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Original Articles.

DOWNWARD DISPLACEMENT OF THE TRANSVERSE COLON. THREE CASES, WITH AUTOPSIES.[1]

BY CHARLES HERMON THOMAS, M. D.,
Surgeon to the Philadelphia Hospital.

A DEFORMITY of the transverse colon, consisting in the elongation of that portion of the large intestine and its displacement downward in the form of a loop or festoon, has been observed by me in three instances in private practice. Autopsies were had in them all. In the first the most dependent portion of the gut was found midway between the umbilicus and the pubic symphysis; in the second it was deeply impacted in the cavity of the pelvis; and in the third it reached the level of the umbilicus.

A positive diagnosis was not made in any of the cases, although in two of them the striking clinical conditions present were studied with special care in association with experienced and highly skilled observers. In the second in order of occurrence, the relationship between it and the preceding one suddenly occurred to my mind, and was communicated to the operator while on our way to make the post-mortem examination. In the third case the actual condition present was strongly suspected before death. So that in both of these latter special precaution was used at the autopsies to avoid disturbing the relative position of the abdominal viscera until their location had been accurately determined.

The lesion here described seems to be of rare occurrence. Thus far I have failed to discover a single recorded case; and not until this paper was nearly completed was I able to find any published reference to the condition, however vague. Several months ago I asked the assistance of Dr. Formad, who informed me that in a series of autopsies, numbering over 2000, which he had made, he had not observed an instance of like character. He has also kindly sent me the following note: —

> "UNIVERSITY OF PENNSYLVANIA,
> *December* 15, 1882.
>
> "DEAR DR. THOMAS, — . . . I looked very thoroughly through the literature of intestinal lesions, but did not meet any record of misplacement of the transverse colon.
> "Very truly yours, H. F. FORMAD."

CASE I. Male, aged eighty years, a retired gentleman, came under my care August, 1874, as a patient of Dr. J. J. Levick, who had placed his practice in my charge during his vacation, and who informs me that there was no previous history of abdominal disease.

The symptoms present were extreme emaciation, feebleness, anorexia, and a profuse but fitful diarrhœa. The abdomen was retracted and somewhat tender upon pressure. There was no complaint of pain except at intervals of three or four hours when the diarrhœa had ceased for a time. Coincidently with the cessation of the diarrhœa a tumor about five inches long and two inches wide, of firm consistency, and visible on inspection, appeared beneath the thinned abdominal walls in a transverse position midway between the umbilicus and the symphysis pubis. The tumor persisted but an hour or so at a time, disappearing immediately upon the return of the diarrhœa. During the periods of continuance of the tumor the pain was so severe as to rapidly weaken the patient. This condition of alternate flux and painful tumefaction was repeated several times daily until death took place. During the attendance upon the case there were associated with me Dr. Albert H. Smith and a distinguished physician from another city — a near relative of the patient. With attention fully directed toward it, and after repeated observations, we were unable to frame a reasonable hypothesis as to the exact character and origin of the tumor. Death occurred September 12th, about three weeks from date of attack.

Autopsy. In the presence of Dr. Levick and the relative mentioned I made the abdominal section. To the former I am especially indebted for the specimen obtained, and which is still preserved.

Upon laying open the abdominal cavity the transverse colon was found to be greatly elongated and proportionately narrowed, the loculi being nearly obliterated, forming a loop open at the top similar to the letter U, the most dependent portion occupying the position of and constituting the tumor as above described, that is, the horizontal portion of the loop rested upon the small intestines, midway between the umbilicus and the pubic symphysis.

CASE II. Female, aged fifty-four years, a lady of delicate frame and refined habits of life, was under my charge for about ten months prior to her decease. During the greater portion of this period Dr. James H. Hutchinson was associated with me in the attendance. Dr. Charles K. Mills also saw her for me during my vacation. The patient had previously been attended by a homœopathic practitioner who had diagnosticated her condition as enlargement of the liver and stricture of the rectum. The latter supposed condition he had treated by the introduction of rectal bougies; this practice being afterward abandoned on account of the pain produced, and the lack of beneficial results.

Profound cerebrasthenia from other causes, with several months of delirium, and which finally led to a fatal result, served greatly to complicate the issues involved. The abdominal conditions which had been recognized from the beginning were thus either masked or placed entirely in abeyance during much of the time.

The more prominent symptoms recognized were: —

(1.) Pain, referred chiefly to the region of the liver and extending both upward and downward, which pain was aggravated by walking, and was described as of a dragging, tearing character, and which had existed for four years or more. It was very much relieved by the recumbent posture, and after some months spent mostly in bed almost entirely vanished.

(2.) Obstinate constipation, with indications of obstruction, even a liquid passage being voided with difficulty. The capacity of the rectum to retain enemata was also diminished to two ounces.

(3.) Two solid tumors, elongated in form and of the consistency of solid fæces, were discovered, located one on each side of the abdomen, and evidently just beneath the parietal structures. They were vertical in position, and about eight inches distant from and so parallel to each other, and were traced from the border of the ribs to within about two inches of the pelvic brim. This condition was observed but a few times, and at considerable intervals; at other times it was absent. The hypothesis was adopted that these masses were the ascending and descending colon, respectively, in a state of fæcal impaction.

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[1] Read before the Philadelphia County Medical Society, October 17, 1883.

Death occurred March 30, 1882, supervening upon a severe mental shock. An autopsy was made by Dr. William M. Gray two days later, Dr. Hutchinson and myself being present. To quote from Dr. Gray's notes: "Upon opening the abdomen found complete prolapse of the transverse colon. It was carried beneath the pubis and rested on the bladder. The large intestine was much narrowed, and was filled throughout with hard nodulated fæces; the meso-colon was absent, and the omentum, which was free from fat, was extremely atrophied; the rectum was normal, showing no evidence of stricture; the liver was of normal size, but upon microscopic examination showed marked cirrhosis."

Thus that which had appeared to be the ascending colon proved to be the descending limb of the displaced transverse colon, and that which had seemed to be the descending colon was shown to be the ascending limb of the same malformation.

The pain which had previously been felt in the region of the liver, and which had been relieved by recumbency, had manifestly been caused by the sharp flexure of the colon contiguous to it, and the rectal obstruction by the crowded condition of the pelvis produced by the invading loop of large intestine.

CASE III. Male, aged thirty years, a tailor's cutter, under attendance nine days prior to decease. The subject of advanced Bright's disease, with "hyaline, epithelial, and granular tube casts, also mucous cells, compound granule cells, and free oil globules," he was extremely exhausted thereby. He also complained of severe pain in the abdomen to the right of and slightly above the level of the umbilicus. Upon inspection and palpation of the part no enlargement or induration was discovered, but light percussion developed an intensely tympanitic sound confined to the region described. Misplacement of the transverse colon was suspected, and the region kept under observation for any evidences of fæcal impaction which might, but which did not, present. Death occurred suddenly, March 19, 1883. Autopsy two days later by Dr. William M. Gray, operator, Dr. William H. Burke and myself being present.

The following notes were made by Dr. Burke: . . . "Body rather emaciated, and showing signs of commencing decomposition. On opening abdomen absence of fat noted; omentum normal. Peritonæum showing traces of lymph and pus, in the pelvic region especially, but no general inflammation. Tranverse colon empty, distended with gas, and has a sharp flexure at its centre, bending obliquely downward and toward the right, to the level of the umbilicus, thence sharply upward to its normal position. Meso-colon intact and apparently normal except in length. No sign of fæcal obstruction at the point of flexure. Both kidneys scirrhotic; capsule adherent, and secreting structure destroyed."

Evidently the heightened tympany localized near the umbilicus, which had been previously recognized and ascribed to the presence there of a portion of the transverse colon misplaced, had in reality been so caused.

No adhesions of the displaced parts were found in any of the cases cited. The intestinal fault was probably not the cause of death in any of them. Taking them together, it will be seen that clinical conditions and post-mortem appearances agree in at least one important particular, namely, the location of the displaced intestine in contact with the anterior abdominal wall and below its normal site.

The normal anatomical relations of the colon have a special significance in the light of these cases from a diagnostic point of view. The ascending and descending portions of the colon are, normally, to be found in contact with the *posterior* or lumbar wall of the abdominal cavity, — behind the small intestines, — and are there bound closely down by reflections of the peritonæum. The transverse colon, on the contrary, is normally in contact with the *anterior* abdominal wall — in front of the small intestines — where it is loosely suspended by the transverse meso-colon, a structure of considerable length.

It therefore appears to be a practical impossibility for the vertical portions of the large intestine to become spontaneously misplaced anteriorly. But of the transverse colon, its displacement downwards, — in which changed position its relation of contact with the anterior abdominal wall is retained, — these cases show to be a condition of repeated occurrence.

Conclusions. (1.) Displacement of the transverse colon downward within the abdomen may be to any degree, partial or complete.

(2.) Such displacement will present as solid tumor if the bowel be in a state of fæcal impaction, or as a limited area of heightened resonance if the bowel be distended with gas; but in either case the displaced part is to be found *in contact with the anterior abdominal wall.*

(3.) The occurrence of intra-abdominal tumor situated below the normal site of the transverse colon, and having the same general configuration as the colon, such tumor being of a certain consistency, and presenting evidences of being in contact with the anterior abdominal wall, or the occurrence of areas of special typmpany with like outlines and similarly located, constitute diagnostic signs strongly indicative of downward displacement of the transverse colon.

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A FATAL CASE OF INTERNAL URETHROTOMY.[1]

BY GEORGE W. GAY, M. D.

MR. D., aged twenty-three years, conductor, had had more or less difficulty in passing his urine for two years, having been obliged on several occasions to resort to a catheter. October 16, 1883, he was again seized with retention, which repeated efforts at catheterization failed to relieve. The bladder was finally aspirated above the pubes, and the patient sent to the City Hospital.

During the next three days he passed a fair amount of urine, the bloody character of which was supposed to be due to lesions of the urethra. His treatment consisted in rest in bed, diuretics and diluents, fomentations to the hypogastrium, and complete rest to the urethra. As the patient seemed to be in good condition, and it was evident from his history and from his very sensitive urethra that some more radical treatment was necessary, he was etherized and examined on the 19th of October. Five inches from the meatus was a stricture, which admitted only a fine whalebone bougie; upon this a tunneled sound was passed through the obstruction; with a urethrotome the stricture was then carefully cut and dilated till a No. 25 steel sound passed quite easily. The hæmorrhage was unimportant. The immediate after-treatment was morphine hypodermically, large doses of quinine, fomentations to perinæum and abdomen, and liquid diet.

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[1] Read before the Surgical Section of the Suffolk District Medical Society, November 7, 1883.

About six hours after the operation the patient had a chill, and on the following day there was complete suppression of urine. He was pulseless, delirious, had vomiting, high temperature, and a congested skin. He was put on infusion of digitalis, squills, and acetate of potash; fomentations of digitalis leaves to the abdomen; gin and cream of tartar for a drink; food and stimulants by the rectum.

Two days later the urine began to flow, but the nervous symptoms were not improved. Free catharsis was produced with elaterium, when there was a temporary change for the better in that respect. It was of short duration, however, and in spite of hot-air baths and a fair secretion of urine he became comatose, gradually failed, and died six days after the operation.

The autopsy was made by Dr. Gannett, and his report is as follows: —

"The first five inches of the urethra from the meatus showed nothing unusual. The next two and a half inches, extending to the prostatic portion, showed numerous rents in the mucous membrane parallel to the course of the urethra. The mucous membrane was here of a reddish-brown color, and was covered with a shreddy, diphtheritic false membrane. The surrounding corpus spongiosum was indurated.

"The bladder contained about two ounces of a thick, blood-red fluid. The muscular walls were doubled in thickness. The mucous membrane thickened, velvety, of a reddish-black color, in portions covered with a diphtheritic false membrane and fine, gritty material.

"The mucous membrane of the pelvis of the kidney showed a few circumscribed patches of hæmorrhagic pyelitis. The kidneys were both enlarged, dark-red in color, with several opaque-gray lines extending from the cortex to the apices of the pyramids. Microscopically the kidneys showed cloudy swelling of the epithelium of the convoluted tubules, and extensive hæmorrhages into the tubules.

"The lesions were as follows: laceration of urethra, diphtheritic urethritis, hæmorrhagic-diphtheritic cystitis, pyelo-nephritis. Evidence of general septicæmia was found in the cloudy swelling of various organs."

Dr. Gannett's report, as well as the state of the organs shown you, prove that there was no extravasation, no abscess nor unusual inflammation about the seat of stricture; nor were the lesions consequent upon the operation more severe or more extensive than was to be expected. There were no false passages, no gangrenous patches nor sloughs in or about the urethra. There was simply a firm, dense stricture, which had been cut or torn (and from the local appearances no one could have told which); nor was there anything whatever to indicate that the operation had produced unusual violence, or had been followed by unusual local changes.

This patient died from acute pyelo-nephritis, septicæmia, and uræmia, the immediate and exciting cause of which was undoubtedly the operation. The predisposing causes were very probably the long-standing inflammation of the bladder and urethra, and the consequent irritation of the nervous system.

It may be said that this was a case for external rather than internal urethrotomy, and also that if less violence had been done to the urethra the result might have been different. I can only say that I have operated on a good many similar cases in precisely the same manner with good results. On the other hand, I once lost a strong and apparently healthy man from suppression of urine four days after a single and easy passage of a steel sound. Hence I cannot think that the fault was entirely in the operation.

RECENT PROGRESS IN OTOLOGY.

BY J. ORNE GREEN, M. D.

STATISTICS OF EAR DISEASE.

In a painstaking article Bürkner[1] has brought together all of the statistics of ear diseases which he has been able to find, and analyzed and tabulated them as far as was possible. Although, like all figures, these give us but dry reading matter, they nevertheless, from the large number of cases, bring out many interesting facts. It should, however, be borne in mind that they are open to the objection of all similar medical statistics, in that the observations are made by many different persons of various degrees of ability, in many countries, and under various circumstances, so that we must hesitate to accept many of the tables as giving anything more than a distant approximation to the truth. For instance, under the causes of ear disease we find the percentage referred to scarlet fever, measles, small-pox, typhus, etc., given, but it is evident that unless such figures extended over many years for the same town, they would be somewhat variable, according to whether there had been epidemics of those diseases. Tables of results of treatment in public clinics are always open to doubt, if, for no other reason, on account of the difficulty of keeping the cases under observation for a length of time. Others of the tables are of undoubted value.

AGE.

Of 34,532 patients 22.4 per cent. were less than 15 years old.
Of 34,532 patients 59.3 per cent. were between 15 and 50 years old.
Of 34,532 patients 12.9 per cent. were over 50 years old.
Of 41,287 patients 77.8 per cent. were less than 15 years old.
Of 41,287 patients 22.2 per cent. were adults.

SEX.

Of 37,920 patients	60.3 per cent. were men.
Of 37,920 patients	39.7 per cent. were women.

PART OF EAR AFFECTED.

Of 58,645 patients	25.5 per cent. external ear.
Of 58,645 patients	66.9 per cent. middle ear.
Of 58,645 patients	7.6 per cent. inner ear.

This table, from eighteen different sources, in comparison with the older tables of Wilde and Kramer, is interesting as showing the tendency of modern investigation to find disease in the middle ear, and is the direct result of pathological study and improved methods of examination. The same thing has been noticed in the study of eye diseases.

WILDE'S TABLE.

Of 2330 patients	55.8 per cent. external ear.
Of 2330 patients	39.5 per cent. middle ear.
Of 2330 patients	4.9 per cent. inner ear.

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[1] Archiv für Ohrenheilkunde, vol. xx., p. 81.

KRAMER'S TABLE.

Of 300 patients	16.5 per cent. external ear.
Of 300 patients	47.3 per cent. middle ear.
Of 300 patients	36.2 per cent. internal ear.

A large and interesting table of the percentage of different diseases is given, based upon the observation at sixteen different clinics of 43,730 patients, but no résumé is possible, and we can only refer to the original.

WHICH EAR MOST FREQUENTLY AFFECTED.

Of 3255 patients	60.3 per cent. both ears.
Of 3255 patients	17.6 per cent. right ear only.
Of 3255 patients	22.1 per cent. left ear only.
Of 2242 patients	54.0 per cent. both ears.
Of 2242 patients	20.0 per cent. right ear only.
Of 2242 patients	26.0 per cent. left ear only.

SEASONS OF ACUTE DISEASE.

The absolute frequency of acute disease according to months was as follows in 478 acute diseases among 2242 patients: —

September	5.7 per cent.	January	8.6 per cent.
August	6.7 per cent.	June	9.0 per cent.
July	6.9 per cent.	December	9.0 per cent.
October	7.2 per cent.	February	9.9 per cent.
April	7.8 per cent.	March	10.3 per cent.
November	8.1 per cent.	May	10.8 per cent.

But the relative frequency, that is, the percentage of acute disease in the whole number in attendance for each month was: —

July	12.3 per cent.	November	22.5 per cent.
August	16.1 per cent.	April	25.0 per cent.
September	17.0 per cent.	March	25.2 per cent.
June	17.9 per cent.	February	26.5 per cent.
May	18.6 per cent.	January	29.7 per cent.
October	22.0 per cent.	December	37.7 per cent.

Bürkner's conclusions are as follows: —

(1.) The most frequent causes of ear diseases are colds, affections of the nose and naso-pharynx, and the acute infectious diseases.

(2.) The predisposition to ear disease increases from birth to the fortieth year, and then decreases.

(3.) Men are more frequently affected than women; the proportion being about three to two.

(4.) Of all diseases of the ear about twenty-five per cent. are of the external ear, sixty-seven per cent. of the middle ear, and eight per cent. of the inner ear.

(5.) The left ear is more frequently diseased than the right, the proportion being about five to four.

(6.) The acute middle-ear diseases are less common in summer than in winter.

(7.) Of all cases of ear disease in the polyclinics fifty-three per cent. were cured, thirty per cent. improved, seven per cent. unimproved, and 0.3 per cent. ended fatally.

PERFORATIONS OF SHRAPNELL'S MEMBRANE.

The inflammation, perforation, and ulceration of this small triangular portion of membrane lying above the short process of the hammer, to the serious nature of which attention was early called in this journal,[1] is the subject of two instructive articles[2] by Morpurgo and Hessler. Both authors acknowledge the serious nature of the disease on account of the difficulties of treating it successfully, and on account of its complications; both have found it a somewhat rare disease, each reporting eleven cases, although the proportion of cases to the whole number of patients seen is not given. But few such statistics can be found. Moos, in 126 perforations, found perforations of Shrapnell's membrane four times, and Marian in sixty-two cases of chronic purulent inflammation of the middle ear found one perforation of Shrapnell's membrane.

Morpurgo would divide the cases of the disease into two classes: those in which the pathological process is localized and confined to the upper cavity, and those in which the whole tympanum is involved. The different appearances of the disease on inspection are well described; the dry unswollen membrana tympani wholly destitute of polish; the marked prominence of the short process and manubrium and the basin-shaped, sunken drum-membrane; the variable size of the perforation from a small opening up to a loss of the whole membrana Shrapnelli, or even a still larger opening due to destructive caries of the upper osseous edge of the tympanum, which even allows the niche of the oval window, the Fallopian canal, and the prominence over the horizontal semicircular canal, to be seen.

A very marked characteristic is the frequent absence of a perforation whistle on inflation of the tympanum. In eighteen cases of the disease four only gave this perforation whistle. The explanation of this Morpurgo finds in the recent anatomical studies of Prussak and Politzer, which, although differing somewhat in their details, agree so far as to acknowledge a system of cavities in what has been called the superior pouch of the drum-membrane, which cavities communicate with the drum cavity only by a very narrow opening. This narrow opening becomes closed by the swelling and secretion accompanying the inflammation, and therefore no passage is afforded for air from the tympanum to the meatus, even although the whole of Shrapnell's membrane has been destroyed. Morpurgo has proven experimentally both that the cavity behind Shrapnell's membrane communicates, when in its normal condition, with the tympanum, and that when this cavity becomes inflamed such communication with the tympanum ceases. In fourteen cases in which Shrapnell's membrane was normal he made a small perforation, and in all of them obtained a perforation whistle on inflation; in one of these cases, where the perforation whistle was obtained immediately after the operation, a moderate inflammation followed, and no perforation whistle could then be obtained. After the wound had healed, and the inflammation had subsided, another perforation was made, and the perforation whistle again obtained.

Caries with resulting granulations and polypi are complications of the disease.

The diagnosis of a general or localized inflammation Morpurgo makes from ocular inspection. If an otorrhœa with perforation of Shrapnell's membrane exists, and inspection shows the drum-membrane in toto swollen and reddened, with the hammer indistinct, the inflammation is a general one of the whole tympanum. If inflammatory changes are, however, only seen in the neighborhood of Shrapnell's membrane, and the rest of the drum membrane is unchanged, and no communication with the tympanum proper exists, as shown by inflation, the process is a localized one. If in a similar case the drum membrane is sunken like a basin, its mobility greatly impaired, and a perforation whistle is absent, a general inflammation has existed, but has disappeared leaving more or less alteration in the tympanum. The degree of deafness Morpurgo does not consider of value in differentiating between the general and the localized process.

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[1] Boston Medical and Surgical Journal, March [illegible], 18[illegible].

[2] [illegible] Morpurgo, [illegible], vol. [illegible], p. [illegible]. 1882. Dr. Hessler, Archiv für Ohrenheilkunde, vol. xx, p. 121. 1883.

The therapy of perforations of Shrapnell's membrane, or rather of purulent inflammations of the upper tympanic cavities, cannot be left to the patient. Intratympanal injections are absolutely necessary, as the common injections of the meatus wholly fail to remove the secretion. For this purpose Morpurgo uses Weber's tympanic catheters, and for a fluid a saturated watery solution of boracic acid. The natural perforation is often insufficient to allow a thorough evacuation of the retained secretion, and then Morpurgo recommends enlarging the opening in various directions, especially upwards, by incisions, thus freely exposing the complicated cavities above Prussak's pouch. As the most useful in the further treatment of the case, a combination of the disinfecting intratympanic injections with the alcohol treatment has been found the best, spiritus vini rectificatissimus with an equal quantity of distilled water injected by the tympanic catheter, and used as an ear-bath for a quarter of an hour twice daily. Polypoid growths and caries of the bone require their own proper treatment. In chronic cases of the disease Morpurgo has not had satisfactory results with powdered boracic acid after Bezold's method, but in an acute case this treatment gave a brilliant result.

In forty cases collected by Morpurgo polypoid growths were present in twenty-one. Six cases were acute, and in four of these the perforation closed rapidly; in two the disease became chronic. The remaining thirty-four were chronic, and in seven of these the perforation closed; in twenty-six no closure took place, or the result was unknown, and in one case death resulted from meningitis. The ages of the patients were as follows: —

Ten years old	1 case.
Between 11 and 20 years old	4 cases.
Between 21 and 30 years old	14 cases.
Between 31 and 40 years old	14 cases.
Between 41 and 50 years old	4 cases.
Between 51 and 60 years old	3 cases.

The duration of the disease varied from a few days to more than twenty years.

Hessler bases his article on the study of eleven cases in private practice, and agrees entirely with Morpurgo in the clinical symptoms and appearances which the latter has described. He found the disease in just one per cent. of all cases treated, and his youngest patient was but four years old. In all the cases the suppuration was slight in quantity, but always from the very beginning fetid. In six the head was free from the pressure and pain which often accompanies this form of inflammation, while in four there was long-continued and recurring pain and pressure on the same side as the ear disease. In nine the perforation was in the upper and anterior part of Shrapnell's membrane. In one it was in the posterior upper quadrant of the same membrane, while one was acute and had not been perforated. In only two cases was there a communication between the Eustachian tube and the suppuration, so that a perforation whistle could be obtained. As the results of treatment in four there was complete healing of the suppuration and closure of the perforation. In one the same result was probably reached. Two others were still under treatment, and two were unsuccessful.

The treatment of these cases Hessler considers must depend upon whether the suppuration can be reached only from the meatus, cases in which there is no communication with the tympanum proper, and consequently no perforation whistle, or whether it can be also reached from within, cases in which the tympanic communication exists. The latter are the most amenable to treatment, and he uses in them daily syringing with disinfecting solutions both from the meatus and from the Eustachian tube, and more stress is laid upon the thorough cleansing than upon the degree of concentration of the disinfectant. The use of powders he does not approve, as they are apt to hinder the evacuation of the secretion. Where caries exists the bone should be scraped with the sharp curette, and this should be followed by cauterization with silver nitrate or with the galvano-caustic. With caries of the head of the hammer the curette cannot be used, and the cauterization only can be applied. Galvano-caustic is preferred to the knife for enlarging the perforation when that is necessary, as the opening remains longer. The reaction from the galvano-caustic, although generally slight, is sometimes very marked, requiring suspension of the application for two or three weeks. Where such reaction does not take place the cauterization is repeated every six or eight days, and between times the thorough cleansing of the suppuration is continued daily. In case of exudation forming in the tympanum proper this should be evacuated by paracentesis. In this treatment by cauterization Hessler differs from Morpurgo, who thought his results were better from alcohol than from cauterization.

For the second class of cases, those in which there is only a communication with the meatus, but none with the tympanum, Hessler, not finding the results from disinfecting injections in the meatus and cauterization satisfactory, although they were not used with Weber's tympanic catheter, tried to convert them into cases of the first class by puncturing with the galvano-caustic in the upper and posterior part of the drum-membrane. In only one case, however, was he able to get the desired communication with the tympanum, and in that the daily disinfecting injections produced a cure.

PRESSURE IN THE TREATMENT OF BUBOES.

O. Petersen[1] treats buboes, after fluctuation is clearly determined, as follows: A large incision is made and the cavity of the abscess is cleaned out with a sharp spoon. The bleeding is stopped, and iodoform powder is applied. Then comes the pressure bandage, which is the important principle in this treatment, and its application is as follows: First a ball or wad of salicylic cotton or some soft, pliable material, made antiseptic with salicylic acid, is formed of the size of the cavity, and placed over it; upon this wad are then placed several layers of the same material; then a second ball or wad made of tow or oakum, and about four times as large as the first, is placed upon this. Over this oil-silk or wax-paper, and the whole is firmly fastened with a gauze or elastic bandage. This bandage remains unmolested, as a rule, from seven to ten days. The average length of healing, in a trial for three years of this method, was twenty-three days; previously the average was from seventy to ninety days. Twenty per cent. of the cases healed under one bandage, twenty-five under two, twenty under three; more than seven bandages were in no case necessary. The average number of bandages was two.

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[1] Centralblatt für Chirurgie, November 17, 1883.

New Instruments.

A NEW HIP SPLINT.

BY A. T. CABOT, M. D.

THE splint which I shall describe has been in pretty constant use at the Boston Children's Hospital for several years. It is easily made, is very efficient, can be adapted to a variety of conditions, and costs but little.

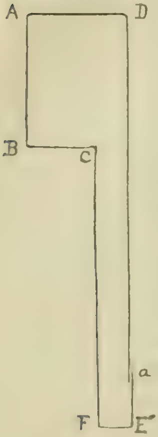

FIG. 1.

The foundation material is a wire rod from three sixteenths to one fourth of an inch in diameter, which can be readily bent with wrenches or in a vise to the form shown in Fig. 1.

The free ends are then lashed together with copper wire at *a*.

The measurements required are: D E. From the axilla to a point one or two inches below the heel; or if desired the splint may be finished to reach only to just below the middle of the calf.

A D. The width of the trunk.

A B. From the axilla to a point midway between the crest of the ilium and the top of the trochanter.

F E. Two to two and a half inches, according to the size of the leg.

A D and B C are then to be bent to conform to the curve of the back; it being particularly important that B C shall be sufficiently curved to jump across the sacrum without exerting injurious pressure upon it. Lastly, the rods running longitudinally are to be bent so as to adapt themselves accurately to the curves of the back, hip, and knee.

This frame, especially in those parts which cross the body, is to be thickly wound with strips of cotton batting, and the whole covered with Canton flannel tightly stretched across it. Lastly a swathe is to be stitched onto the body part of the splint (A B C D).

After the frame is accurately fitted to the curves of the body the patient is to be laid upon it, so that point B takes its bearing on the gluteus muscle of the well side, and C rests a little outside the sacro-iliac synchondrosis on the affected side. The pressure of the splint is thus borne by parts well padded with muscles, and if B C is sufficiently curved the sacrum and surrounding bony prominences are not pressed upon. It is, however, a good precaution to put a large sheet of cotton batting upon the splint to still further protect against the danger of a bed sore.

The frame being accurately adjusted the swathe is to be pinned firmly round the body, and the leg is bandaged to the leg part of the splint.

When applied as I have described, the splint fits the patient comfortably but firmly, and as it leaves a considerable interval between the anus and any part of itself, it can be kept clean, and consequently can be worn for a long time without changing.

Besides its use in hip disease, this splint is of value in the treatment of fractured thigh in children. With coaptation splints to the sides and front of the thigh, and with a foot piece, Fig. 2, added to the splint to prevent the rolling of the foot to one side or the other, we have perfect immobility of the fractured bone, and are able to move and handle the child with entire freedom, and without causing the least pain. Another obvious application is to cases of excision of the hip. Here again we need a foot piece to prevent rotation of the leg, and the wires where they pass behind the hip are divested of padding and can then be thoroughly cleansed and included in an antiseptic dressing. The splint has been so used in several cases of excision with satisfaction. The patients were free from pain and were easily moved. One child, indeed, was carried from Boston to Nova Scotia while the wound was far from well without discomfort or apparent detriment to the joint. If it is desired to combine extension with fixation, it can be done by fastening to the outer rod D E an arm coming forward and curving round the side just below the crest of the ilium. By a buckle attached to the top of this arm, and another behind the splint, a band can be carried through the perinæum. At the end of the leg of the splint are then to be attached two buckles through which the extension straps can be drawn and held down, or if desired an arrangement with a ratchet and pinion fastened to the foot of the splint will provide for more steadiness of extension.

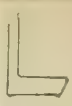

FIG. 2.

Lastly, this frame, if fitted to reach only to the middle of the lower leg, can be used like a Thomas' hip splint in the ambulatory treatment of hip disease, the patient walking about with a high shoe on the well foot and crutches.

It would seem at first sight that the splint would interfere with the patient's sitting down, but practically, if the body part is not made too wide, the splint is not more uncomfortable than a Thomas' splint in this respect, and it has the decided advantage that it is less likely to be displaced.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

S. J. MINTER, M. D., SECRETARY.

NOVEMBER 7, 1883. DR. G. W. GAY reported

A FATAL CASE OF INTERNAL URETHROTOMY.[1]

DR. GANNETT exhibited the specimen, consisting of the whole urinary tract of Dr. Gay's patient.

DR. A. T. CABOT asked Dr. Gay whether he did not think that a catheter left in the bladder immediately after the operation would, by providing for a free escape of the urine, have diminished the danger of death from suppression in this case. Dr. Cabot also asked if the result in this case would cause the reader to adopt some other method of operating in similar cases in future.

DR. GAY said that in such an unfavorable case for operation he should be inclined to do external urethrotomy, though it is an operation to be avoided if possible, as it often leaves the patient with urinary fistulæ, and necessitates a much longer after-treatment than the internal treatment. It is, perhaps, well to risk some thing in doubtful cases. The reader had since performed internal urethrotomy in a case of stricture two inches from the meatus, the operation being followed by quite severe symptoms for forty-eight hours. The reader and all the other surgeons at the City Hospital had for some years abandoned the practice of leaving a catheter in the bladder after divulsion or internal urethrotomy, as they considered that it rather diminished than increased the chance of a favorable result.

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[1] See page 2 of this number of the JOURNAL.

In reply to a question by Dr. Watson, the reader said that the danger to life was decidedly greater in the internal than in the external operation. After the latter there is almost no fear of abscess, pyæmia, or other septic processes.

In reply to a question by Dr. Garland, Dr. Gay said there was almost no conceivable condition of the urinary tract where the surgeon should refrain from operating by some method to relieve symptoms of retention and stricture as severe as were present in this case. It is of primary importance to relieve the stricture, as that is the cause of the whole trouble, and must be removed before a change for the better in the bladder and kidneys can be hoped for. When, however, the symptoms were not severe, and the stricture could be kept well open by means of gradual dilatation, he was of the opinion that any operation should be avoided.

Dr. Gannett said that the changes seen in the bladder in this case were ante-mortem, and due to the long-standing cystitis caused by the stricture, while the pyelo-nephritis and diphtheritic inflammation of urethra and bladder followed the operation, the process spreading from the lower to the upper part of the urinary tract, probably by means of micro-organisms which passed up the ureter, and which may have been present in the bladder for some time. In cases where the kidneys are infected in this way the inflammatory process often skips from the bladder to the pelvis without manifesting its presence in the ureters.

Dr. Cheever called especial attention to the much greater safety of the external operation of urethrotomy, which almost always gives a good result as regards the life of the patient, although it is usually adopted only in the most severe cases. After this operation the bladder is allowed to empty itself in the easiest possible manner, and perfect drainage is permitted.

The subject for discussion was

EXCISION IN HIP DISEASE; ARE ITS PROGNOSIS AND ITS RESULTS BETTER THAN THOSE OF A SPONTANEOUS CURE.

Dr. E. H. Bradford, in opening the discussion, said that it was impossible at present to deduce from the facts as yet presented exact surgical laws regulating excision, and cases will have to be judged chiefly according to their individual merits. Certain facts, however, have been collected justifying some generalizations of value, which may be grouped as follows: —

(1.) As to the immediate danger from the operation.

(2.) As to the chance of ultimate recovery after the operation.

(3.) As to the usefulness of the limb after such recovery, and the time required before such a result is gained.

(4.) As to the probability of and requisite length of time for a "natural" cure, and the subsequent usefulness of the limb.

It may be said as a preface that this consideration of the subject is limited to cases of hip disease, and chiefly of children under puberty.

I. There can be little doubt that among the grave surgical procedures excision of the hip cannot be considered an extremely dangerous one. The rate of mortality directly due to the operation, according to the report of the London Clinical Society's Committee, is fifteen per cent.[1] According to Culbertson the mortality from partial excision is nineteen per cent., and from complete excision thirteen per cent.[2]

II. Forty-six per cent. of the cases of complete excision collected by Culbertson, and forty-three per cent. of partial excision, died within six months of the operation.[3] According to the London Clinical Society the mortality was, in 320 cases, forty per cent.[4] Antiseptic surgery would appear to have lessened the rate of mortality, for Grosch, in 126 cases of the operation done under the strictest antiseptic precautions, reports a mortality of 36.7 per cent., and that in the last half of the decade during which the list of operations was collected the mortality was nine per cent. less than in the first half of that period, during which an apprenticeship to strict antiseptic principles was being served. The mortality also varies according to the stage of the disease at which the operation is performed, being 0 at the first stage, twenty-four per cent. at the second, and sixty-seven at the third.[5]

III. It would appear from the clinical facts presented by Mr. Holmes that the limb after the most successful excision is not as useful as after a "natural" cure,[6] This is emphatically the opinion of the London Clinical Society,[7] and this view is apparently substantiated by a comparison between the anatomical appearances in the few reported cases of autopsy after successful excision with those found in a natural cure.[8] The process of absorption and repair in the natural cure is a gradual one, and the bone becomes firmly welded in place by the slow deposits of the ossifying ostitis which follows the destructive ostitis of the original disease; only such portion of the bone is removed as cannot be saved, and the fragment of the neck and head becomes well surrounded and securely held in an acetabulum gradually altered in the successive processes of disease and repair. After excision, on the contrary, a large fragment of bone is removed, and the subsequent union with the ilium in the most successful cases is by ligamentous and fibrous bands, forming in some cases a false capsule, and if ossification ultimately takes place it can hardly be thought that the parts will be as accurately fitted as is the case after the more gradual process. A flail joint at the hip, or one approaching it, is certainly not so useful as a stiff joint. Cases which appear to be cured sometimes are ultimately not as satisfactory in the result as was at first considered probable. Case 464, Culbertson's Table, was reported as perfectly cured, and three years later was found in a permanently crippled condition, with a useless limb.[1] Furthermore it has not been found that antiseptic dressings have any influence upon making the limb ultimately more useful, or upon the length of time necessary for a permanent cure. This, according to the London Clinical Society, is one and three quarter years; according to Culbertson 190 days. It is manifest, however, that it is difficult to obtain figures of great value bearing upon this point.

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[1] British Medical Journal, May, 1881.

[2] Trans. of American Medical Association, 1876.

[3] Culbertson does not consider many of these deaths (that is, twenty-six per cent. of them) as attributable to excision, and classifies them as due to "other causes." A list of the diseases, however, makes it clear that this is hardly just; bed sores, amyloid disease, Bright's disease, meningitis, are all to be considered in estimating the chances of ultimate cure. According to the London Clinical Society about four per cent. of the deaths were due to causes other than the disease and not influenced by the operation.

[4] British Medical Journal, May, 1881.

[5] Centralblatt f. Chir., No. 14, 1882, p. 229.

[6] Medical Times and Gazette, November 3, 1877.

[7] Loc. cit.

[8] New York Medical Journal, April, 1879. Archiv f. klin. Chir. Band xix., Heft 2, pp. 400–411.

IV. In comparison with these figures Dr. Gibney reports the results of "natural" cure to be as follows: Eighty cases of recovery were recorded; no particular treatment being followed beyond constitutional (forty-eight of these had abscesses); cure was established in seventy-one of these before the fifteenth year, the disease lasting, in thirty-three, three years; in twenty-eight from three to six years; and in one case fifteen years. In only eight of these cases did such a deformity exist as to interfere with walking. Out of the eighty cases, in twelve there was a recovery in motion of from fifteen to ninety degrees.[2] Better results are of course obtained, as far as the usefulness of the limb is concerned, where careful and continued treatment can be carried out for a long time than where the limb is practically left to itself. The results reported by Dr. Judson[3] clearly demonstrate this, as well as that remarkable results can be obtained even in desperate cases by the conservative treatment. Cazin found in five years that in eighty cases of suppurative hip disease treated by the expectant plan —

Forty-four were cured (fifty-five per cent.).

Twenty not cured (thirty-three per cent.).

Ten died (twelve per cent.).

Of these fifteen were complicated by albuminuria, and five died, six were not improved, two were improved, two were cured.[4]

The mortality, according to the London Clinical Society, in suppurative cases treated conservatively was thirty-three per cent.; forty-two per cent. were known to be cured, and the duration of treatment of those who recovered was two and a half years, the duration of the disease being four years. In non-suppurative cases sixty-nine per cent. were cured (the duration of the disease being three years), ten per cent. died, and twenty per cent. remained incomplete.

Taking the facts, imperfectly recorded as they are as yet, it may be roughly stated that in one hundred average cases of excision about forty die, and of those who recover about twenty-five will have limbs that they can walk on without a cane, twenty-five will need a cane or crutch, and five will have limbs that are useless. The limbs will probably not be as useful as if the patients had survived the disease with the average result of a "natural" cure, the chances for which in an average suppurative case may be placed roughly at fifty in one hundred. The time required for a cure after the operation will be probably somewhat less than if no operation is performed.

Recurring again to statistics and quoting from Culbertson: nearly a half of those who recovered from the operation had "perfect" limbs (that is, they could walk without support), about the same number had "useful" limbs, and could walk with and without apparatus; five to seven per cent. had worthless limbs. Out of some eighteen cases Mr. Holmes was able to examine three from eleven to thirteen years after the operation, and but one was able to bear the whole weight upon the affected limb. It may be said, therefore, that excision of the hip is a measure to be resorted to only as a last resort and as a life-saving remedy, and is indicated in cases of profuse suppuration and continued loss of strength in spite of thorough treatment for some time, as well as in cases where the course of the temperature indicates a demand for complete drainage. Mr. Holmes has expressed the matter well as follows: "The operation has a claim for adoption from its success in saving life where natural cure seems improbable. These cases are rare, if care for years can be provided."

Dr. A. T. Cabot said that he regarded excision of the joint in hip disease as a life-saving operation, to be resorted to only when recovery by the natural powers is manifestly impossible. Cure by anchylosis is the most favorable result which can follow an extensive caries of the head of the femur, and the pelvis adapts itself so readily to the changed condition of things that a patient with the hip anchylosed in a good position has a very serviceable limb upon which he can walk with often but a slight limp. As Dr. Bradford has just shown, the fibrous articulation frequently resulting from an excision is, in the majority of cases, far less useful than an anchylosed joint, so that the best result of excision is no better than that which follows spontaneous cure, and the limb is necessarily shortened by the length of bone removed.

In a severe case of hip disease, then, the first thing is to fix the joint with an appropriate apparatus and to use every effort to promote bony union. If abscesses form they should be freely opened, the tubercular lining membrane should be thorougly scraped out, sinuses should be followed up and curetted, and any rough bone which is reached should be removed. Counter-openings should be made, if possible, behind the hip-joint so that they may be dependent, and secure thorough drainage. Abscesses treated in this way heal much more readily than after a simple opening.

If in spite of all care the patient steadily loses ground, and suffers continuously from hectic, particularly if pain in the hip is a prominent and distressing symptom, then the removal of the diseased head of the femur and of the tubercular material about the joint is demanded.

As cure by anchylosis is the result to be sought it is of the greatest importance to apply an apparatus after excision which shall provide for perfect fixation, and which shall allow the dressings to be changed without movement of the joint.

Dr. Cabot showed a splint which he had used upon four cases of excision with entire satisfaction, and which is fully described in another part of this journal.

Dr. Gannett showed a section from a tuberculous joint in which the tubercles were plainly visible with a lens of low power, and spoke of the tendency of the process to become general throughout the body unless it yielded to proper treatment.

Dr. Cabot said that, as Dr. Gannett had shown, the disease was to a great extent a morbid growth, which tended to recur if not fully removed unless the natural powers of the patient were great enough to resist its further progress. In case, therefore, that the sinuses continued to discharge freely for a long time it would be a wise course to follow them up by a second operation, and again, with a sharp spoon, scrape out all granulation tissue which could be found either in the soft parts or in the bones.

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[1] New York Medical Journal, April, [illegible]

[2] New York Medical Record, March [illegible]

[3] [illegible] Hip Disease [illegible]

[4] [illegible] No. 5, [illegible]

Dr. Royal Whitman showed a patient of Dr. C. D. Homans whose right hip had been excised nineteen months before.

The patient entered the City Hospital October 4, 1878, at the age of four, with a history of a fall six months previously, which was followed by gradually increasing pain and lameness.

The examination showed an obliteration of the right gluteo-femoral fold, moderate flexion of the thigh upon the abdomen, and considerable limitation of motion on the affected side.

He was treated by rest in bed with extension, and left the hospital six months later, wearing a Sayre's short splint.

In October, 1880, he entered the hospital, the symptoms being about the same as on his last admission. He remained there for two months, and the acute symptoms having subsided, he was discharged. On October 11, 1881, he again entered the hospital, with a history of a fall followed by pain and increasing disability.

The examination showed the leg to be flexed almost at right angles to the body. Dr. Bradford, under ether, forcibly extended the leg, and the child was placed in bed with eight pounds' extension. He remained in the hospital for three months, and was then discharged, on crutches, wearing a high shoe. At that time the leg was straight, and there was considerable motion in the joint. On January 31, 1882, he entered the hospital for the fourth time, with the usual history.

Examination showed pain on motion, obliteration of the gluteo-femoral fold, moderate flexion and fixation of the joint, with a hard, elastic semi-fluctuating swelling in the groin. He was placed in bed, and a T splint and extension were applied.

At the end of three months, as there had been no improvement in the symptoms, Dr. C. D. Homans decided to excise the hip, which was accordingly done on April 10th, 1882, the head of the bone being removed at a point two inches below the trochanter, and the acetabulum, which was found to be roughened, was thoroughly scraped. Very little shock followed the operation, and there was an immediate improvement in the condition of the patient.

After the operation the patient was placed upon a frame, moderate extension applied, and the leg kept in a fixed position. The wound was dressed with iodoform and salicylic cotton. The patient was discharged February 5, 1883, the wound having completely closed. Since this time his health has been perfect.

At the present time examination shows the following result: The leg is somewhat smaller than the other, and there are two and one half inches shortening. The head of the bone appears to be in close apposition to the acetabulum. The wound has completely closed, and there is no pain or tenderness about the seat of the operation. A certain amount of limited motion still remains at the joint. The patient walks easily, with a considerable limp from the shortening. If the body is steadied he can support his weight upon the limb without discomfort.

Dr. Cheever regretted the absence of many of the older surgeons who had had such a large experience in the treatment of these cases, and spoke especially of the good work done by Dr. Buckminster Brown in this field. Fifteen years ago, when almost all authorities favored excision, Dr. Brown predicted that the opinion in regard to the operation would be greatly modified in time, and that it would be reserved for carefully selected cases. At that time the traumatic or constitutional origin of the disease was in dispute, but now almost all cases are regarded as the results of a tuberculous process.

It seems to be true that if a patient with hip disease does not recover before puberty the result is generally fatal. Dr. Cheever spoke of a patient who died at the age of twenty-two of hip disease that began in early childhood. Before death there were extensive sinuses about the joint and thigh, and the process had extended across the pelvis and in every direction until both sides of the pelvis, both nates, the sides of the abdomen, and even the thoracic wall, as well as the rectum, were the seat of extensive suppurative processes.

On the other hand patients may recover the use of the limb and fairly good health, though there may be occasional relapses. One patient, an active business man, wears a splint, and is quite well, though occasionally, if he remains in this cold climate in winter, abscesses form about the seat of the old disease. Another similar case is that of a young lady, who is quite well except for an occasional small abscess. These cases were treated without operation. Another case in which excision was performed was seen thirteen years after the operation with extensive sinuses, and in all respects as badly off as though he had never been treated.

Constitutional treatment is all important. Fresh air and nourishing food are absolutely necessary, and often these alone seem to effect a cure. At Rainsford Island Hospital many cases of hip disease were formerly received; many in a very reduced and wretched state. These received little treatment beside plenty of plain, wholesome food and plenty of fresh sea air, and the number of recoveries was remarkable. It is often difficult to decide whether there is a loose sequestrum in the joint, though bare bone can be easily recognized. Bony crepitus is not always obtained after etherizing, as the joint is filled with granulations. No one doubts that excision is the proper treatment in desperate cases; but it should be borne in mind that the disease is apt to recur in the shaft of the femur after the head has been excised; that the limb after a spontaneous cure is almost always stronger; and that there is less shortening and greater power of eversion than after excision. If openings are made they should be large, and free drainage should be encouraged.

Dr. Bradford spoke of the peculiar liability of children with hip disease to carbolic poisoning, and mentioned a case where the drip was employed after excision, the death of the patient being undoubtedly due to carbolic absorption. No bad effects have been noticed in a large series of reported cases where a solution of corrosive sublimate had been used, except slight diarrhœa in two cases, supposed to be due to absorption.

Dr. Cabot spoke of the beneficial effect of iodoform in the treatment of local tuberculosis, it having almost a specific action upon the tuberculous granulations. He had used it in comparatively small quantities, dusting it on and injecting it in oily solutions.

NEW YORK NEUROLOGICAL SOCIETY.

Regular meeting of December 4, 1883. Dr. William J. Norton, President, in the chair.

Dr. George W. Jacoby read a paper upon

NEUROTIC AFFECTIONS ACCOMPANYING JOINT LESIONS.

The history of the subject goes back as far as Hippocrates, by whom it is mentioned. John Hunter was the next to take any note of it, and it is with him that originated the sympathetic theory. Malgaigne, 1826, and within the last ten years, Weir Mitchell, Duchenne, Verneuil, Sir James Paget, and Charcot and his pupils, comprise the list of names that have cast light upon the subject. The experiments of Valtat show conclusively that as a result of injury to the articular or even to the periarticular tissues produced by irritant injections the muscles of the entire limb, but more particularly the extensors of the joint, become atrophied. The result of the experiment given in the paper, as shown by the autopsy, is that the extremity which was experimented upon lost eighty grammes in weight in twelve days, and that each and every muscle separately weighed less than its corresponding fellow of the left side.

The affections which most frequently follow joint disorders are paralysis and atrophy of the muscles and hyperplasia of the subcutaneous connective tissues. More uncommon are anæsthesia, hyperæsthesia, analgesia, hyperalgesia, and neuralgias.

Three groups of nerve functions are implicated: motility, sensation, and nutrition. Symptoms are, after the joint lesions, a change in the appearance of the limb. The extensor muscles are generally the ones involved.

There is a change in the electrical reaction of the muscles, their contractile power is diminished, and finally lost. There is no reaction of nerve degeneration, no reversion of the normal contraction formula. This is also most noticeable in the extensors. The paralysis may appear as early as twenty-four hours after the accident; may also appear very late. The hypertrophy of subcutaneous connective tissue seems to stand in a direct ratio to the atrophy of muscular substance. The atrophy is ascending and progressive. Contracture is rare. The disorders of sensation are early symptoms, and differential diagnosis between these affections and progressive muscular atrophy may become difficult.

The conclusions which I am entitled to draw from the notes of thirty cases are: First. That in all cases except those involving the ankle or wrist-joint the muscles affected were the extensors of the diseased articulation. Second. That in those cases which involve the ankle or wrist-joint the affection is descending instead of ascending, and that the extensors are not affected to any greater extent than the other muscles. Third. That in cases of arthritis of any of the joints of the fingers the interossei muscles suffered first and most.

The cases which present particular interest are the following: —

Case I. Mrs. L., age thirty-four, while walking, slipped and fell, striking her right knee. The joint rapidly increased in size, and was very painful. The following day it was very much enlarged, the patella pushed forward, and fluctuation was distinctly noticeable. The joint affection improved rapidly, but upon the seventh day a distinct paralysis was noticeable. The movement of flexion of the leg upon the thigh was easily executed, but that of extension was performed with great difficulty. Patient could only by the strongest effort produce any contraction of the triceps cruris. As the effusion became absorbed the paralysis increased, and at the end of three weeks it was impossible for her to extend the leg at all. Atrophy was now well marked, showing a difference of three centimetres in favor of the healthy limb. The gluteal muscles were also involved. The electro-contractility of the muscles was decreased to both currents.

Case II. This case shows how soon after the injury paralysis and atrophy may ensue.

Patient, a laborer, age thirty-four, was struck upon the left knee on a Friday afternoon. He applied ice to the joint. The swelling went down. I saw him upon the following Monday, seventy-two hours after the injury, and then a distinct paralysis of the triceps cruris was noticeable, and atrophy was distinguishable upon the following Friday.

Case III. By this case may be seen how entirely disproportionate the effect may be to the cause.

Patient, L. H., merchant, age thirty. While walking his left ankle-joint turned, the outer margin resting upon the ground. Notwithstanding severe pain he continued his walk. Used the joint for several hours. When he examined his foot he did not notice any change in the appearance, but it was painful on pressure. After two months he noticed a slight weakness in the injured leg, which was particularly observable upon going down stairs. Four months after the accident I saw him. His condition was then as follows: His foot hangs with the toes pointing downward, and cannot be brought to a right angle with the leg. He walks upon his toes, and does not bring his heel to the ground. The toes may be easily raised, but they fall back again by their own weight. The interossei of the foot are atrophied. The peroneal muscles, the muscles of the thigh, are also involved. The gluteus maximus is evidently considerably atrophied, for a large depression takes the place of its former prominence. Added to this severe neuralgia of the sciatic and peroneal nerves rendered a condition almost unendurable.

The pathogenesis of the affection is still a disputed one. The sympathetic of Hunter, the pressure theory of various writers, the theory of functional inertia, then that of Vulpian, which is reflex, and finally those of Decosse and Charcot, are all incapable of satisfactorily explaining all of the cases.

The treatment, in order to be successful, must be varied and adapted to each special case. The chief agents at our disposal are: electricity, massage, mechanotherapie and hydrotherapie in the form of hot and cold douches. Massage in very many cases seems to deserve preference to the electrical currents. The effects produced by massage are: —

(1.) The diffusion of any articular effusion. (2.) The comminution of vegetations. (3.) The loosening and destruction of adhesion. (4.) Increase of circulation. (5.) Stimulation of muscular fibres.

In fact, all the agents above mentioned seem to act similarly by stimulating the nutrition of the affected muscles, by increasing the flow of blood to the parts, and perhaps thus causing a reflex excitability of the motor tracts.

After reading the paper the subject was thrown open for discussion. Dr. Charles Fayette Taylor said: This is a subject with which I have considerable familiarity, as all persons who are extensively engaged in the treatment of joint affections must have, but it is too large to even touch upon in many of its aspects, in the limited time at my disposal to-night, even if I had prepared myself for such a discussion by having previous intimation of the direction it would take. I should prefer to have the subject arranged before speaking of it, especially as I shall be obliged to differ from the essayist, both as to the pathology and treatment of the neurotic disturbances attending or following joint diseases of the character which he has set forth in the paper. In regard to the pathogenesis, I do not think it is necessary to adopt any peculiar theory, or to assume that even any special deviation from the ordinary course of nerve function takes place in order to account for all the facts observed in these cases. The difference is one of degree only. A person is attacked with inflammation of the knee-joint, for instance; this is rapidly followed by diminished size of the muscles controlling the action of that joint, with diminished and sometimes even with entire loss of muscular action. But loss of muscular action is by no means evidence of loss of muscular power. The nerve centres are unquestionably affected; but, most of all, the cerebral nerve centres are the seat of the greatest disturbance. No theory can be adequate which leaves the cerebral nerve centres out of the account, and the consequent mental element which plays, in my opinion, so important a part in these cases. The simple loss of muscular action, consequent on an attack of inflammation of the knee-joint, is sufficient to account for an immediate diminution of the size of the muscles whose freedom is curtailed. This is the certain result from mechanical restraint alone. But if, besides the mechanical restraint of position or retaining apparatus, there is added the mental restraint of fear, the difference in the rate and amount of muscular atrophy is enormously increased. Mental restraint acts similarly to an Esmarch's bandage; it squeezes the very life out of a muscle. As a very simple proof of the remarkable effect of mental restraint in causing muscular atrophy, let me mention those frequent instances accompanying disease of the hip-joint. These cases often apply with limbs attenuated to the last degree. That a large portion of the muscular attenuation, accompanying somewhat long standing hip-joint disease, is due to the mental restraint of motion, which might cause suffering, is proven by the fact that the application of proper mechanical protection, by which the mind is relieved of the fear of pain, is followed by immediate increase of muscular growth. This is so common and well-known a fact that advantage is constantly taken of it in the management of cases. My observation of the effects on the muscles of joint diseases must amount to some thousands of cases, and I never saw a case of atrophy which, in my opinion, could not be perfectly explained by non-use and mental restraint.

In regard to the therapeutics of muscular atrophy and loss of action following joint disease, I fear I must differ from the essayist quite as widely as in its pathogenesis. So far as the muscular wasting has been caused by non-use, during the progress of the arthritis, it is sufficient to set them to work again, after the inflammation has subsided. And, I may say, in passing, that muscles stubbornly refuse to act, or if forced to act, they as stubbornly refuse to develop during the progress of an arthritis. You must wait until the joint is well before you can expect the muscles to act readily enough, after there is no longer any joint affection, except for the restraint which is often maintained for a long time by mental impressions formed during the progress of the arthritis. It is astonishing to notice how deep and lasting the impressions made on the cerebral nerve centres may sometimes be. Whatever the treatment may be, I do not believe it can be of any direct service so long as there continues a mental restraint over the muscles; and it is equally true that whatever will remove such mental restraint will cure the atrophy. So important do we, in our practice, consider the mental influence over the muscles, attending and following joint diseases, that we take special pains to get and to keep the direction of that influence, for the very purpose of hastening the recovery of the muscular power, after curing the joint disease. But the object of treatment should be to divert the mind from the affected member rather than to keep up attention to it by local treatment. It is true that massage will sometimes seem to do much good to the atrophied muscles; but this is apparent and indirect rather than real and direct. Massage has elements of mental diversion and control, which may be properly and usefully employed. But, with a large experience in its use, I am free to say that I think it is very much overestimated as a direct therapeutic agency. Its direct effect on the muscles is very slight, and what there is is not exercise. Exercise involves nerve action as the initial force. Massage merely assumes to promote the forward displacement of a certain small portion of the tissue fluids. But such propulsion of the fluids contained in the soft parts, even if effected, is not exercise nor a rational substitute for exercise. Only by the legitimate use of the nerve centres, especially of the cerebral nerve centres, can there be any action deserving the name of exercise. To regulate such nerve centre function, when disturbed by the strong impressions made by joint inflammation, is the indication presented in the cases under discussion. In most cases time alone is sufficient. In others, any means which effects a diversion of attention, whether done to the affected member or at a distance from it (which is the safer plan), will effect a cure. Incidentally, massage, electricity, the manipulations of the so-called "bonesetters," as well as the "animal magnetism" of the more arrant quacks, all do appear to produce wonderful results in a certain number of cases. The results are real, but are not produced through any direct effect on the parts, but through the incidental impressions made on the cerebral nerve centres; that is, on the mind. The worst of it is that in a large number of these cases direct treatment to the part affected by the mental restraint tends to increase the mental impressions, and to indefinitely postpone that unrestrained action of the muscles by which alone they can regain their power. The most difficult cases within my experience have been those who have had their attention to the affected member kept up by too much local treatment after the joint inflammation had passed away.

Dr. L. Weber has seen some cases of muscular atrophy following joint disease, and remembers one in particular which may be of interest to the Society.

Mr. J. W., age thirty-two, merchant, of nervous temperament, but strong and active, made a tour through

Switzerland in the summer of 1870. Being a good pedestrian, he traveled mostly on foot, but after a severe Alpine tramp in the upper Engadine he was taken with synovitis of the right knee-joint. When the effusion had passed away the extensor muscle above the knee had wasted considerably; the patient was unable to walk, and reached New York with difficulty. On examination the joint was found to be in good order again, but the atrophy of extensor muscle was still very marked, and the patient, by the support of a cane, walked, but not without difficulty. A four weeks' course of faradization made no appreciable change, and although he was assured that he would regain the use of his limb completely in the course of time, he was not satisfied, but grew despondent, and finally left for Europe to consult Professor Erb. The latter told him the paralysis was not in his limb, but in his mind, that he should go about and exercise and live well and he would soon again regain the full use of his muscles. He followed the doctor's advice, and returned to New York early in the spring of 1880, in perfect health. As to the pathogenesis of the disorder, the doctor believes that the muscular paresis and atrophy in the case reported and in others of a like manner is of reflex origin, and that functional disturbances of motor centres in the brain, and not in the spine, is probably the cause of the trouble.

Of massage and its effect in such cases, as reported by the author of the paper, he has no personal experience, but has seen excellent results from its proper application in sub-acute joint diseases, muscular rheumatism, and bad sprains.

DR. E. C. WENDT said that the paper had brought out several points of interest, especially as regarded ætiology, symptoms, and the hopefulness of treatment. He was sorry to find, however, that the reader had nothing new to offer in explanation of the pathogenesis of these conditions. Admitting the correctness of Sappey's views concerning the richness in nerves of the articular and periarticular tissues, it certainly seems thoroughly puzzling why acute polyarticular rheumatism was not more frequently followed by just such accidents as Dr. Jacoby had described. Again those more chronic joint manifestations dependent upon the gouty diathesis, where profound structural alterations were frequently observed, only quite exceptionally led to atrophy, paralysis, and to other neurotic disturbances alluded to.

Upon these points he was sorry to find that the paper under discussion left us as much in the dark as we had been before.

With regard to massage, although his experience was limited, it was yet sufficient to fully convince him of its utility in certain cases. Of course, there is massage, and massage. But when properly and systematically applied it is useless to try now to dispute its beneficial action. The combined experience of a large number of competent men placed its usefulness beyond the pale of doubt.

DR. HEITZMAN said: When I was a student in Vienna a girl, twenty-five years of age, fell down stairs and acquired serous gonitis, after which she was paralyzed and confined to her bed for five years. She was sent to a water cure. A physician there urged her to walk in order to enable him to judge about the degree of the disease, but she began crying, and said she was unable. She went home in despair; her sister asked her to make at least an effort to walk. After considerable urging she got out of bed and walked. This illustrates that mental influence has much to do with these affections.

I would call the attention of Dr. Jacoby to an article by Dr. Micoladoni, published in 1871, in the *Wien. Med. Jahrbücher.* I have seen his specimens with the nerves brought out by the use of chloride of gold, and, from my observation, I am convinced that these terminal nerve fibres are not stable and unchangeable formations, but, on the contrary, new nerve fibres may form at any time of life from the living matter present in all tissues.

I am thoroughly convinced that nerves may disappear and appear, according to certain physiological necessities, certain physical conditions of the body, such as, for instance, results of exercise.

In an inflammation of a joint, the synovial and capsular wall being the seat of pathological changes, of the breaking down of the tissue, certain nerve fibres of the sensitive sphere will be within its range, and we should know that a certain number of them perish altogether.

Dr. Jacoby to-night did not give a theory of his own, but he quoted various authors. It certainly was the best plan for him to pursue, as so very little is known even in our day about nervous action.

We know that by the inflammatory destruction of a number of sensitive nerve fibres in the capsule of the joint at once three spheres are involved: the motor, for there is paresis or paralysis; the sensory, for there is pain; and the vaso-motor or trophic, for there is emaciation.

So far as my insight goes I am convinced that the living matter in a reticular arrangement produces the gray matter and all essential portions of nerves, including the axis-cylinder. This fact is thoroughly acknowledged by Professor Stricker at Vienna.

There may be loss of living matter of certain nerves, in consequence of inflammation, and loss of contractility, with impaired conduction towards the centre. We then have comparative rest in a limited portion of the spinal cord, or even the brain, for the reticulum of living matter is set at rest for a time, without there being a material change in the living matter of the gray substance and ganglionic elements.

If massage will reëstablish the activity of muscles we are prepared to understand that the field in the spinal cord before out of action may at once be brought in motion, and the motion communicated at once to the motor ganglia and all the sympathetic centres, which are situated along the spinal cord, as physiologists agree upon. The nervous action may for a certain time be impaired or dulled, because the reticulum of living matter is in comparative rest, lacking an impulse from without. So soon as such an impulse is carried to the resting portion, either by mental action, energetic will, or by mechanical shock, such as is done in massage, or in any other way, the contraction of the living reticulum is induced, and the normal condition reëstablished. Neither the assumption of centripetal neuritis nor the theory of reflex-action can explain the phenomena observed after the inflammation of articulation and their sometimes speedy cure.

DR. HENRY LING TAYLOR said: I can contribute a case showing the beneficial effect of the use of the body battery. A woman, under the care of Dr. J. West Roosevelt, at the Roosevelt Hospital Dispensary, of middle age and neurotic personal and family history, presented, among other symptoms, that of prickling sensation down right arm and in right hand. There was no joint trouble. Dr. Roosevelt and myself regarded it as one of the neurotic disturbances incident to a person of her temperament. The body battery was tried for its psychical effect, and the woman returned in two days with the abnormal sensations gone. The symptoms had lasted a considerable time. The same treatment was applied to her hand without effect during the week she has since been under observation. I regard the result in this case as entirely due to mental influence.

Before concluding my remarks I wish to speak of an interesting class of cases alluded to by Dr. Gibney, the pseudarthroses. We have in these cases nearly or quite all the symptoms enumerated by Dr. Jacoby in his paper, atrophy, hyperæsthesia or anæsthesia, etc., following mental restraint, there being no affections of the joints. I regard the trouble as functional, and seated mainly in the brain, and not in the spinal cord as Dr. Gibney believes, if I understand him. Almost anything calculated to make a profound impression on the higher nerve centres will often prove curative in these cases. This is, in my opinion, one of the most important effects of massage.

I have in mind three cases of ankle trouble following sprains, seen three to five months after injury. The acute symptoms had subsided, but pain, tenderness, and such impaired function as to cause limping persisted. These patients had been treated with supports, etc., for several months. Physical examination showed no local trouble not readily explained by mental condition. There had been recovery from the sprain without a corresponding readjustment of the nerve centres to the new condition. The patients were perfectly and rapidly cured by purely psychical treatment. I do not doubt that massage often accomplishes the same result through its psychical effects in similar cases, but it is an empirical method as generally employed.

Dr. Garrigues said: What little experience I have had with massage is in its favor, but that is almost nothing compared with that of Dr. Taylor. Nevertheless I have used massage for ten or twelve years. I became acquainted with it when quite new, and have found it most excellent for secondary conditions and for treatment to which Dr. Jacoby alludes.

Dr. Morton said a few words upon the subject of the continuous body battery and its use. The battery consists of a simple pair of elements. I well recollect a case in which I used this with good effect. A gentleman came to me with chronic arthritis. Associated with it was paralysis of the extensor group of muscles; the foot was dropped and the toe dragged. He said no form of electricity that he had tried had done him any good. I told him that I would give him a battery which he could wear all the time, which consisted of pieces of silver and zinc connected by copper wire. The zinc was shifted about upon different parts of the body; a constant current was kept up, which could be tested at any time with ordinary litmus paper. While under alkaline treatment the battery worked with better results, the excretions being saline.

This battery is also useful in the treatment of chronic ulcers; the granulations formed will be found much more healthy. It is also beneficial in chronic eczema. This much he would add to the practical part of the paper, since the main question after all was treatment.

Dr. Gibney said that at times it is very difficult to determine whether the atrophy precedes or follows joint diseases. It is his opinion that it is more frequently the accompaniment of epiphyseal disease than joint disease proper, and he wished to emphasize the fact — for a fact it is according to his observations — that the majority of grave lesions about joints in childhood was epiphyseal, in other words, a chronic epiphysitis. Synovial disease he believes to be rare. If one examined a hip, for instance, said to be the subject of disease, marked atrophy is usually found in the thigh and calf muscles long before any pronounced joint symptoms are presented.

The atrophy, he further stated, is confined to the muscles and not to the bony tissue. For it is a rule that in chronic epiphysitis, about the knee for instance, the epiphysis is actually elongated. He, in common with many other orthopædists, has long since regarded acute atrophy as one of the most constant signs of chronic articular ostitis, and he believed the atrophy to be purely reflex, and not the result of disease or of the pressure from apparatus or bandages.

One argument brought against mechanical treatment, namely, that atrophy was produced, is fallacious. The clinical history of these bone lesions proves this conclusively.

He was not sure whether chronic synovitis induced atrophy, but he was very positive in stating that in acute synovitis atrophy was rather the exception than the rule.

A class of cases presented certain neuroses which were very valuable in excluding bone or joint disease. These are known as spinal pseudo-arthropthy, and known furthermore as neurosis of the joint, neuro-mimosis, hysterical joints, Brodie-joints, etc. The neuroses referred to were neuralgia, hyperæsthesia, anæsthesia, but rarely any atrophy. He believed that they had their origin in the spinal cord and the meninges, and the readiness with which they responded to spinal treatment confirmed him in his belief.

Furthermore, the neuralgia of chronic articular ostitis of the hip is well known, and the knee branch of the obturator is never affected early, and very often late in the disease, although this is denied by some writers, and especially a recent writer, Dr. Clippingdale.

In some of the most advanced cases of caries of the hip this obturator neuralgia is very distressing. Very frequently the sciatic nerve is involved, and in some cases narrated, especially one in a young lady with old disease at the hip, the sciatica was most distressing, and yielded very poorly to drugs and electricity.

The question of paralysis and degenerative nerve changes being sequences of chronic arthritis was one about which he did not feel fully convinced.

He referred to a case of chronic arthritis of the knee in an old woman who had paralysis of most of the muscles of the thigh and leg, and it was thought by some who saw the case that the paralysis was dependent on the joint lesions, but the proof was not by any means conclusive.

Dr. Jacoby said: The first point to which I desire to reply is that brought forward by Dr. Taylor. He said that he believed these nervous changes, particularly the paralysis and atrophy, were produced by psychical or mental influence, and that they might be relieved by attention to this point. I am at considerable variance with him as regards the effect that mental influence has in the production of these disturbances. I for my part cannot understand how mental uneasiness can produce an atrophy, which is easily diagnosticated by the tape, of a certain muscle, and that in the short time of three days. But, as the doctor has promised us a paper upon this subject, perhaps that will succeed in convincing me.

As regards the opposition which the massage treatment has received, I expected it would receive more. Massage has, especially in the United States, been very much in the hands of non-professional men, and consequently has been greatly abused and misapplied. But I hardly think there can be any question as to its efficacy in suitable cases and when properly applied.

The theory advanced by Dr. Heitzman is very similar to that of Professor Charcot, who, as I mentioned in the paper, believes that certain parts of the cord are in a state of inertia or stupor.

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MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

PREVENTION OF PUERPERAL INFECTION.

At the December meeting of the Society, held Friday evening, the 21st, Dr. H. J. Garrigues read a paper on the above subject. It was mainly devoted to an account of the manner in which puerperal septicæmia had been eradicated under his management from the wards of the Maternity Hospital on Blackwell's Island. This is in connection with Charity Hospital, to which all obstetric patients were transferred from Bellevue Hospital about the year 1875.

In this year the number of confinements was 515, and the deaths, fifteen, a mortality of 2.67. In 1876 there were 536 confinements and twenty deaths, a mortality of 3.73. In 1877 there were 480 confinements and thirty-two deaths a mortality, of 6.67. In 1878 there were 225 confinements and seven deaths, a mortality of 3.11. In 1879 there were 254 confinements and eleven deaths, a mortality of 4.40. In 1880 there were 149 confinements and eight deaths, a mortality of 5.37. In 1881 there were 382 confinements and nine deaths, a mortality of 2.31. In 1882 there were 439 confinements and fourteen deaths, a mortality of 3.25. While some of these deaths were attributable to other causes, the great majority of them were due directly to hospitalism. For a few years past separate pavilions had been used for the lying-in patients, but the mortality had still continued large.

In the first three months of 1883, when Dr. Garrigues was placed in charge of the wards, there had been 108 confinements and no less than eleven deaths. During the six months of his service, from October 1, 1882, to the end of March, 1883, 182 women were confined, and of these forty-six, or about one in four, were seriously sick. Thirty-nine of the number, or about one in five, suffered from inflammatory puerperal disease. On the 1st of October, 1883, he again came on duty, and found the condition of the hospital much the same — nine patients having died within the past month, and several of the women being still very ill. In the meanwhile the bichloride of mercury had come to be [illegible], and he resolved to give it a full trial; but at the same time he thought it well to adopt other precautionary measures in addition.

In the first place: he divided the hospital into two departments: one for the well, and the other for the sick, with separate physicians, nurses, and instruments. He employed rapid alternation in the use of the wards, and each patient was allowed to remain eight days in the pavilion where she was confined, when she was removed to the convalescent ward. The doors between the wards were kept locked, all chinks were filled up, springs were placed on the doors of the water-closets, and solution of bichloride of mercury used freely everywhere. As soon as a ward was vacated it was fumigated; twenty pounds of sulphur being burned for this purpose in the larger wards, and fifteen pounds in the smaller. When it was again occupied every piece of furniture was washed with a solution of the bichloride of mercury (one to 1000), and fresh bedclothes and new straw for the beds were provided. Large demijohns of the solution were kept standing in all the wards, and for the hands of the physicians and attendants it was used undiluted, except in cold weather, when a small quantity of warm water was added to it. For use about the patient's person it was diluted one half, very hot water being employed for this purpose in cases of post-partum hæmorrhage.

When labor was coming on the patient was given an enema and bath at first, after which at least two quarts of the bichloride solution were injected into the vagina by means of a fountain syringe. There was a large glass vessel, with which was connected a long rubber tube, at whose extremity was a straight glass tube for the vagina. When it was necessary to use intra-uterine injections a curved glass tube was employed. In tedious labors the vaginal injections were made every three hours. At the beginning of labor the physician and nurse were both required to wash their hands thoroughly with soap and water by means of a large nail-brush, after which they were to allow their hands to remain in the bichloride solution for a minute or more. In case of more than one patient being taken in labor at the same time, the hands were to be treated in the same manner before passing from one patient to another. No other lubricant than the bichloride solution was employed, except in case of operation, when glycerine was used with the solution; glycerine itself being a good antiseptic. When the child's head appeared at the vulva it was covered with lint wet with the solution, and after the expulsion of its body the genitals were kept carefully covered. The placenta was expelled by Credé's method. Intra-uterine injections were resorted to only in cases where it had been necessary to introduce the hand or instruments into the cavity of the uterus. No portion of the placenta or membranes was ever allowed to remain in the uterus, as it was considered safer to introduce the whole hand into the uterus, if necessary, than to run the risk of hæmorrhage or septicæmia from this cause. The curved glass tube used for intra-uterine injections was fifteen inches in length, and had a large opening at the end, while there were eight smaller holes at the side. It differed from the Chamberlain tube in having the orifice at the extremity and a greater number of holes at the side, while its calibre (a quarter of an inch in diameter) was considerably smaller. On account of its small size it could be used at a comparatively late period, when the os uteri had become considerably contracted. The opening at the end permitted the stream from the syringe to impinge directly against the fundus, and by means of the numerous holes at the side, which were all within a distance of four inches from the extremity, the walls of the uterine cavity were thoroughly washed with the antiseptic solution. When used directly after labor it was held in position by means of the fingers; but if at a later period, and there were any signs of inflammation present, a Cusco speculum was first introduced into the vagina. If there were any diphtheritic deposit (which had hitherto been found very likely to occur at the Maternity Hospital), it could be thus seen to advantage, and the tube could be introduced into the uterus through the speculum.

After every labor the vulva was covered with a piece of lint six by eight inches folded lengthwise, so as to make its width three inches, and over this was placed a piece of oiled muslin nine by four inches. Over this again was placed a large pad of oakum; the whole dressing being kept in position by means of a piece of muslin eighteen inches square, with all its sides folded over, so as to form a kind of boat, which was then pinned securely to the binder in front and behind. This dressing was put on with the same special care that would be used in dressing a wound after a capital operation, and it was changed four times in each twenty-four hours. Before making the change the nurse was always required to use the precautions in regard to her hands alluded to above. When this plan was pursued preventive injections were unnecessary, and thus one of the greatest dangers from infection was avoided. During the eight days that the patient was in the lying-in pavilion no visitors were permitted to see her, and this rule extended even to clergymen, unless the patient were seriously ill.

Carbolic acid was used only for instruments, the solution of bichloride of mercury corroding the metal, and also becoming weaker itself in consequence. In two or three instances the bichloride had produced slight eruptions upon the skin, but in no case had the drug been abandoned on this account, and in no case had it produced any general symptoms. Some of the nurses complained of sore hands caused by it at first, but the difficulty was quickly remedied by the use of glycerine. The lochia were kept entirely sweet by it, and the use of the drug was always continued as long as the patient remained in bed.

As to the results obtained by the plan of treatment thus described, from the 1st of October up to the present time there had been ninety-seven women confined, and not a single one had died. Six had been more or less sick, but only one had been seriously ill. This was a case of eclampsia. Three cases of metritis and two of perimetritis made up the six. In two only had there been any rise of temperature, although some of the labors had been severe, including two versions and one craniotomy. Formerly, on the other hand, there had been more or less rise of temperature in from one third to two thirds of all the cases of confinement. In short the pavilions were scarcely recognizable now by those who had previously been familiar with them. Instead of being filled with foul air the wards were pure and sweet, the physicians and nurses were no longer overworked and anxious, and the patients were bright and cheerful instead of despondent and foreboding.

Bichloride of mercury possessed several advantages over carbolic acid, among which were the facts that it was a much more efficient antiseptic, and that it was an excellent deodorizer while being free from odor itself. It also affected the hands much less unpleasantly than carbolic acid. It might be objected to the paper, Dr. Garrigues continued, that the time during which the plan of treatment described had been tried had been too short to prove anything. But the change in the condition of the patients and the wards had been so sudden and so remarkable that he thought it could be attributable to nothing but this, and he believed that the same results could be continued indefinitely if the same attention to detail was maintained. The great factors in the success, in addition to this careful attention to detail, were the use of the bichloride of mercury and the exclusion of air.

Dr. Murray was the first speaker who took part in the discussion which followed the reading of the paper. The latter had been especially interesting to him, he said, because he had been Dr. Garrigues' immediate successor as visiting physician to the Maternity Hospital. During the three months of his service there had been ninety-six confinements with fourteen deaths. Four of the fatal cases, however, were not due to the results of labor, so that the mortality from hospitalism was eight out of the ninety-six. The form of puerperal fever which had prevailed was very similar to that which had been met with in Bellevue Hospital about ten years ago, and was frequently characterized by diphtheritis. Puerperal peritonitis was very seldom seen. The diphtheritic deposits would commence at the vulva and gradually extend up the vagina, but rarely into the interior of the uterus unless the case were protracted as long as two weeks, when this result was liable to occur. The symptoms were not very well marked at the commencement of the attack, and the pulse did not often run above 100 during the first few days. Afterwards it was very apt to be intermittent. With the appearance of the diphtheritic deposit typhoid symptoms usually became developed, and in some cases the patients sank into a semi-comatose condition. In a certain ward the women almost invariably had diphtheria, and notwithstanding that it was disinfected as perfectly as possible the same result was noticed afterwards when it was reoccupied. When Dr. Garrigues came on duty he had the advantage of a new ward, which had not been used for a year, and this he thought might have had something to do with the results shown. When the lying-in wards had been in Charity Hospital it was always noticed that when a new ward was taken possession of there was a marked improvement for about a week. Still he questioned very much whether the immunity from mortality was due to this cause alone, and was disposed to give Dr. Garrigues full credit for the efficient system for the prevention of infection which he had inaugurated. In private practice he thought all this minute attention to detail was unnecessary, though the main features of the treatment might be carried out with advantage. Before concluding, Dr. Murray spoke of the inefficiency of carbolic acid in the treatment of puerperal diphtheria. As soon as the slight slough which was caused by its application had come away he had often noticed the diphtheritic deposit to spread to all the points which the acid had touched, and he had seen the patches appear just the same after patients had been actually cauterized with it.

Dr. Wylie referred to a paper which he had read before the County Society about six months ago, and said that he commenced to use antiseptics in midwifery when an interne of Bellevue Hospital in the year

1871. He attended thirty-six cases of confinement while serving in the lying-in department, and there was not a single case of puerperal fever among them. The only death that occurred was due to convulsions. He had observed the same measures in his private practice ever since, and had never had but one case in which there was a rise of temperature during the first few days after delivery. When there had been any febrile movement it had occurred after the eighth day, and had been due to mastitis. He was in the habit of washing out the vagina with a solution of carbolic acid of the strength of one to fifty, or more often of one to thirty, and also of carbolizing the bed linen; while he always insisted on having two sets of blankets and at least thirty-six napkins for the use of the patient. He would now try bichloride of mercury instead of the carbolic acid. In conclusion, he said that he could not agree with Dr. Murray in regard to there not being the same necessity for taking every precaution against the occurrence of infection in private practice. A physician might have the most uninterrupted success for a long time in his obstetric practice, and yet septicæmia at last make its appearance.

Dr. Gillette stated that he had been connected with the maternity service on Blackwell's Island for twelve years, and that he had sole charge of the lying-in wards of Charity Hospital when the obstetric patients were transferred from Bellevue Hospital. For years puerperal fever had been epidemic at Bellevue, and all efforts to break it up had proved futile. At last the mortality became so great that it was determined to discontinue the lying-in service there entirely, and, accordingly, forty women were removed to Charity Hospital. They were all saturated with the influences that had prevailed at Bellevue, but under the counteracting influence of extraordinary cleanliness only one case of puerperal fever occurred among them. Nothing was known of Listerism then, and no special antiseptic treatment was employed except carbolic acid baths. He thought there could be no question of the importance of all the suggestions which Dr. Garrigues had made, but there might be some discussion as to the methods which he proposed. The latest germicide to attract attention had been the bichloride of mercury, and so at the present time everybody was expected to bow down to it, although he was not as yet convinced that it was of more value than some other antiseptics. In regard to Dr. Garrigues' vulvar dressing, he could see theoretically how it might do good, but practically he did not believe it was of any service, for the simple reason that it could not be kept in absolute contact with the parts to which it was applied, and, consequently, there must be plenty of room for the entrance of any germs that might be in the air. The great secret of the success which had been reported he believed to be perfect cleanliness, and he was also disposed, like Dr. Murray, to attribute it in part, at least, to the fact that Dr. Garrigues had commenced in a new institution.

Dr. Alexander T. Hunter made some remarks, in the course of which he spoke of the superior advantages of the tube devised by Dr. George H. Lyman, of Boston, in cases where it was desirable to resort to intra-uterine injections; after which **Dr. Baruch** said that he was glad to hear the author of the paper speak against the use of prophylactic antiseptic injections after normal labor. For himself, he could only condemn them in the most unqualified manner. During the last twenty years he had attended about nine hundred cases of confinement, including every variety of complication, and had had but one death which was preceded by febrile symptoms. Even this one was not due to any septic influence. It was only since Dr. Wiley had read the paper before this Society to which reference had been made that he had tried the use of prophylactic vaginal injections, and he was sorry to say that his experience with them had not been at all favorable. In no less than six cases, in all of which the women were faithfully syringed, he had seen fever which was undoubtedly of septic character occurring in from five to eight days after delivery. He then went on to say that there was a distinct reaction against the use of such injections now taking place in Germany, and that they seemed to him to be objectionable on the following grounds: (1.) He believed that the lying-in patient ought to be kept as quiet as possible, and the injections interfered with this. (2.) It was impossible to give them without subjecting the patient to a certain amount of pain and exposure. (3.) Very few nurses know how to give injections properly. (4.) They were liable to displace clots and thus open avenues for auto-infection. (5.) They might also loosen adhesions. In his opinion simple cleanliness before, during, and after labor was all that was necessary.

Drs. F. V. White, J. P. Garrish, and **J. C. Peters** then spoke, and **Dr. Garrigues** brought the discussion to a close. In the course of his remarks he said that while one of the wards was new the others had been in constant use, and had previously contained many fever cases. There were three wards occupied by the lying-in patients in rapid alternation. The vulvar dressing had been devised with special reference to the shape and size of the parts to be covered by it, and he thought that if applied with proper skill it was efficient in excluding septic germs.

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PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

Thursday evening, December 13, 1883. **Dr. J. H. Musser** in the chair.

ENORMOUS HYPERTROPHY OF THE HEART (WEIGHING FORTY-EIGHT OUNCES).

Charles W. Dulles, M. D., reported the case.

The patient from whom this specimen was obtained was a young man, eighteen years of age, who came under my care in February, 1882, in an attack of muscular rheumatism, principally affecting the shoulders. I found at that time great oppression of breathing, a heart dilated and hypertrophied, with a harsh, strong, mitral systolic and presystolic murmur. His urine contained bile coloring matter, great excess of urates, great lack of chlorides and phosphates, and no albumen or sugar. In the sediments only amorphous urates were found. The treatment employed included the administration of infusion of digitalis, with iron and strychnia. At one time, believing it might benefit the violence I attributed to the real hypertrophy, I gave him veratrum viride. But it did no good. I did, however, get apparently good and prompt relief from some of the symptoms by the use of iodide of potash, in twenty-grain doses, thrice daily. After using this for a week, I noted in my case book: "Sleeps well;

eats well; feels well; cough very slight; urine clear; pulse better; *cannot hear the old murmur* (perhaps barely); both heart sounds audible and pretty clear; action of heart fair." (It had been very tumultuous.) After six weeks of doing well the patient had a new attack of uneasy stomach, dyspnœa, and more or less cyanosis. On the night of May 10th he had a frightful attack of dyspnœa; I gave him one fifth grain of muriate of pilocarpine hypodermically (in the left arm), under the influence of which he sweated, but had no salivation. The next day he had a large œdematous swelling of the left side of his neck, below the jaw, and reaching to the middle line in front. This increased up to the evening, and gradually subsided in three days.

About this time fluid began to accumulate in the abdomen and thorax, and there was, of course, œdema of the feet and legs. There was also heard now a most beautiful water-hammer pulse over the femoral arteries below Poupart's ligament. The pulse here was intermittent and had a reduplicated sound like this . —, . —, . —, . —, etc.

Three weeks later another severe attack occurred, and again about three weeks after this. There were now in his urine considerable albumen and hyaline tube casts. When his attack came on, which was at night. I gave him one third grain of the muriate of pilocarpine hypodermically, which produced free sweating and brought out about two fluid ounces of saliva. His pulse came down from 140 to 100 in half an hour. But the dyspnœa abated only temporarily; the restlessness continued; the cyanosis increased; the respiration varied from 35 to 60 per minute; then his bowels moved involuntarily, his lungs seemed to fill up with œdema, and he died asphyxiated.

The autopsy was made the next day, with the assistance of Dr. Formad and Dr. J. H. Musser. The points of interest were as follows: General œdema of feet and legs; the face and neck and chest covered with purpura-like spots and patches. The abdomen contained about two quarts of clear serum; each pleural cavity nearly as much. The lungs were normal but small, and occupied the upper part of the chest. They were quite œdematous. The liver was slightly fatty, the spleen was of normal size, but very hard and tough. The kidneys were large, congenitally lobulated, and in a state of cyanotic hypertrophy.

The heart was enormously hypertrophied, weighing, when all the adherent parts were removed, forty-eight ounces. The pericardium was so uniformly attached to it that it could not be removed, and there was absolutely no pericardial cavity. The right ventricle contained about six ounces of soft post-mortem clot. The left side contained about two ounces similar. After the heart had been opened and well washed it weighed forty ounces. All the valves and blood-vessels were healthy. The tricuspid and aortic valves were quite competent. The mitral orifice was enormous — measuring two and a half inches across. Every part of the heart was hypertrophied, and all to about the same degree. The whole organ, which I here show, was about the size of that of a bullock.

The points of interest in this case — aside from the curiousness of the specimen — seem to me to be the comparative immunity of the kidneys; the absence of signs of adherent pericardium; the benefit derived from the use of iodide of potash; the temporary disappearance of the very strong mitral systolic and presystolic murmur; and the parotid swelling, following the hypodermic injection of pilocarpine in the arm of the same side. Dr. J. H. Musser remembered distinctly the case both before and after death. He had marked out on the chest the dimension of the heart and made it out as enormous, extending especially to the right. Furthermore, he thought that there was a double mitral murmur. The only apparent cause for the hypertrophy was the adherent pericardium. He would like to know what Dr. Henry thought of the correctness of this explanation.

Dr. F. P. Henry said that the heart presented was remarkable not only for its enormous size but also for the absence of the usual causes of cardiac hypertrophy, there being neither valvular disease nor obstruction in any part of the circulation. During his student days he had seen some very large hearts in the collection which Prof. Alonzo Clarke was accustomed to show to his class, but would not trust his memory so far as to affirm that any one of them was as large as the one just shown.

Dr. MacConnell had seen a case in a member of the Modjeska troupe where post-mortem examination showed an enormously hypertrophied heart with adherent pericardium and markedly granular kidneys. In this case the hypertrophy was clearly due to the kidney trouble.

Dr. Formad thought that Dr. Dulles' case was unique as to size. Dr. Robinson, of New York, had recently reported a case of hypertrophied heart, weighing fifty-six ounces, but Dr. Dulles' specimen was weighed after removal of clots, etc.

Dr. Musser asked whether other members of his patient's family had not hypertrophied hearts without valvular lesions. If such was the case, taking into consideration the age of the patient, it would be well to consider the probability of the hypertrophy being in part secondary to the pericardial adhesions, in part idiopathic in origin.

Dr. Dulles said that there was a tendency to hypertrophy of the heart in one sister, and that the murmur at times was double.

(*To be continued.*)

— In the duty of the medical journalist to welcome the coming, speed the parting guest, it falls to our part to chronicle the demise of the *Archives of Laryngology*, which we do with regret, and to announce the appearance of *The Analectic*, a new periodical designed to select and analyze the essential items of medical progress from the publications of this and foreign countries.

— *The Archives of Medicine* has also suspended publication after a satisfactory existence of five years. It is to be regretted that this journal, which has filled a valuable place in supplying purely original material to its readers, is obliged by a combination of extraneous circumstances to retire from the field.

— The *Illustrite Monatsschrift der ärztlichen Polytechnik* and the *Centralblatt der orthopädeschen Chirurgie* will hereafter appear as one publication.

— Mr. P. T. Barnum has been making a will, disposing, it is said, of some $10,000,000, and has called a number of physicians to give evidence of his mental soundness at the time of the execution of the instrument.

Medical and Surgical Journal.

THURSDAY, JANUARY 3, 1884.

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ANNUS MEDICUS INCIPIENS.

As last week brought the annual duty of summing up the medical events and results of the year which has just left us and contributing thus, it is to be hoped, to his euthanasia, so this week brings the no less periodical pleasure of wishing to our friends all they desire of good during the new year upon which we are all just entering. Hope, that best though delusive companion, is again starting trippingly on the journey as though she had never misled and even abandoned those who confided in her guidance; may vigor and perseverance be added to the company, enabling it to attack new questions and bring old ones to happy conclusions. There are plenty of dragons still to be slain, captives to be rescued, and rough places to be made smooth.

Were not the spirit of prophecy such a dangerous one to imprison in print, we might outline the present medical year as we have the past, at least in so far as the one inherits from the other.

Contributions will be made to the facts upon which the germ theory of disease is based, and the significance and scope of that theory will be somewhat more clearly defined. The Collective Investigation of Disease will be carried forward in England, on the Continent, perhaps in this country, and the methods by which the greatest advantage may be drawn from it will be gradually evolved. Both our own continent and that of Europe will be somewhat occupied next summer in guarding against any dangers from the relics of this year's epidemics of yellow fever and cholera, the present course of events in Egypt rendering a revival of cholera by no means improbable. Congress will discuss the value and functions of a national board of health, and, we will predict, while acknowledging the desirability of having a national board with a tolerably broad basis of representation, will leave the administration of maritime quarantine matters to the Treasury Department, assigning to a board of health the duty of pursuing and directing investigations of abstract hygienic problems which confront us as a nation and as individuals, and of making sanitary surveys. The possibilities and limitations of quarantine will probably in any case attract much discussion abroad as well as at home.

Congress will in its wisdom make an appropriation to provide the Army Medical Museum and the Medical Library of the Surgeon-General's office at Washington with a fire-proof building.

The medical societies of the different States will not allow the *Index Medicus* to become extinct.

Massachusetts will restore, or will prepare to restore, her Board of Health to its existence as a separate entity, and will simplify the organization of the complex body now known as the Board of Health, Lunacy, and Charity.

There will be a sharp contest in her courts and Legislature over the enforcement of the law to prevent the adulteration of food and drugs, in which the rights of the public to be protected will eventually prevail over the desire of the manufacturers to be rich.

The system of medical examiners obtaining in this State will receive favorable consideration in other States, warning the old coroners to withdraw.

In the domain of therapeutics the synthetic process in the chemical laboratory may have surprises in store for us.

We risk less in averring that medicine will again be robbed of some good followers, whose places will be taken by others now less known.

In the above short paragraphs sufficient prophetic hostages have been given to fortune. Should some of them fail to be redeemed we shall shelter ourselves behind the wish, which perhaps was father to the thought; and laying aside the prophet's mantle we revert in closing to the agreeable and certainly safer function of wishing all who journey with us a happy and prosperous new year!

LITERATURE IN MEDICINE.

The profession of medicine is making progress by means of the constant study done in the laboratory, at the bedside and in the library, by a series of trained students and observers.

Laboratory work has accomplished so much for the good of the profession, and has assumed such importance in the eyes of educators, that there is danger lest work of other descriptions, not less important, should be under-estimated. "Original scientific work" is in the present day too apt to be considered the only claim to distinction, and that phrase is held to mean, almost exclusively, work in the physiological or chemical laboratory, and clinical and literary labors are apt to be under-valued if not despised. The propriety of such an attitude toward these latter methods of study is discussed in an address on the Place of Literature in Medicine by Dr. C. J. Cullingworth, Lecturer on Medical Jurisprudence in Owens College, Manchester, England, before a students' society of that institution. He intimates that the term "original" is not always appropriate as applied to such laboratory work, which consists in the carrying out of a series of observations and experiments under the direction of a teacher to whom is not only due the suggestion of a subject for inquiry, but also the laying down of the lines of the inquiry itself. Unless originality of thought on the part of the worker himself is involved the phrase is open to objection. In the gentleman's opinion, while he is far from detracting from the value of researches which lead to even the slightest addition to exact knowledge, there is nothing in laboratory work itself as distinguished from clinical or literary work which gives it an exclusive right to be regarded as original and scientific.

Literary work may be as deserving of the designation *scientific* as any other, and of immense value to practical medicine. Not every man who contributes an article to a medical journal can be described as literary. Unfortunately our journals too often contain limited personal experience and hasty generalizations recorded with complete ignorance of what has previously been written on the same subject, but it is one of the functions of the literary worker to rescue from oblivion the valuable facts scattered through the voluminous literature of medicine, and render them by comparison and collation useful to the profession. To bring together unusual cases, to elucidate a symptomatology from the collected histories, to put the practitioner on the watch in regard to such cases, and mark out lines of future inquiry which shall enable the next man who meets with a similar case to complete the story, what more profitable work can be found for the student?

As a sample of such *scientific* literary work, the earlier editions of Bumstead's Venereal Diseases may be mentioned. The later editions were enriched more largely by his own observations, and deserve recognition for combined literary and clinical work, but of the first edition the author claimed only that he had collected into one volume, and thus rendered more accessible to the American reader, the investigations and results scattered through the pages of medical periodical literature in our own and foreign languages.

This is an extreme example of such work; it is ordinarily done on smaller subjects, and is peculiarly fitted to men at the very commencement of their career, when their experience at the bedside is as yet too small to justify them in drawing materials from it alone for contributions to medical literature.

As an assistant to such work Dr. Cullingworth speaks of the *Index Medicus:* —

"It is a remarkable example of American enterprise, and one can but feel deep regret that it has hitherto failed to obtain sufficient support to repay the cost of its publication. Recognizing the great loss it would be to medicine for such a publication to be discontinued, several of the medical societies in the United States have subscribed to a guarantee fund, from which the publisher, who for the first two or three years bore the entire risk, is for a short time to be recouped for any loss he may sustain by its continuance. I am glad to say that of all the towns in Great Britain, Manchester is the one which furnishes the longest list of subscribers in support of this enterprise."

In attempting to collate the facts recorded by others one constantly finds the most important facts omitted and generalizations added in abundance. "The great obstacle to the development of a science of medicine is the difficulty in ascertaining what cases are sufficiently similar to be comparable, which difficulty is in its turn largely due to insufficient and erroneous records of the phenomena observed. . . . Very, very few are the men who can, by and for themselves, see and describe the things that are before them. . . . We had to wait long before the man came who could see the difference between measles and scarlatina, and still longer for the one who could distinguish between typhus and typhoid." We fear many cases are lost to the world which would prove not only of paramount interest but of great value to the profession, through the modesty of men who hesitate to publish cases because of their inability to explain every symptom which has appeared. "The report of a case," says Dr. Billings, whom we have just quoted above, "in which every symptom observed and the effect of every remedy given is fully accounted for, and in which no residual unexplained phenomena appear, is usually suspicious, for it implies either superficial observation or suppression or distortion of some of the facts."

No one need despair, then, that laboratory experiment is not to their taste. The literary doctor has his uses as well as the more strictly scientific, if only he will learn to use his literary ability for the service of his profession. Diversity in preliminary medical education is certainly an advantage to the profession, as furnishing a class of men who are able to profit by and make profitable to all the work of the observer and the experimenter.

PERMISSIVE EUTHANASIA.

Among the queries made by the Poet at the Breakfast Table of the man of the fortieth century A. D. is one whether the euthanasia has become a recognized branch of medical science. The Journal has already noticed the assumption on the part of certain practitioners that a monstrosity should be put out of the way as soon as possible after birth, which proposal, though not (we are happy to say) generally "recognized," is in its measure a present realization of what the Poet thought a possible development of two millenniums. We now find in an exchange the frank confession of a physician on the frontier that he believes in and has acted on this principle in the treatment of an adult. The patient was a pauper, and was suffering from a serpiginous phagedæna which had destroyed the external genitals, and had spread into a large ulcer extending from the perinæum to the hypogastrium. He was alone, covered with filth and flies, dependent on the tender mercies of county commissioners, and apparently too weak to be moved to an almshouse. The reporter considered it his "duty as a conscientious physician," and in fulfillment of the "golden rule," to administer sol. Magendie ʒi., which succeeded in fulfilling the indication for euthanasia, *cito tuto et jucunde.*

Whatever the fortieth century may have in store for us, we believe that the profession is not quite prepared for this teaching at present. We are not as yet ready to see the functions of Atropos added to those of Asklepios. But, on the other hand, though we would never become destroyers of life, we suspect few physicians have escaped the suggestion in a hopeless case of protracted suffering to adopt the policy of *laisser aller*, to stand aside passively and give over any further attempt to prolong a life which has become a torment to its owner. For instance, a woman has malignant disease advanced far beyond the chance of operative interference. The odor is horrible, and not to be suppressed. Pain is intense. The stomach refuses its work. Fatal hœmorrhage momentarily threatens. For weeks the physician has combatted death at each of these points; has taxed to the utmost the art of the cook to appease the recalcitrant stomach; has crowded in food and stimulant by every channel, and all for what? to exhaust the strength and perhaps imperil the lives of the remainder of the household: to keep in their home a body which is repulsive to every sense and a mind which is no longer that of their friend, but which is overclouded if not maniacal; or, if the sufferer retains consciousness, to meet her bitter reproaches for prolonging her misery. Shall not a man under such circumstances give up the fight, take off the spur of the stimulant, and let exhausted nature sink to rest?

One of the most ghastly of Poe's tales is of a man whose soul was by some mesmeric influence kept in his body for weeks after the body was dead and decaying. The agony with which with swollen tongue and rattling voice he implores to be set free is vividly depicted, until at last the spell is taken off, and as the soul escapes the corpse collapses, "a loathsome, almost liquid mass of detestable putrescence." Even this emphatic language is hardly an exaggeration when applied to the bodies in which the physician sometimes fancies himself called upon to enchain for a little longer the struggling life. If the open upbraiding of the patient is wanting, the unspoken desire is often present to be delivered from this body of death. A garrison is brought face to face with inevitable surrender. The friendly general has not troops or supplies enough to relieve the besieged, and is perfectly aware of it. Shall he send in the pittance that can be introduced merely to prolong the garrison's suffering a few more days, when the surrender must inevitably be made?

Perhaps logically it is difficult to justify a passive more than an active attempt at euthanasia; but certainly it is much less abhorrent to our feelings. To surrender to superior forces is not the same thing as to lead an attack of the enemy upon one's own friends. May there not come a time when it is a duty in the interest of the survivors to stop a fight which is only prolonging a useless and hopeless struggle?

— The city government of Paris tested, during the month of November, the French wines brought into the market. Out of 1518 samples examined only sixty-five were found absolutely free from injurious adulterations.

THE DECISION IN REGARD TO THE PRIZE FOR ESSAYS ON MALIGNANT DISEASE, ITS CURE, AND THE METHODS OF INVESTIGATION TO BE FOLLOWED.

IN our advertising columns will be found the decision of the judges concerning essays on the subject of Cancer presented in accordance with an announcement made in March, 1882. The result is to be regretted. The subject, it must be admitted, was a difficult one, but so much the more surprising is the lack of serious and painstaking endeavor noticeable in the majority of the essays offered. We must confess, too, to some surprise at the absence of other than writers in the English language, for the announcement concerning the prize offer was extensively published in France, Germany, and Austria, permission being given to employ the French or the German as well as the English language.

The amount of the prize offered — one thousand dollars — was certainly sufficiently large to act as a spur to scientific zeal, and to have called forth a keener competition than is represented by the six essays which it is announced were received. Nineteen or twenty months was, moreover, time enough for serious preparation. There is no doubt that the benevolent proposer of the prize is not the least disappointed of those concerned.

MEDICAL NOTES.

— The Naval Advisory Commission has recommended the sale of the whole or the larger part of the Naval Hospital grounds at Chelsea, Mass. The cause is that the grounds are unnecessarily large, that they form an obstacle to public travel, and that they are too valuable to be kept longer from the market.

— A story illustrating the nutritiousness of the milk of the cocoa-nut is found in a daily contemporary. It seems that a vessel left San Francisco with four hundred passengers for Sydney, and, in consequence of running short of stores, put in at Samoa, where a large quantity of cocoa-nuts were obtained. The weather became so severe that the remainder of the passage consumed eight days, so that men, women, and children were reduced entirely to a cocoa-nut diet, and were obliged to be contented at last with but one per diem for each adult. "Notwithstanding this diet," says the report, "not a life was lost, and not a single case of sickness occurred, all the passengers landing in a healthy and well-nourished condition."

— The attorney-general of New York has begun suit at New York against the Eclectic Medical College of that city to annul its charter and dissolve the corporation. The attorney-general charges that the college has violated the provisions of its charter by issuing its diplomas in blank to enable persons not properly qualified to insert their names and illegally practice medicine.

— Dr. Robert T. Davis, member of Congress from Fall River, has been appointed on the Committee for Public Health. Dr. Davis's long experience on the

Massachusetts Board of Health should make him a valuable member of that committee.

— Frank Pere Lawrence, a member of the second class at the Harvard Medical School, died lately of pneumonia at the Massachusetts General Hospital, after an illness of about eleven days. Mr. Lawrence was an earnest student, and was highly esteemed by his classmates.

— Of Dr. Murray, who has lately been appointed Surgeon-General of the Army, the following incident is related: In 1850 General Sherman, then a young lieutenant, was stationed at Monterey. Returning thither on one occasion from a visit to San Francisco, he was attracted by the continuous crying of a child at a ranche on the road. He inquired the cause, and learned that the mother and her friends had done all they could for it, but as they were too poor to buy medicines or send for a doctor they had given up all hope and sat waiting for the poor little creature to die. As he was traveling under orders he had to push ahead with all rapidity, but on his arrival at the fort he related the incident with a great deal of animation and some pathos in the mess-room. Dr. Murray, then a young assistant surgeon, listened, with his heart in his eyes, and with the ardor of youth volunteered his services. He was given permission to go, and, hastily preparing for the journey, he rode *seventy miles* on his charitable mission. He was rewarded by the recovery of his patient, and the pleasure of reporting at the garrison the good news of his successful and unselfish enterprise.

Correspondence.

THE CLINICAL EXAMINATION OF DIABETIC URINE BY DUHOMME'S TEST.

Mr. Editor, — There is no doubt that the quantitative method for dosage of diabetic urine, originated by Duhomme, and described by Dujardin-Beaumetz in a lecture published in this journal, November 15th, vol. cix., is the most expeditious and most handy yet known. Without claiming much experience in testing by this method, having had occasion to apply Duhomme's process to the examination of only two samples (from different patients) of saccharine urine, I am asked by several correspondents to clear up for them certain difficulties connected with the practical application of this test by physicians in this country. And first there is the disadvantage of not having the neat little apparatus of Limousin with the dropping tubes and all the other appurtenances. The most essential part of the apparatus is the graduated dropping tube (*compte-gouttes*), graduated at one cubic centimetre for urine, two cubic centimetres for Fehling's solution. These require to be very delicate, and easy of management. Those made recently by Codman and Shurtleff are a little clumsy in comparison with the "compte-gouttes" of Limousin. It is difficult with those of Boston manufacture to make the drops uniform or prevent the admission of air. I have lately obtained from Paris the apparatus of Limousin, and find the dropping tubes all that could be desired. I have no doubt that Codman and Shurtleff will be able in the future (with the samples before them) to furnish *fac-similes* of the French dropping tubes; with a little practice, however, one can obtain correct results with the tubes which this firm has already made.

With regard to the strength of Fehling's solution, this seems to be a matter of some importance. It should be of standard strength, *so that two cubic centimetres shall be exactly reduced by one centigramme of diabetic sugar.* I had a preparation made according to the formula given by Beaumetz in the November 15th lecture, except that for the neutral tartrate of potassa I substituted the tartrate of soda and potash (Rochelle salt). I find no difference between this solution and that of Limousin, which accompanied the saccharimetric apparatus.

As for the solution of soda, I do not think it makes any difference whether, in using Duhomme's process, you dilute the liquor Fehling (two centigrammes) with the solution of the French Codex or with the *liquor sodæ* of the United States Pharmacopœia. The main thing is to dilute the Fehling's solution with an equal quantity of an alkaline liquid. At the same time the preparation used on the Continent, a sample of which came with the Limousin package, is of specific gravity 1.14.

In a diabetic patient whom I am now attending, the proportion of glucose excreted in the urine continues almost a constant quantity. It takes just ten drops to redden the cupro-sodic solution. There are eighteen drops in each cubic centimetre. Referring now to Duhomme's table,[1] we find that there are eighteen grammes of sugar in each litre. This patient is now voiding sixty-four ounces or about two litres a day, hence is excreting rather more than an ounce of glucose.

The paper of Duhomme explaining the *rationale* of his process is too lengthy to be reproduced here. Suffice it to say that the method has been wrought out by patient and painstaking experimentation, and may be relied upon as accurate.

Yours truly, E. P. Hurd, M. D.
Newburyport, *December* 24, 1883.

NOTE FROM DR. WEIR MITCHELL.

At Dr. Mitchell's request we insert the following communication to the editor of *The Medical News*: —

Sir, — Will you kindly publish the following statement, made necessary because of my receiving letters from England and this country calling my attention to the liberty taken with my name.

Dr. H. H. Kane, of New York, has made use of my name in an advertisement of a secret means of treating the opium habit, and afterwards, in a pamphlet labeled De Quincy Opium Home Cure, printed fac-similes of letters received by him years ago from a number of physicians, and among them a letter of mine. In obedience to a protest on my part Dr. Kane has removed my name from his advertisement, and my letter from his pamphlet.

Yours truly, S. Weir Mitchell, M. D.
December 22, 1883.

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[1] Vide Journal, November 15th. It should be mentioned in this connection that the quantitative analytical process of the Harvard Medical School embodies the essential principle of the Duhomme method.

Miscellany.

REFUSION IN CARBONIC OXIDE POISONING.

Dr. William S. Halsted discusses in the *New York Medical Journal* (December 8th) this method of treating cases when death is imminent from inhalation of carbonic oxide or illuminating gas. The practice consists in removing a quantity of the vitiated blood, and after defibrinating and oxidizing it restoring it to the body of the patient. He quotes a few authors who have mentioned this method of treating collapse from exsanguination, as, for instance, Volkmann, who suggested the feasibility of utilizing the blood which unavoidably was lost in an exarticulation of the hip. In carbonic-oxide poisoning refusion involves an additional factor, namely, the oxygenation of the poisoned blood employed; and is, therefore, an infusion of the purified, defibrinated, for the poisoned, entire blood of the individual.

Two cases are given at some length where refusion was practiced on individuals deeply poisoned by illuminating gas. In the first there was coma which had resisted previous treatment. Respirations were very superficial. The superficial reflexes feeble or absent; the deep ones not to be tested on account of rigidity of the limbs. The right radial artery was exposed above the wrist for about one inch, and two ligatures passed under it. This was at 10.50 A. M. The report says: —

"A canula introduced centripetally into the artery was held in place by one ligature; the other was used to occlude the vessel peripherally. Through the canula 512 cc. of blood were withdrawn, defibrinated, strained, and kept at a temperature of about 37.5° C. in a transfusion apparatus. 11.20 A. M.: temperature 35.4° C. (95.8° F.); pulse 22; respiration 22, full and dyspnœic. Superficial reflexes well pronounced. Eyes closed, but patient can be made to open them. Rigidity of limbs has in great measure disappeared. 11.32 A. M., 288 cc. of defibrinated blood, all that could be obtained from the 512 cc., were refunded through the canula in the artery toward the heart — centripetal arterial infusion. At 11.45 the injection was completed. Temperature 36.6° C. (98° F.); pulse 104; respirations 28, deep and labored. Superficial reflexes possibly exaggerated. The usual post-transfusion rigors lasted for half an hour. 12.35 P. M.: 300 cc. withdrawn, as before, through the canula, defibrinated and mixed with 128 cc. of defibrinated blood taken from another patient. One P. M.: temperature 38.2° C. (100.8 F.); pulse 128; respiration 28. 1.05 P. M.: patient's pallor most striking; 192 cc. of the mixed blood infused. The color returned rapidly to his face when from 80 to 100 cc. had been injected, the change from a deathly white to a healthy red taking place in a few seconds. 1.13: temperature, 39.1° C.; pulse 120; respiration 40. 2.30: temperature 39.4° C.; pulse 140: respiration 40. 5.20: temperature 37.8° C.; pulse 116; respiration 20.

"Patient has been gradually returning to consciousness since the first venesection, and now attempts to get out of bed."

The next day the urine was voided voluntarily, the patient ate well, and desired to go home, which he did fifty hours after admission to the hospital. No ill effects remained.

In another similar case the patient, a young girl, was growing gradually worse, despite all ordinary treatment, and ultimately her condition became, in the opinion of her attendant, hopeless. Then 204 cc. of blood were drawn from the left basilic vein, whereupon the condition improved marvelously, — the respirations becoming full, the pulse less frequent and stronger, the rigidity disappearing, and the reflexes returning. Here an attempt to refund blood to the system failed on account of imperfection in the apparatus, so that only 30 cc. were introduced. The fact that the improvement was coincident with the venesection and that there was really scarcely any refusion, renders it doubtful whether in the first case a similarly fortunate result would not have followed simple blood-letting. The good effects of venesection in such cases have been established by observation as well as by experiment on animals. Why then, it may be asked, transfuse if venesection accomplishes so much? If for no other reason, says the author, to allow of repeated venesection. The poisoned individual should be bled freely, unless there be decided contra-indications, even after, to all appearances, out of danger, in the hope of diminishing the risk of pernicious after-effects.

Although bleeding of itself will probably suffice to save life in almost all cases which occur in practice, it has been demonstrated by Kühne that animals, poisoned beyond hope of rescue by venesection, can be saved by transfusion. In one of his experiments, where respiration had been suspended seven minutes, he was still able to restore life to the animal by the infusion of defibrinated blood.

The theory of a substitution of corpuscles capable of carrying oxygen for those so vitiated as not to be capable of performing this function, though an attractive one, is negatived by the fact that saline injections are as efficacious as whole or defibrinated blood.

As to the various means of introducing blood, centrifugal venous infusion is at once rejected. So is centrifugal arterial injection in view of cases of gangrene so caused, and of rupture of capillaries due to the force necessary to overcome the vascular spasm. Of the two remaining possibilities the centripetal arterial is to be preferred to the venous because the blood by the former method courses more slowly and uniformly to the heart; because the minutest air-vesicle is retained in the capillaries; and because the danger of phlebitis is avoided. Moreover, arterial blood is thus most directly dispatched to the nerve-centres, in consequence of which the venous blood there contained is propelled onward into the veins, and the filling of the arterial system rejuvenates the feeble circulation by creating a considerable difference in pressure between the arterial and venous systems. The practical results of the author confirm those theoretical advantages of centripetal arterial infusion.

PARACENTESIS OF THE PERICARDIUM.

Dr. J. W. Macdonald reported to the Canada Medical Association (*British Medical Journal*, October 27, 1883) a case of pericarditis with effusion attendant upon acute rheumatism, in which he performed paracentesis. Thirty-two ounces of fluid were withdrawn, greatly to the patient's relief. A partial re-accumulation of the fluid was met by elaterium and counter irritation, and the patient subsequently did well.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 22, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	617	178	13.92	17.92	.80	4.12	1.12
Philadelphia	846,984	375	138	22.41	12.69	2.97	11.24	4.86
Brooklyn	566,689	236	77	13.44	16.18	.84	5.56	2.52
Chicago	503,304	236	110	28.14	10.92	5.46	11.76	5.04
Boston	362,535	193	55	17.68	15.08	3.12	11.44	6.24
St. Louis	350,522	135	60	25.16	8.14	1.48	14.06	3.70
Baltimore	332,190	166	63	23.40	12.60	1.20	11.40	.60
Cincinnati	255,708	—	—	—	—	—	—	—
New Orleans	216,140	137	35	27.74	8.76	1.46	1.46	—
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg (1883)	175,000	59	25	27.20	6.80	8 50	12.20	5.10
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	39	21	23.04	7.68	5.12	10.24	7.68
Providence (1883)	116,755	38	10	7.89	15.78	2.63	—	2.63
New Haven (1883)	73,000	16	4	—	12.50	—	—	—
Charleston	49,999	36	17	8.31	11.08	2.77	—	2.77
Nashville	43,461	24	8	12.48	12.48	4.77	4.77	—
Lowell	59,485	24	6	20.80	20.80	12.48	8.32	—
Worcester	58,295	19	7	21.04	26.30	5.26	15.78	—
Cambridge	52,740	25	9	16.00	24.00	4.00	8.00	4.00
Fall River	49,006	11	6	18.18	18.18	9.09	9.09	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	16	0	—	18.75	—	—	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	4	0	—	50.00	—	—	—
New Bedford	26,875	6	1	—	33.33	—	—	—
Somerville	24,985	9	2	11.11	—	—	11.11	—
Holyoke	21,851	10	1	10.00	40.00	—	—	—
Chelsea	21,785	6	2	—	33.33	—	—	—
Taunton	21,213	7	0	—	28.56	—	—	—
Gloucester	19,329	3	2	—	—	—	—	—
Haverhill	18,475	7	0	28.56	—	—	28.56	—
Newton	16,995	5	1	—	40.00	—	—	—
Brockton	13,608	3	0	—	—	—	—	—
Newburyport	13,537	5	0	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	6	1	—	50.00	—	—	—
Fifty-eight Massachusetts towns	255,440	51	13	—	—	—	—	—

Deaths reported 2524 (no reports from Cincinnati, District of Columbia, and Buffalo): under five years of age, 852: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 477, consumption 350, lung diseases 282, diphtheria and croup 202, scarlet fever 65, typhoid fever 59, diarrhœal diseases 48, measles 35, malarial fevers 21, erysipelas 12, cerebro-spinal meningitis nine, small-pox eight, puerperal fever eight, whooping-cough seven, typhus fever three. From *diarrhœal diseases*, New Orleans 17, New York 13, Chicago five, Brooklyn and Boston four each, Baltimore two, St. Louis, Charleston, and Holyoke one each. From *measles*, Baltimore 14, New York 13, Philadelphia, Brooklyn, and Pittsburg two each, Chicago and Providence one each. From *malarial fevers*, New Orleans nine, New York and St. Louis four each, Brooklyn three, Chicago one. From *erysipelas*, New York five, Chicago three, Philadelphia and Boston two each. From *cerebro-spinal meningitis*, New York three, Chicago two, Philadelphia, Baltimore, New Orleans, and Nashville one each. From *small-pox*, New Orleans five, Philadelphia three. From *puerperal fever*, Chicago and St. Louis two each, New York, Philadelphia, and Brooklyn one each. From *whooping-cough*, Boston and New Orleans two each, New York, Brooklyn, and St. Louis one each. From *typhus fever*, New York three.

Six cases of small-pox were reported in St. Louis; diphtheria 51, scarlet fever 33, and typhoid fever 15 in Boston; scarlet fever 20, and diphtheria 11 in Milwaukee.

In the 73 cities and towns of Massachusetts, with an estimated population of 1,094,567 (estimated population of the State 1,922,530), the total death-rate for the week was 21.60 against 19.52 and 16.65 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending December 8th, the death-rate was 21.6. Deaths reported 3568: acute diseases of the respiratory organs (London) 448, scarlet fever 131, measles 98, whooping-cough 73, fever 59, diarrhœa 39, diphtheria 35, small-pox (Sunderland five, Birmingham four, Liverpool three, London two) 14. The death-rates ranged from 14 in Oldham to 32.8 in Preston; Bradford 16.6; Bristol 19.6; Sheffield 19.8; Nottingham 20.2; Leicester 21.4; London 21.5; Birmingham 21.8; Liverpool 23.6; Leeds 24.5; Manchester 26.1. In Edinburgh 17.9; Glasgow 23.5; Dublin 33.3.

For the week ending December 1st, in 169 German cities and towns, with an estimated population of 8,695,846, the death-rate was 23.4. Deaths reported 3913; under five years of age, 1763; consumption 535, lung diseases 445, diphtheria and croup 286, diarrhœal diseases 132, scarlet fever 85, measles and rötheln 84, typhoid fever 64, whooping-cough 58, puerperal fever 20, typhus fever (Stettin one) one, small-pox (Coblenz one) one. The death-rates ranged from 7.3 in Mannheim to 32.5 in Königsberg; Breslau 26.9; Munich 30.1; Dresden 27.2; Berlin 25.7; Leipzig 28.2; Hamburg 26; Cologne 22.7; Frankfort a. M. 16; Metz 15.1.

For the week ending December 1st, in the Swiss towns, there were 30 deaths from consumption, lung diseases 17, diarrhœal diseases seven, diphtheria and croup six, scarlet fever three, measles two, typhoid fever one, puerperal fever one. The death-rates were, at Geneva 12.3; Zurich 6; Basle 19.1; Berne 30.5.

The meteorological record for the week ending December 22d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Dec., 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 16	30.055	16	24	1	58	67	100	75	W	S	S	5	9	2	C	F	S	—	—
Mon., 17	29.803	20	24	16	100	95	89	95	N	NW	W	11	19	14	S	S	C	—	—
Tues., 18	29.997	30	38	13	84	83	77	81	SW	SW	SW	5	12	6	O	O	C	—	—
Wed., 19	30.276	26	37	21	62	100	100	87	W	N	N	4	12	17	O	S	O	—	—
Thurs., 20	30.413	20	24	18	85	72	84	80	N	N	N	13	10	6	O	F	O	—	—
Fri., 21	29.966	17	20	15	93	100	86	93	N	NW	W	10	16	7	S	S	C	—	—
Sat., 22	30.195	12	21	1	54	54	72	60	W	NW	NW	13	12	9	C	C	C	—	—
Mean, the Week.	30.101	20						82										48.30	2.40

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING DECEMBER 29, 1883.

Gihon, A. L., medical director. To the Naval Hospital, Washington, D. C.

Rush, Charles W., passed assistant surgeon, U. S. S. Colorado. Granted sick leave for three months.

Suffolk District Medical Society. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, January 9th, at 7.45 o'clock. Drs. F. I. Knight, J. P. Oliver, and T. A. DeBlois will open the discussion upon Follicular Tonsillitis, postponed from the last meeting. Dr. G. Liebmann will present a paper upon Spinal Irritation and Neurasthenia. Drs. J. J. Putnam and S. G. Webber will open the discussion. Dr. A. N. Blodgett: The Voluntary Abandonment of the Morphia Habit. Exhibition of two cases. Albert N. Blodgett, *Secretary*.

Erratum. — A correspondent calls attention to the fact that we were in error in our editorial of December 20th last, p. 594, first column, in stating that Andrews was sentenced to the State Prison for life. The sentence was for twenty years.

Appointment. — Dr. W. L. Richardson has been appointed Visiting Physician at the Massachusetts General Hospital.

Books and Pamphlets Received. — A Treatise on Bright's Disease of the Kidneys. Its Pathology, Diagnosis, and Treatment, with chapters on the Anatomy of the Kidney, Albuminuria, and the Urinary Secretion. By Henry B. Millard, M. D., A. M. With numerous original illustrations. New York: Wm. Wood & Co. 1884.

A Treatise on Syphilis in New-Born Children and Infants at the Breast. By P. Diday, Ex-Surgeon to the Hospital de l'Antiquaillé. Lyons. Translated by G. Whitley, M. D., with notes and an appendix by F. R. Sturgis, M. D. New York: Wood's Library. October, 1883.

A Treatise on Pharmacy. Designed as a Text-Book for the Student and a Guide for the Physician and Pharmacist, containing the officinal and many unofficinal formulas, and numerous examples of extemporaneous prescriptions. By Edward Parrish. Fifth edition, enlarged and thoroughly revised by Thos. S. Wiegand, with 256 illustrations. Philadelphia: Henry C. Lea's Son & Co. 1884.

Étude sur la Pharmacopée des États Unis. Par C. Tanret, Pharmacien de première classe, Lauréat de l'Institut.

Des Fumigations de Parfums Trochiques Désinfectants. Par C. Tanret.

Étude sur les Extraits de Quinquina. Par C. Tanret.

Medico-Chirurgical Transactions. Published by the Royal Medical and Chirurgical Society of London. Volume 65. 1882.

Same. Volume 66.

Voice, Song, and Speech. A Practical Guide for Singers and Speakers, from the Combined View of Vocal Surgeon and Voice Trainer. By Lennox Browne, F. R. C. P. Ed., and Emil Behnke. With numerous illustrations by wood-engraving and photography. New York: G. P. Putnam's Sons. 1884.

Sixth Annual Report of the Trustees of the Danvers Lunatic Hospital. For the year ending September 30, 1883. Public Document No. 20.

Hints in Sickness: Where to go and What to do. By Henry C. Burdett, Founder of the Home Hospitals Association for Paying Patients. Author of Pay Hospitals of the World. London: Kegan Paul, Trench & Co. 1883.

The Operative Treatment of Intra-Thoracic Effusion. By Norman Porritt, L. R. C. P. Lond., etc., etc. Being the Essay to which the Fothergillian Gold Medal, 1883, was awarded. London: J. & A. Churchill.

Establishment of Tent Field Hospitals for the Treatment of the Wounded on the Field of Battle. By B. J. D. Irwin, Surgeon and Brevet-Colonel, U. S. A., Medical Director Department of Arizona. (Reprint.) 1883.

Ominous Symptoms in Typhoid Fever. By Charles R. Crandall, M. D., Portland, Maine. A paper read before the Portland Medical Club, October 18, 1883. Portland. 1883.

Observations on the Use of Bromide of Ethyl as an Anæsthetic for Short Operations, and as a Precurser to the Administration of Ether. By A. E. Prince, M. D., Jacksonville, Illinois. (Reprint.)

The Electro-Osteotome. A New Instrument for the Performance of the Operation of Osteotomy. By Dr. Milton Josiah Roberts. New York. (Reprint.)

New Operation for Rupture of the Perinæum Through the Sphincter. By J. Collins Warren, M. D., etc., etc. (Reprint.)

Transactions of the American Dermatological Association at the Seventh Annual Meeting, Held at Lake George, N. Y., August 29–31, 1883. Official Report by the Secretary, Dr. Arthur Van Harlingen. Baltimore. 1883.

Index to the Transactions of the American Medical Association. Vols. I.–XXXIII. Prepared by William B. Atkinson, M. D., Permanent Secretary. Philadelphia. 1883.

Relation of Eye and Spinal Diseases. By A. Friedenwald, M. D., Professor of Diseases of the Eye and Ear, College of Physicians and Surgeons. Baltimore. (Reprint.) 1883.

The Illustrated Christmas Number of the Publisher's Weekly, 1883. New York: F. Leypoldt.

Ophthalmia Neonatorum and its Prophylactic Treatment. By Walter P. Manton, M. D. Boston. (Reprint.) 1883.

Charlatanism in Colorado. By Jesse Hawes, M. D. Greeley, Colo. (Reprint.)

Annual Report of the Society for Instruction in First Aid of the Injured. October, 1883. Published by the Society.

Report of Cases treated in Ward XIX. of the Royal Infirmary, Edinburgh. Reported by Skene Keith, M. B., C. M. Edinburgh. 1883.

Elements of Surgical Pathology. By Augustus J. Pepper, M. S., M. B. Lond., F. R. C. S. Eng., etc. Illustrated with eighty-one engravings. Henry C. Lea's Son & Co.: Philadelphia.

Report of the Commissioner of Education for the year 1881. Washington: Government Printing Office. 1883.

Principles of Theoretical Chemistry, with Special Reference to the Constitution of Chemical Compounds. By Ira Remsen, Professor of Chemistry in the Johns Hopkins University. Second Edition. Revised and enlarged. Philadelphia: Henry C. Lea's Son & Co. 1883.

Lectures.

SYPHILIS OF THE BRAIN AND MEMBRANES.

LECTURE II.

A CLINICAL LECTURE DELIVERED AT THE PHILADELPHIA HOSPITAL.

BY H. C. WOOD, M. D.,

One of the Physicians to the Hospital, and Professor of Nervous Diseases in the University of Pennsylvania.

Gentlemen, — You will remember that when I last had the honor of meeting you we considered the subject of cerebral syphilis, with special reference to the disease as it affects the brain membranes. There is another form of specific disease of the brain which is much more rare. Cases of this form of cerebral syphilis are not often seen in the wards of a general hospital, but find their way into the insane asylums. I am, therefore, unable to illustrate my remarks by the presentation of a case, unless a brain which is now being removed from a man who died in the ward yesterday should prove to be the seat of this lesion. This man came into the hospital in a condition of absolute dementia. He was also partially paralyzed on one side. In the absence of any history it was, of course, impossible to make a diagnosis. The case, however, presented some of the aspects of the disease known as dementia paralytica, but later in the course of the lecture I shall bring the brain before you.

As I have said, I cannot illustrate my remarks by the presentation of a case, but in order to make the subject more complete I shall ask your attention for a few minutes to a consideration of syphilitic insanity dependent on disease of the gray matter of the brain. Sclerosis and atrophy of the gray matter are frequently found associated with disease of the membranes, and the cerebral symptoms which are present in disease of the membranes are always due either to primary or secondary involvement of the brain cortex or to derangement of its circulation. It is possible, however, for syphilis to attack the brain cortex without attacking the membranes. Under such circumstances the symptoms are not to be distinguished from the symptoms present in general paralysis of the insane. There is progressive mental failure, with a condition of depression, melancholia, or hypochondriasis, or with exalted delusions or mania, in which the patient thinks that he is the emperor, the czar, or that he owns millions, has great power, or strength, or, in some way, manifests the features of the *delire des grandeurs*. Then there is failure of muscular power, and fibrillar tremblings manifest themselves. The symptoms are sometimes not distinguishable from those of general paralysis of the insane, and it is often impossible in these cases to make the diagnosis from the symptoms alone. There may, however, be the evidences of syphilis of the membranes of which I spoke at the last lecture. If you have these you can make the diagnosis. But where the cortex is alone involved, it is not possible to determine the true nature of the lesion without a knowledge of the history or the aid of the therapeutic test.

At the last lecture I spoke of the therapeutic test of the existence of syphilis. Most of you know that this test consists in the power of the patient to bear mercury or iodide of potassium. In private practice it is my invariable rule never to ask questions in these cases. Persons are often unaware that they are suffering from syphilis. They honestly believe that they never had primary or secondary symptoms; these symptoms may, however, have been present, but so slightly marked as not to attract attention. Again, this is one of the points about which human nature often fails. People, even when death is staring them in the face, and their lives hang upon the truth, will make false statements. As we have a touchstone by means of which we are able to decide whether or not a patient is suffering from cerebral syphilis, I ask no questions, but apply the test where I have reason to suspect any disorder. It is a serious matter to mercurialize a patient, but it does no harm to produce iodism, so that when making the test I always employ iodide of potassium. If I find that ten grains three times a day produces symptoms of iodism I am almost sure that the case is not one of specific disease. If, on the other hand, the patient takes from one half to one drachm of iodide of potassium and waxes fat thereon, I am almost sure that he is the subject of specific disease. There are some persons, not syphilitic, who will stand large doses of iodide of potassium, but such cases are rare, so that when a patient will take half a drachm of the remedy three or four times a day it may be concluded that he is syphilitic. I say this with one reservation. Persons who have gradually accustomed themselves to the use of iodide of potassium, as, for instance, those who are asthmatic, will stand large doses of this drug, even when not suffering from syphilis. In such a case there will be the history of the long-continued use of the remedy. You must remember, also, that there is a syphilitic asthma, so that the relations of iodide of potassium to asthma are in many cases easily explainable. I shall speak of the method of using iodide of potassium when I come to consider the treatment.

It is important when employing iodide of potassium as a therapeutic test that you should be familiar with the symptoms of iodism. The most frequent manifestation of its constitutional action is the development of coryza, which exactly simulates that produced by cold. There will be dull aching in the temples, dependent upon congestion of the frontal sinuses, followed by a discharge from the nose, which is sometimes thick, but more usually watery, and often very free. In other cases, instead of coryza mild salivation is produced. When the salivation is severe the probabilities are that the patient has been taking mercury, and that the condition of the mouth has been produced by the liberation of the mercury which has been concealed in the tissues, for, as you know, iodide of potassium has the power of causing mercury which has been stored up in the body to take a soluble form. Sometimes an acne eruption is produced. Sometimes the eruption is of an ecthymatous character, while in other cases it takes the form of an erythematous dermatitis resembling erysipelas.

Before discussing the treatment of syphilis of the nerve centres I wish to say a few words in regard to the prognosis. Formerly when I took charge of a case of specific disease of the brain I always gave a favorable prognosis, but experience has shown me that sometimes such prognoses are not realized. Syphilis of the brain is a serious disorder, and in a certain proportion of cases you will fail to obtain the result you desire. The first element in the prognosis is the fact that because the symptoms are due to syphilis they are more amenable to treatment than if produced by any other cause. Thus the fact that in any case insanity, palsy, or headache have a syphilitic origin makes them more amenable to treatment than if they were due to other causes. The prognosis must be guided by the manifestations in individual cases, but it always must be guarded. If a patient has severe hemiplegia, if the headache is severe, if the epileptiform attacks are violent, and if the history is that of long continuance, the prognosis is far more grave than if the nature of the disease is discovered at an early period of the attack. Even, however, in the most desperate cases almost complete recovery may be brought about by proper treatment. I remember reading in a London journal a short time ago the report of a case in which a man, absolutely paralyzed and demented, incapable of lifting hand or foot, and hardly knowing enough to have knowledge of his own existence, who in the course of a year or eighteen months was so far recovered that he won a rowing match on the Thames. Having made up my mind that the disease is specific, I tell the patient, no matter how severe the symptoms may be, "You have a chance for recovery." And however slight the symptoms may be I never say, "You are sure to get well." The proportion of chances, of course, varies with the extent of the lesion and the severity of the symptoms. It is a good plan to endeavor to put the prognosis in numbers. You make up your mind as to what you think the chances in his favor are, and then you tell the man, for instance, that he has three chances out of six. This satisfies him, and if he does not recover you simply say that he took one of the other three chances. It is related of a celebrated New York merchant that when on what he thought was his death-bed he asked his physician if he had a chance of recovering. The doctor told him that he had one chance out of a hundred. The merchant said that that was all right; he never wanted more than that in his business. He recovered.

Here is a patient whom I want to show you as a case of recovery. This man came into the ward two years ago. He then had severe specific basal meningitis with apparent implication of the brain substance. He had very marked oculo-motor palsy with ptosis and dilated fixed pupil on the left side. He had severe headache, great general weakness, and very little mental power. He had no epileptiform attacks. He suffered from a form of delirium which is seen in many of these cases, and is somewhat characteristic. During the day he would seem rational, but at night he would be dazed, not knowing what he did, and had a great tendency to get out of bed and wander away. When away from his bed he was unable to recognize where he was. It frequently happens in nervous diseases that the patient loses control of the sphincters, and passes urine and fæces in bed. In these cases of syphilitic disease this is not seen except in the last stages of the disorder. What we did see in this case was that the patient would go to a corner of the ward, and, supposing that he was in the water-closet, would void his excrement there. You see that there is an important distinction between these two conditions. In the one case the patient loses control over the rectum and bladder; in the other the patient does not recognize the position in which he is. Where you have this latter form there is always a suspicion arising that the disease is of a syphilitic origin. It is sometimes seen in general paralysis of the insane.

For several months this patient did not improve under treatment, but he is now almost recovered. The recovery is not absolute, and this happens in most instances of severe cerebral syphilis.

Here is a second patient who came in about two months ago. The disease was not so severe as in the previous patient, and it is probable that he will make a complete recovery.

In treating cerebral syphilis it is sometimes necessary to treat the symptoms, but the basis of the treatment is the use of antispecific remedies. If a patient has a violent attack of acute meningitis from cerebral syphilis, this is to be treated by counter-irritation or by bleeding, as may be indicated. If there is chronic or sub-acute meningitis or violent headache it is to be in part treated by the application of counter-irritants to the back of the neck and such other measures as are indicated; but although you do this you know that this is the mere frill, the *entrée* to the real courses of the dinner, and that the *pièce de resistance* is antispecific medication. There is no use of employing small doses in these cases; in order to cure the patient it is necessary to give large doses. This is one of the rare cases in which it can be truly said that the doctor effects a cure.

The question at once comes up as to the choice between iodide of potassium and mercury, and you will frequently find it somewhat puzzling to decide this point. Mercury is certainly more rapid than iodide of potassium, and when it is of great importance that the symptoms should be relieved at once, mercury should be used in preference to the iodide.

Some years ago I saw in consultation a tavern keeper in whom epileptiform convulsions had developed after he was forty years old. I diagnosticated cerebral syphilis, and he was put on the use of large doses of iodide of potassium. The fits grew less violent and came at longer intervals, and he was in a fair way to recover, and he would have gotten well, but one day he had a fit which stopped respiration a little too long, and he died. That man ought to have recovered, and he would have done so if it had not been for the accident of his death. If instead of giving iodide of potassium and being satisfied with a gradual improvement that patient had been mercurialized at once, the probabilities are that the fits would have been immediately reduced in severity, and he would not have died. You therefore see that we are to be guided to some extent in our choice between these remedies by the symptoms of the disease itself, leaving out of sight the condition of the patient. If the only manifestations of the disease are a little squint and a dilated pupil, we know that these will not kill the patient, and the slow action of iodide of potassium is sufficient. But where there are violent epileptiform attacks, or such a condition of the meninges that we fear the development of an attack of acute meningitis, mercury should be employed. In the great majority of cases it is sufficient to use iodide of potassium, but where there is any doubt, the administration of the iodide should be preceded by the use of mercury. Many combine these two remedies, but my own experience has not led me to have much confidence in this method. When the drugs are combined too small doses are usually given. If only ten grains of iodide of potassium are ordered, mercury should of course be given, but if one hundred grains of the iodide are given, I do not think that it is necessary to add to it one twelfth of a grain of the bichloride of mercury. If both are given at the same time they should not be combined in the same prescription, for it is often desirable to push the iodide without increasing the dose of mercury. In regard to the amount given, my rule is to begin with small doses. If I am making the therapeutic test I begin with fifteen grains of iodide of potassium three times a day for a week. If a patient will bear this, he will in ninety cases out of a hundred bear sixty grains three times a day. In three or four days I increase the dose to twenty grains, and a few days later to twenty-five grains. If this is well borne, I make a bold plunge and give sixty grains three times a day. If the patient bears this the amount may be increased to eighty or ninety grains three times a day. If you want to cure cerebral syphilis there is no use in giving less than sixty grains three times a day. One half an ounce is not an excessive daily dose. This may be kept up for weeks, months, or years. How or why these large doses act better than smaller ones I cannot say, but I believe that iodide of potassium is one of the remedies that escape from the kidneys as fast as they are taken into the mouth, and do not accumulate in the patient's system.

In reference to the use of mercury, I do not think that it makes much difference how it is employed. It may be rubbed into the skin in the form of an ointment, it may be administered hypodermically in the form of the albuminate of corrosive sublimate, or it may be given by the mouth. If the mercury finds entrance to the system, it makes little difference by what door it goes through. If you want to impress the patient and do something that no one else does, of course you will use hypodermic injections, but these are apt to produce severe local soreness, and I do not think the effect is any better than when the drug is administered by the mouth. An important practical fact in regard to the use of mercury is that a mercurial course should always be followed by iodide of potassium. It is absolutely proven, to my mind, that mercury given for a long time does not all escape from the body, but finds its habitat in the solid tissues. I have seen patients mecurialized and recover, and when iodide of potassium has been given have a second outbreak of the former condition. In many cases, if the urine is examined no mercury will be found, but if iodide of potassium is administered, chemical tests will show mercury to be present. It should be made an absolute rule in all cases of syphilis to follow a mercurial course by a prolonged course of iodide of potassium.

The question always comes up in the treatment of syphilis, "How long shall the antispecific treatment be employed?" If you are giving iodide of potassium you can not continue the antispecific remedy too long. I think myself that in a severe form of cerebral syphilis the treatment should be continued for one, two, three, or four years after the subsidence of all symptoms. It is not then necessary to give it in such large doses as before recommended. Fifteen grains once a day is sufficient.

There are some cases of cerebral syphilis which will not respond to mercury or iodide of potassium. Under these circumstances the old treatment with the woods should be tried. A good form is Zittman's decoction. The compound decoction of sarsaparilla is the modern representative of mediæval decoction of the woods. I used to believe that these remedies had no power, and that sarsaparilla was a useless remedy. Although I now think that it is of service, I do not think that it is necessary in most cases of cerebral syphilis. In one case in which I failed with iodide of potassium and mercury, complete success followed the administration of Zittman's decoction. This preparation contains a small amount of mercury. The patient to whom I refer was a sea captain. I gave him iodide of potassium and I gave him mercury. He improved to a certain point, and then I could get him no further. In a moment of inspiration, or of desperation, I ordered Zittman's decoction. In a week the symptoms began to improve, and in four weeks he was able to return to his duties. The compound syrup of sarsaparilla is one of the few vehicles which has the power of covering the taste of iodide of potassium. In employing the iodide I order a prescription in which two drachms of the watery solution represents one drachm of the drug. I order the patient to add so many drops to one or two teaspoonsful of the compound syrup of sarsaparilla, or I administer it in the compound decoction of sarsaparilla. As iodide of potassium is prone to irritate the stomach, it should be given after meals, well diluted.

In this second patient we at first used iodide of potassium, but about ten days ago he was put on inunctions of mercury. These have been thoroughly carried out, and have produced a mild constitutional effect. He seems to have improved less under the mercury than he did under the iodide of potassium. We shall then resume the latter drug.

I shall now ask attention to the specimen to which I referred at the beginning of the hour. This is the brain of a man who was brought to the hospital on a stretcher ten days ago. The symptoms were those of complete dementia, but we had no history whatsoever. Three days ago he became unconscious; the temperature began to rise, and yesterday he died in a condition of apoplectiform congestion.

There is one point which I wish to refer to: that is, the rise of temperature. When in apoplexy, or apoplectiform conditions, the temperture begins to rapidly rise, the case almost always ends fatally. There is no symptom which has so fatal a significance as a rise of temperature accompanied with unconsciousness. The rapid rise of temperature indicates the destruction of so large an amount of nervous tissue, or tissue so situated, that recovery is next to impossible.

Looking at the specimen we find adhesions of the pia mater and exudations of small amounts of lymph on the upper surface of the brain. The under surface is normal, except that there is marked atheroma of the arteries. The arteries are thick, opaque, white, and feel like little round cords. This may depend on syphilis, and if the condition occurs in early life usually is so dependent; but as this patient was old, it may be simply the result of senile changes. Again examining the upper surface of the brain, I find, in the posterior lobe on the right side, a soft, discolored spot. I am sure that if some of this tissue were placed under the microscope numerous small, round cells would be found. This apparently is a gliomatous tumor of the brain. This consists of a tissue like sarcoma, with small, round cells infiltrating the brain tissue. There is no distinct line of demarkation separating the growth from the normal tissue. To the naked eye it differs from the normal brain structure only in color and consistence. On opening the right lateral ventricle I find it filled with serum. The left ventricle is empty. As I have said, I believe this to be a case of gliomatous tumor associated with secondary serous apoplexy.

Original Articles.

A CASE OF CEREBRO-SPINAL SYPHILIS.

BY ABNER POST, M. D.

THE following case is presented with the knowledge that it is imperfect, but with the hope that it may prove as interesting to the reader as to the observer: —

J. D., aged thirty-one, Irish-American, of healthy family, and in general well until present trouble. Previous to March 31, 1867, served three years in the regular army, the latter portion of the time as corporal, — important matters of his personal history, as they establish the fact of physical soundness and of ordinary mental capacity.

After leaving the army John led an irregular and useless life; drank very freely, and was in general very dissipated. Had several gonorrhœas, and at some time not easily fixed, probably in the latter part of 1869 or early in 1870, had a venereal sore, followed by a bubo which suppurated and remained open for a year.

This was followed after a time by lumps in the throat and a falling of the hair. He did not consult a physician at this time, but applied nitrate of silver to the primary sore, cut his hair short, and took iodide of potash at the advice of a friend. He says he never had any eruption save a few pimples on his arms. Something, however, sent him once to the dispensary, and he took the contents of a bottle given him there. If he is to be believed the manifestations were very slight, and the treatment was certainly very imperfect. He was now for three years a barkeeper at the North End, and drank more freely than ever, being drunk by his own statement about half the time.

In the spring of 1875, or about six years, as nearly as can be ascertained, after the primary sore, he began to have dull remitting pains in various parts of his body. During the summer he was attacked on five or six occasions with a sudden sharp pain in the small of the back, which seemed to be drawing him backwards and compelled him to lie down to keep from falling. Each attack was of short duration; there was no loss of consciousness nor headache. He noticed after the commencement of the pains that he was dragging his right foot in such a manner that he wore out the tip of the right shoe. He lived at home at this time and was probably temperate, but his walk was so irregular that the boys on the street would cry out that John was drunk again. During this time, and probably before the commencement of these latter symptoms, he had some difficulty of micturition.

In November of the same year, 1875, the following note of his case was made by a physician who saw him: "Intellect below par; eyes dull, expression sleepy; gait labored, shuffling, slightly irregular; inclined to drag right toes; with difficulty stands on one foot with closed eyes; can turn round fairly; sensation in foot normal; slight incongruity of speech. Pulse 75; temperature 99° F. Urine contains no abnormal constituents." The patient is reported as saying that he had noticed a change in his own voice; words were thick and cut short, and he talked "through his nose."

Soon after this record he visited a sister in the country. One morning, after talking with the family until after ten o'clock the preceding night, he was unable to rise and his speech was unintelligible. In the afternoon he was encouraged to get out of bed, but was unable to stand and fell to the floor. In a day or two, however, he was able to return alone to the city. Nothing could be learned as to the extent of this attack or what members were involved.

He was treated for more than a year at various places, gaining slightly at times, but on the whole with no great benefit, and at last with marked failure. At one time his right arm became powerless, hanging helpless by his side; he regained partial control over it after a time, however.

Was first seen by the writer in the winter of 1876–1877. When first seen he was dressed and sitting in a chair, but was unable to hold himself upright in it; he could with difficulty stand erect for a moment without support; he could walk across the room when supported, dragging both feet, noticeably the right; tottered, and was easily upset. His grasp was very feeble, weaker on the left side than on the right. His mother dressed and undressed him, put him to bed, and fed him. On the preceding night he had fallen out of bed and was unable to return to it till assisted. He had entirely lost control over his sphincters. His countenance wore a vacant expression or a meaningless smile. His speech was thick, not easily understood. All answers to questions were followed by an idiotic laugh. There was a constant flow of saliva. His memory for the principal events of his life was good, and he could generally answer any question requiring a simple yes or no, but he was incapable of any mental effort. He could not give his age, but was very bright in his answers to questions for specific history.

Much of his time was spent in reading newspapers, which he comprehended, at least partially; but he could not repeat sensibly a single item. There was no delirium nor hallucination.

His tongue was protruded in a straight line, and no paralysis of facial muscles existed. There was no loss of sensation noticeable by ordinary methods of investigation. There was no wasting of separate muscles, and no tremor. A very slight cicatrix could be made out at the seat of primary sore; an irregular puckered cicatrix in right groin; aside from these no cicatrices; no enlarged glands; no nodes.

The irregular and progressive character of the paralysis, its union with dementia, in a patient of thirty-one, of probable syphilitic antecedents, made the diagnosis of cerebro-spinal syphilis nearly if not quite positive, and treatment was instituted in accordance with that view.

His improvement was almost immediate, and to a certain point rapid. In a few days he regained control of his sphincters and was able to dress and feed himself; his powers of locomotion returned more slowly, and he continued very silly. He became exceedingly restless, and as soon as he was able to go out of doors would spend the whole day from home, wandering as far as his strength would allow, returning always punctually at meal time.

Soon after he began to walk about the pain in the lumbar spine returned with great violence, and for a few days he walked with his back deeply curved — an opisthotonos — using his cane apparently to prevent falling backwards. His iodide was increased, and this symptom lasted but a few days, when he resumed his former position, still dragging his foot, his mental state improving little if any. What symptoms accompanied this condition of the spine are unknown, as during this time he was never found at home but only seen accidentally as he was walking upon the street.

During the summer he was seldom seen; he continued to take iodide, but irregularly, at times ceasing for a few days altogether. In the autumn he returned to treatment in about the same state as when last seen. He had had no further attack, but had made little if any improvement. He was put upon iodide again, beginning with fifteen grains three times a day, running up rapidly to half a drachm, and more slowly to one drachm.

On the 1st of January, 1878, he dragged his right foot for a few steps, and then raised it for a step. His intellect was somewhat clearer, he answered sometimes with the usual idiotic laugh, and sometimes in a more natural manner.

In the middle of January his laugh was still less marked. An acneform eruption existed on the face.

Dr. Wadsworth was kind enough to make an ophthalmoscopic examination of the patient for me, which was negative so far as symptoms of intra-cranial disease were concerned; he however found evidence of an old iritis in right eye of probable syphilitic origin. The following is his account: —

January 17, 1878.

Dear Doctor, — I examined the man you sent me yesterday. I found in the right eye evidence of former iritis and appearances about the optic nerve which may have been the result of an old optic neuritis or may have been congenital. The left eye was hypermetropic to a considerable degree, and, as he says it has always been, amblyopic. There were no evidences of disease to be seen in it.

The imperfect sight in the left eye I am disposed to believe connected with the hypermetropia, and both congenital.

If the appearances seen about the right optic disk are the result of former inflammation, I should rather regard that inflammation, here, as connected with the iritis which he certainly has had, than as a symptom of organic cerebral trouble. If neuritis were excited by the latter it would most probably affect both eyes. The iritis was probably specific.

I should call the result of my examination, so far as it bears on the existence of organic cerebral trouble, negative.

Very truly yours, O. F. Wadsworth.

Under date of , 1878, the following account appears: —

"At present he presents a most marked contrast to his former state. He drags his foot, but not so heavily as before, occasionally raises it for a few steps, especially if walking on a level floor. His eye is quite bright; he can talk for several minutes without the vacant laugh showing itself; he can write very intelligibly, probably as well as he ever did. He announces that "he feels better; that his mind is not troubled any longer," and that he could do almost anything he ever did. He remembers perfectly events previous and subsequent to his sickest time, but cannot believe he was ever unable to feed himself. Has noticeably improved within the last fortnight."

In regard to diagnosis the points particularly noticeable are the youth of the patient, the disorderly grouping of the symptoms, and particularly the evanescent and imperfect character of the paralyses, and the necessity of supposing various lesions, widely separated, as points of origin for the various symptoms. Such a history is very unusual, save as a result of syphilis, and even if the history of early symptoms were more imperfect than in the present case or entirely wanting, no other diagnosis would be admissible; the rapid though partial improvement confirms it.

An interesting point in the history of this case is the entire absence of headache and sleeplessness. Pain in some portion of the head of a very severe character is supposed to be an almost invariable precursor of cerebral symptoms. It is usually continuous, seldom intermittent, and usually without nocturnal exacerbations. Neither the patient nor his friends have the slightest recollection of its ever occurring, though questioned repeatedly in regard to it.

The pain over the lumbar spine was, however, one of the earliest symptoms; its severe character was the same as that usually ascribed to the cephalalgia, and may well supplant it as an early symptom.

The case unites three of the causes usually considered influential in determining cerebral symptoms in syphilitics: —

Poorly marked secondaries.
Irregularly followed treatment.
Irregular, dissipated life.

The first two antecedents may to a certain extent be considered identical. The slight severity of the symptoms being the reason why patients are unwilling to carry out the details of a specific course. That debauchery, and particularly the free use of alcohol, should tend to the location of syphilis in the nervous system seems but a natural result. It is the cause oftentimes of various nervous manifestations in other diseases, it renders the nervous system sensitive to outside influence, and exactly as syphilis often manifests itself at the seat of an old injury in the skin and bones, so it may tend to locate itself in a brain injured by the repeated hyperæmias of free alcoholic stimulation.

Hereditary predisposition to nervous diseases is also one of the determining causes, and it may be interesting to note that the patient's father, during the latter years of his life, was "nervous," according to his wife's story, that is, restless and irritable, less able to apply himself to his ordinary occupation than previously. These symptoms came on after, and were referred to, a blow on the head.

The dose of the iodide under which the first striking improvement was made is quite uncertain; a misunderstanding took place in regard to its administration; it fell far short of the enormous doses often necessary in cases of this character; it probably never exceeded fifteen or twenty grains three times a day. To it was added for a time a small dose of mercury; it was soon suspended, however. When the patient returned to treatment in the winter the dose was run up slowly from fifteen grains to one drachm three times a day, which he is now taking. There is little doubt in my own mind that had he taken at first the amount he was supposed to be taking the improvement would have been far greater.

His appetite was good throughout. No symptom of iodism appeared, save a few acne pustules on the face. The continuance of the very noticeable flow of saliva was suspected to be due to the iodide, but it markedly decreased during treatment.

The actual improvement made in the patient's condition almost surpasses belief. The long time that elapsed before he received continued specific treatment, and its insufficient character for some time after it was entered upon, certainly allowed sufficient time for permanent injury.

Of the later history of this patient I am able to give but little account. He remained in about the same general condition, never recovering sufficiently to assume again his position behind the bar, and finally died, probably some time in 1880. Of the particulars of his death I have no knowledge.

AN UNUSUAL OBSTETRICAL CASE.[1]

BY CHARLES P. STRONG, M. D.

THE case I bring to your notice to-night has its interesting features in the complications attending the confinement of a healthy primipara of thirty; these were: prolongation of the pregnancy and large child, entire absence of liquor amnii, interstitial and subserous fibroids, contracted pelvis combined with posterior position of the occiput, and non-rotation of the head; a list as formidable as it, fortunately, is rare.

Prolongation of pregnancy. Fortunately there is no possible cause for doubting the honesty of the patient's statement that menstruation was last observed September 17, 1882, and that impregnation must have taken place within the five days subsequent. Allowing the usual time of 278 days from the last appearance of the menstrual flow to indicate the time of delivery, June 22, 1883, was considered the probable date. There were, however, no signs of uterine action until July 10th, 296 days after the cessation of menstruation, and these were but false pains, and it was not until July 18th, 304 days from the end of the last period, and 299 days from the last opportunity for fertile coitus, that labor began. The influence of this prolonged period of gestation was undoubtedly manifest in the large size of the fœtus, eleven and one quarter pounds; but whether the absence of liquor amnii was cause or effect of the prolongation, or whether there was no relation between the phenomena except that of coincidence, I am unable to determine.

To abbreviate the account of the labor, let me state that the first thirty hours were occupied by irregular and infrequent, short, nagging pains, ineffectual in dilating the os much or rapidly, nor did they exhaust the patient, as she enjoyed the rest which chloral gave. The results of my first examination as noted were: First, the peculiar shape of the abdominal swelling. It was not a moderate curve from pulse to sternum, but hung pendulous, the umbilicus crowning the summit, like the tumor found in multiparæ with lax and ruptured abdominal walls. Though a tense, hard uterus, the position of the fœtus was made out with more uncertainty and difficulty than I ever before experienced, but I was sure the head was against the pubes, and the occiput in the right posterior position. The body it was impossible to locate, and, complicating still more, a hard mass the size and shape of a fœtal head could be felt in the median line just posterior to the uterine fundus, evidently imbedded in the walls of the uterus or else in its cavity. The question that these abnormal results of palpation offered was: were there twins, a monstrosity, or uterine fibroids to complicate delivery? With most careful auscultation I could find but one fœtal heart, beating most loudly on a level with, and just to the right of, the umbilicus, which made the existence of twins more problematical. By the vagina the head was felt presenting high up, the os just admitting the tip of the finger. As I stated before, there was no material change in this condition of affairs for some thirty hours; then the pains assumed a better character, and, the os slowly dilating, the head descended, pushing in front of it the anterior lip, which no efforts could keep replaced above the smooth brow, but which, happily, was not made at all œdematous by the pressure. When the os was dilated the head, although extended, firmly engaged, but in a curious manner, the brow jamming hard against the pubes, while the occiput was so far from the sacrum that the finger could easily be passed between them. So long as the pains continued to be effectual, although the progress of the head was very slow, I refrained from any interference to aid the occiput in rotating forwards, but when, with strong pains, there had been no advance for some time, I employed all manual means, pressures upon the forehead, attempts to bring down the occiput and the like, endeavoring thus to obtain better flexion to accomplish this end. No efforts on my part, nor the vigorous pains of the patient, could stir the head from the position it had then occupied for nearly an hour, and, realizing that a bladder slough must ensue unless a speedy termination was made to this localized pressure, I decided to etherize and deliver; but wishing first the advantage of a consultation, I summoned Dr. J. B. Swift, whose advice and manual assistance contributed largely to the happy termination of the case. Palpation under ether revealed the existence of but one fœtus, and the presence of large inter-uterine and subserous fibroids. The head was undoubtedly in the right posterior position, but the fœtal body was still obscured by the tense uterine walls. There seemed no reason for the non-advance of the head, except absence of rotation, and I hopefully applied the forceps with the idea of flexing the head and turning the occiput forwards, but in several trials failed to lock the blades, and, introducing my hand to ascertain the cause, came upon the too projecting promontory of the sacrum, between which and the pubes the head was caught, lying with its bi-parietal diameter in the narrowed antero-posterior diameter of the pelvis. As the forceps would not lock, version was attempted, and our united efforts succeeded in dislodging the head back into the uterus, turning and extracting, the most difficult part of the operation being to draw the body through after the feet were down, and the continued pressure upon the cord at this time is probably responsible for the birth of a fœtus whose heart was but feebly fluttering, and who, despite immediate attention, never breathed. The entire absence of liquor amnii permitted the uterine walls to mould themselves closely to the fœtal limbs, thus vastly increasing the tediousness and danger of version. The perinæum required no stitch.

Following down the uterus as the head was extracted I could force the fundus no lower than two inches above the umbilicus, and I introduced my hand, removing the placenta, completely into the uterine cavity before I could convince myself it did not contain another occupant, and that its size depended only upon the fibrous growths which extended throughout the posterior wall from the cervix to the fundus. The uterus was bulky as normally at the seventh month of pregnancy, and the mass that I had thought might be a fœtal head projected boldly from the fundus as a sub-peritoneal fibroid. Hæmorrhage, which I anticipated, fortunately did not occur. I administered a full dose of opium, and ordered the patient to be kept under its influence thoroughly.

The following day the patient had but slight tenderness over the abdomen, but the vulva was so swollen the legs were kept widely apart. Vaginal douches of carbolic were given for the lochia were already offensive, and ergot and quinine prescribed. Opium was continued to just short of narcotism. On the second day the uterus was still far above the umbilicus, the lochia very copious and offensive, and about the perinæum and vagina sloughs appeared, especially deep on the perineal body. Abundant nourishment was taken. There was no material change until the fourth day, when the breasts, filling, were strapped. While the evening douche of carbolic, one to forty, was being given the patient suddenly collapsed profoundly, necessitating stimulants subcutaneously; immediately following was a prolonged chill, the temperature rose to 105.6° F., the lochia became very offensive, and a case of septicæmia seemed well started, but during the night all these bad symptoms disappeared, and the patient expressed herself as feeling better than at any time since delivery. The lochia, although profuse, were not offensive; the right labium was rapidly returning to its normal size; the sloughs had cleaned away and left granulating surfaces on perinæum and vagina. The left labium contained a hæmatoma the size of an orange, but day by day this diminished, and in six weeks entirely disappeared. On this day I substituted chlorinated soda for carbolic in the douche, and commenced to wash out the bladder for cystitis, a cystitis undoubtedly of traumatic origin. Three times during convalescence the copious lochia were stained with blood, and once the urine for five days was very scanty and dark, but contained no evidence of renal disease. Apparently this was an idiosyncrasy of the patient, for the same phenomenon was twice noticed two years ago when she was ill with acute rheumatism, and her urine then submitted to experts failed to show the cause. With these exceptions convalescence was uninterrupted. The uterus slowly involuted, and at the end of two months was but little above the pubes. Opium was omitted at the end of ten days, but ergot was retained, and materially aided in reducing the bulk of the fibroids.

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[1] Read before the Section for Obstetrics and Gynæcology of the Suffolk District Medical Society, October 17, 1883.

The hæmatoma of the left labium, a lesion fortunately rare, and, unfortunately, not always as happy in its termination, was undoubtedly due to the sudden over-distention of the vulva by the passage of the large fœtus, and to the same cause I attribute the sloughs which appeared on the perinæum and vagina. The method of checking the milk by strapping the breasts firmly as soon as they began to fill, padding freely with cotton to secure uniform and elastic pressure, I regard as much more effectual and speedy than rubbing.

In conducting the convalescence no consideration perplexed me more during the first few days than that of the necessity for an intra-uterine douche which the very offensive lochia indicated. I determined against it for these reasons: Nothing in the general condition of the patient imperatively demanded it. The uterus was free from tenderness and the lochia so profuse I felt sure none were locked up in the uterine cavity, especially as I knew the placenta and membranes were thoroughly removed. The danger to my patient lay not so much in septicæmia as in peritonitis, and it seemed to me that the trying operation of washing out through the swollen and sensitive vulva, requiring, too, as it does, so much manipulation of the patient, would be provocative of far more serious trouble than it would ward off. The chill and high temperature on the fourth day might possibly have been due to the coming of the milk, and the antecedent collapse but a coincidence, but I am more and more inclined to attribute the entire disturbance to the entrance of some of the carbolic solution into the uterus. Since the intra-uterine douche and carbolic acid have grown into such general favor, every year shows an increasing record of cases of collapse, sometimes fatal, during its employment, this, too, notwithstanding the varied and complete armamentaria that abound in our surgical stores. With other disinfectants thus employed I never personally saw these unpleasant results, nor am I familiar with recorded cases. During my service as house officer at the Lying-in Hospital when intra-uterine douches were there first introduced, a solution of permanganate of potash was always employed, and in two severe epidemics of septicæmia where ten and more douches were daily given with no other instruments than a block-tin tube passed to the fundus and a Davidson syringe, there was never a bad symptom produced. I believe permanganate of potash is, above all others, the proper disinfectant for intra-uterine medication; the color of the returning fluid shows when the cleansing is complete, a very important consideration, because if done at all disinfecting needs to be thoroughly done; it does not produce colic, cramp, or systemic poisoning; the ensuing fall in temperature is more decided and protracted. I should always use it in vaginal douches, too, were it not that it stains the linen; for this class of cases a solution of chlorinated soda is most efficient, but the tendency of the latter disinfectant to form with pus a tenacious, semisolid mass prohibits its intra-uterine use in sufficiently strong solution to be reliable.

The subinvolution of the uterus that persisted so many weeks is certainly explained by the presence of the fibroids, which acted not only passively by increasing the mass to be disintegrated, but even more potently retarded the retrograde changes by the reflex action of a foreign body in the uterine walls.

With the success of the early establishment of opium narcotism I am perfectly satisfied. The danger where so much manipulation is employed is not of septicæmia, especially if hands and instruments have been rendered aseptic, but of peritonitis. We have no other remedy to combat the inflammation when once established, and if checking peristalsis offers the one means of cure, checking it earlier rationally appears the one means of prevention.

The exhibition of ergot was continued two months, yet when I last examined the patient, eleven weeks after delivery, the cavity of the uterus measured two and three fourths inches, and the posterior wall and fundus were still thickened and irregular, although the projecting knobs that were so apparent immediately after labor had melted away.

To allot to each abnormal element its proper share in producing the complications of this case is impossible. Had any one of them existed alone a tedious labor would probably have been the worst result, but here it was demanded of a weakened uterus to force an excessively large fœtus, lying in an unfavorable position, through a contracted pelvis. Fibroids, wherever situated, tend always to produce trouble, the submucous ones especially predisposing to hæmorrhage. They impede the uterine contractions, frequently cause abnormal presentations, and during convalescence may threaten life by sloughing *en masse*, or, disintegrating more slowly, be absorbed and produce ichorrhæmia, a condition the prolonged elevation of the temperature shows was present in this case. In two previous cases where I observed this complication, the fibroids being of the subserous class, irregular and weakened uterine action was the result; in one case forceps were required.

Reviewing my patient's symptoms I see that I might sooner have suspected pelvic deformity had there not, unfortunately, been so many other visible explanations of all irregularities. The pendulous abdomen, the malposition of the head, high up, and extended, with the brow pressed hard against the pubes, are all characteristic of this class of pelves, which Schroeder calls flattened pelves. They are produced by the sacrum being thrust forwards and downwards in youth, thus confining the narrowing to the antero-posterior diameter. The deformity is rarely marked enough to produce much trouble except in cases similar to the one under consideration, where there is relative disproportion between the diameters of the pelvis and a large fœtal head. It is in this class of cases that forceps often fail in consequence of the firm wedging of the head, in its wide bi-parietal diameter, between the pubes and the projecting promontory. Version offers far better prospects for speedy and safe delivery.

The temperature chart is instructive. The first days witnessed a steady rise in the temperature culminating on the evening of the fourth day at 102.5° F. It was on this evening also the patient had the chill and an accompanying temperature of 105.6° F. The next day there was a fall to 101° F., and during just two weeks there was a constant morning temperature of 100° F., and evening one of 101° F. For the ensuing two weeks there was a daily fluctuation from 99° F. to 100° F., then the temperature dropped to normal, and remained stationary. The constant elevation of temperature I attribute entirely to the great disintegrating mass of the fibroids.

NITRO-GLYCERINE AND THE CHLORIDE OF GOLD AND SODIUM IN THE TREATMENT OF ALBUMINURIA.[1]

BY ROBERTS BARTHOLOW, M. D., LL. D.

HITHERTO the therapeutics of renal diseases have not advanced in the same ratio as our knowledge of their pathology. It cannot be said now that a cure has been found, but that two remedies of real value are available. My contribution to this symposium, on albuminuria, consists in an attempt to define the place which these remedies should occupy in a curative scheme. To do this, in even the briefest way, I must clear the ground with a preliminary statement.

I start with the proposition that those renal lesions united by the common symptom — albuminuria — are of neural origin. There is a kinship between diabetes and Bright's disease. One of these is sometimes substituted for the other; and during the course of some rare cases of exophthalmic goitre this substitution occurs. Irritation of a certain part of the floor of the fourth ventricle is followed by glycosuria; of another part by albuminuria. The recent observations of Da Costa and Longstreth prove that a relation exists, whether casual or sequential, between certain renal lesions and degenerative changes in some ganglia of the abdominal sympathetic. The hypertrophy of the muscular coat of the arterioles, discovered by Dr. George Johnson, and the increased tension of the vascular system due to an irritation of the vaso-motor centre in the medulla, both present in the chronic forms of albuminuria, are further evidences of the agency of the nervous system. It was, more especially, the condition of elevated tension of the vessels which led to the use of nitro-glycerine. This remedy before all else reduces the vascular tension. It also lessens the work of the heart by removing the inhibition exercised by the pneumogastric nerve.

This remedy appears to have been first used by Mr. Robson, an English surgeon, in cases of albuminuria, and by him employed, because the high tension of the vascular system has proved to be so pronounced an element in the more chronic cases. I have, myself, seen some remarkable instances of relief — indeed of cure — effected by it. If time were now available, I could give some striking examples. In cases of mitral disease accompanied by albuminuria it also renders the highest service — for the diminished peripheral tension lessens the work to be done by the heart, and assists in the more equal distribution of the blood. The effect of this in relieving the renal congestion is obvious.

Chloride of gold and sodium has quite another function. It has long been known that this remedy has a special direction to the genito-urinary apparatus. The ovarian and uterine organs in the female, the testes and vesiculæ seminales in the male, are stimulated by it, and the kidneys, by means of which it is eliminated, and in which it tends to accumulate, are decidedly affected by it in function and structure. In common with some other agents of the class to which gold belongs — for example, corrosive sublimate — the chloride acts on connective tissue and checks its overproduction, or its hyperplasia. It would be quite impossible in this note to go over the evidence on these points, and hence I must ask your assent to these statements. They have been accepted as true of gold, from the days of the alchemists and iatro-chemists, as any one may ascertain from that curious collection of mediæval medical learning — the Anatomy of Melancholy. It has happened, strangely enough, that Hahnemann and his followers have profited by this knowledge, and have used gold preparations — especially *aurum potabile* — in the treatment of renal diseases with success.

How and when are these remedies to be used?

Nitro-glycerine is now administered, as all present know, in the form of the centesimal solution — one minim of the pure drug to 100 minims of alcohol. The initial dose of this one per cent. solution is one minim, which should be increased until the very characteristic physiological effects are produced. The susceptibility to the action of nitro-glycerine varies greatly, and hence the dose cannot be stated in advance. It is necessary to produce some obvious effect. To maintain the same level of action, a slight increase in the dose may be required from time to time. As the effect is not lasting, the interval between the doses should not exceed three or four hours.

The administration of nitro-glycerine should begin in acute cases immediately after the subsidence of the acute symptoms. It is indicated in chronic cases at all periods, but is more especially useful, if given before hypertrophy of the muscular layer of the arterioles has taken place. When it acts favorably, the amount of albumen in the urine steadily diminishes. The mechanism of its action consists in the lowering of the pressure in the renal vessels. How far any curative effect proceeds from action of this remedy on the sympathetic system remains to be determined.

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[1] Read before the Philadelphia County Medical Society, December 19, 1883.

Chloride of gold and sodium is indicated in the subacute and chronic cases, especially the latter. The earlier it is given the better, if structural changes are to be prevented or arrested. The good effects to be expected from it will depend necessarily on the extent of the damage already inflicted on the kidneys.

The usual dose is one twentieth grain, twice a day, but this may be much increased, if necessary. At the outset, one tenth grain may be given; in a week the dose should be lowered to one fifteenth grain, and after a month the regular dose of one twentieth grain should be steadily pursued, with occasional intermissions. Indigestion, gastralgia, and colic pains, nausea or diarrhœa, are occasionally caused by it; and if so, the quantity administered must be reduced. It is usually borne without any discomfort, but after prolonged administration, salivation, weakness, emaciation, trembling and other nervous phenomena may occur possibly. Such effects, however, are wanting in my experience.

The treatment of albuminuria by nitro-glycerine and the chloride of gold and sodium does not necessitate the exclusion of other means — hygienic, climatic, or dietetic. These remedies should, however, be given uncombined at different hours, and their actions should not be hindered or obscured by the effects of other agents given with like purpose. To this general statement there may be two exceptions: with nitro-glycerine, amyl nitrite or sodium nitrite may be given; with the gold and sodium chloride, corrosive sublimate may be combined. If doubts may be felt in regard to the propriety of depending on the utility of these remedies, they need not be long experienced, for if no good effects are observed in two weeks they may then be discontinued.

REPORT ON OBSTETRICS.

BY C. M. GREEN, M. D.

THE DIAPHORETIC TREATMENT OF PUERPERAL ECLAMPSIA WITH HOT BATHS.

IN the last report on Obstetrics[1] was an account of six cases of puerperal eclampsia treated by Dr. Carl Breus with hot baths. To avoid repetition reference is made to that report for a description of the method adopted by Dr. Breus, together with his results. In a second paper[2] Dr. Breus has reported eleven more cases similarly treated with even better results than in the first series. Of these cases, the first eclamptic attack occurred in four, early in the first stage of labor; in two, after a long first stage; in one, during the second stage; and in four, in the first day post partum. The majority of the cases were severe: in only three instances, in which convulsions first occurred post partum, was a favorable prognosis warranted; yet of the eleven cases one only had a fatal issue. This patient, a primipara, aged nineteen, with albuminuria and œdema, was brought to the clinic insensible, having had her first attack two hours previously. Within two hours of her admission to hospital, during which time she suffered four attacks, she was delivered with forceps of a living child: the hot bath and subsequent wrapping up were then employed, and diaphoresis established: convulsions recurred but once thereafter. On the following day the urine was free from albumen, and the facial œdema had disappeared; but that evening the temperature rose to 104° F., and peritonitis developed which resulted fatally in three days: so that death was attributable only indirectly at most to the eclamptic condition. The other ten cases all recovered. Of the eleven children only two were lost, namely, by craniotomy.

Dr. Breus further testifies to the great value of this treatment as a prophylactic measure during pregnancy; not only in cases where the urine gives evidence of nephritis, but also in cases of albuminuria and œdema due to hydræmia, in which one apprehends cerebral effusion with consequent pressure and acute anæmia resulting in the eclamptic seizure. He has never known premature labor to have been induced by the baths, nor other unpleasant results to follow their use.

THE CERTAIN DIAGNOSIS OF PREGNANCY BEFORE THE APPEARANCE OF THE FŒTAL SIGNS.

Most authorities agree that the certain signs of pregnancy are all physical signs of fœtal origin; namely, the fœtal heart, the spontaneous movements of the fœtus perceptible to the physician, and abdomino-vaginal ballottement. Only exceptionally are any of these signs available before the sixteenth or eighteenth week; consequently the diagnosis of pregnancy before that time is only presumptive. Dr. F. Loviot believes, however, that "the existence of pregnancy can be surely recognized, at least ninety-five times in a hundred, before the appearance of the fœtal signs; at two months, two months and a half, *a fortiori* at three months and more;" and he writes[3] to maintain this thesis.

As the rational maternal signs afford only presumptive and confirmatory evidence, Dr. Loviot relies upon physical changes in the uterus which he appreciates by palpation, by the vaginal touch, and above all by conjoined manipulation. He agrees with Professor Pajot that the changes undergone by the cervix are not characteristic of pregnancy, but may be due to catamenial congestion, to metritis, and to various pathological conditions: he therefore directs his attention to the body of the uterus, which he believes is modified by pregnancy in a characteristic manner. By conjoined manipulation the superior segment of the pregnant uterine body is accessible above the symphysis pubis under the form of a rounded, depressible, elastic tumor: the inferior segment is depressed and enlarged, and broadened out of proportion to the cervix, so that it juts out, as it were, and forms around the base of the cervix a sort of cushion; a characteristic collar. As a whole the body of the gravid uterus is soft and elastic, and under the examining finger gives the sensation of pressure on a hollow rubber ball. This soft consistency exists at all accessible points; in front, behind, to the right and to the left. The examination necessary to appreciate these modifications ought not to cause pain. Neither uterine congestion nor chronic metritis, nor again fibroid tumors even when softened, impart identical sensations to the examining finger; although if pregnancy is complicated with uterine fibroma, the diagnosis will be more difficult.

CERVICO-VAGINAL LACERATION WITH RETROPERITONEAL HÆMATOMA AND EMPHYSEMA.

Dr. G. Bayer reports[4] two fatal cases of cervico-vaginal laceration which possess very considerable scientific interest: not only on account of the rarity but also because of the similarity of the post-mortem appearances in cases differing widely in their ætiology and clinical course.

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[1] Vide vol cix., No. 2, of this journal.

[2] Archiv für Gynækologie, Band xxi., Heft 1.

[3] Archives de Tocologie, Mai, 1883.

[4] Archiv für Gynæk., Band xxi., Heft 1.

CASE I. An octavipara eight days before, and again on the day of, admission to hospital had uterine hæmorrhage: the os was about two inches in diameter, the placenta prævia, the fœtus in transverse position. A considerable hæmorrhage being excited by examination, and the pains being weak, a colpeurynter was introduced. One hour and a half later the colpeurynter was removed, and podalic version was performed through an os so small and undilatable as to require some force in introducing the hand: extraction was quickly performed without difficulty, and the placenta came spontaneously a moment later. The uterus contracted well; but very profuse hæmorrhage ensued from the posterior vaginal wall. An hour was spent in trying to check the hæmorrhage with sutures: the woman was restless and pale. Resort was now had to the tampon, and the hæmorrhage checked. Twelve hours later ensued dyspnœa, cyanosis, jactitation, and death from acute anæmia.

CASE II. A secundipara, aged twenty-four, hitherto in the best of health, was twenty-six hours in the first stage of labor at full term. While the head, after complete dilatation of the os, was passing normally and quickly through the pelvis, the woman suddenly grew pale and complained of ill-defined pain in the suprapubic region: the pulse was frequent. After the birth of the head there was felt above the symphysis pubis and to the right well marked crepitation. After the child was born, considerable blood mixed with air was expressed from the uterus, and the crepitation could no more be felt; but, although the uterus was well contracted, a profuse hæmorrhage continued, which however was checked with a tampon. Symptoms of septic poisoning soon appeared, accompanied by severe pain in the region of the right kidney: deep palpation from the right inguinal region upward gave a sense of soft resistance, and the uterus was pushed to the left. Death ensued two days after labor, from septicæmia.

Autopsy disclosed in both cases a right-lateral laceration of the cervix (in Case II. to the os internum, in Case I. to one centimetre below the os internum), and a tear of the vaginal vault without perforation of the peritoneal cavity. Through this tear blood and air bubbles had extravasated into the retro-peritoneal connective tissue and had extended upward along the psoas magnus to the region of the right kidney, pushing up the peritonæum. In Case II. the extravasation had degenerated into a dirty sanious pulp mingled with ill smelling gas.

These cases resemble others reported by McClintock, Hecker, Dohrn, and Lohlein in so far as lateral cervico-vaginal tears have given rise to the effusion of blood and air into the subperitoneal tissue; but in the hitherto reported cases, except one of Hecker's, the subperitoneal emphysema has been limited to the ante-uterine region. In Bayer's cases, on the contrary, and in one reported by Hecker,[1] air bubbles mingled with blood advanced along the psoas behind the peritonæum to the region of the kidney.

The treatment of such cases is well-nigh hopeless. The application of sutures to check the hæmorrhage is difficult; and if successfully performed, results in shutting up a quantity of blood and air to degenerate in a closed space: moreover, the opening of the vagina necessary to the insertion of sutures favors a further entrance of air: the antiseptic tampon therefore is to be preferred. A further difficulty lies in the fact that the air and blood are diffused in the connective tissue, and not confined in a sac which can be easily drained and irrigated: it is probable, however, that when death does not occur from hæmorrhage, the skillful introduction of a drainage tube and careful cleansing afford the best hope of success, as in complete ruptures of the uterus.

THE ANATOMY AND ÆTIOLOGY OF RUPTURE OF THE PERITONEAL PORTION OF THE VAGINA DURING LABOR.

Of interest in connection with the last subject is a valuable paper by Dr. D. Berry Hart under the above title.[2] After pointing out the anatomical structure of the pelvic canal, Dr. Hart emphasizes the fact that whereas the anterior vaginal wall is strengthened by the bladder and urethra, and the inferior part of the posterior wall by the rectum and perineal body, the upper inch of the posterior wall is relatively weak. When, moreover, during labor the contracting longitudinal muscular fibres of the uterus exert upward tension on the cervix and vagina, the anterior vaginal wall suffers very little elongation, while the posterior wall is elongated to about five inches. If then the uterine tension is extreme, as in cases of fœtal mal-position, of faulty pelvis, or where the fœtal head is unusually large, the cervix or vagina, or both, will yield at the point that is structurally weakest; namely, as regards the vagina, at the upper part of the posterior wall.

Dr. Hart sums up the whole question as follows: —

"(1.) During labor the uterine muscle exercises an upward tension on the cervix and pelvic floor segments.

"(2.) The fœtal head exercises a dilating power on the cervix and pelvic floor segments, this dilating force acting at right angles to the long axis of the cervix and vagina.

"(3.) The vaginal walls are constructed so as to bear longitudinal tension and eccentric strain. This is provided for by the rugæ and the felted structure of the vagina.

"(4.) The anterior vaginal wall, from its close incorporation with the urethra and loose union with the bladder, is the strong wall.

"(5.) The posterior vaginal wall is structurally weak at its upper half inch, is more elongated during labor than the anterior one, and therefore —

"Rupture of the vagina is most common where the posterior wall is covered by peritonæum, and when it occurs is a tension tear like the cervical rupture."

THE PREVENTION OF OPHTHALMIA NEONATORUM.

Professor Credé, in a third paper[3] on this subject, has given the results of his further observation and experience. Concerning the ætiology of this affection he concludes: —

(1.) That the blennorrhœa of the newborn is caused by a specific virus identical with that of gonorrhœa.

(2.) That the virus, which is contained chiefly in the vaginal secretion of women suffering from vaginitis granulosa, comes in contact with the conjunctivæ during the expulsive stage for the most part: consequently,

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[1] Monatsschrift für Geburtshülfe, Band xxxi., S. 291.

[2] Edinburgh Medical Journal, July, 1883.

[3] Archiv für Gynäk., Band xxi., Heft 2.

(3.) That a protracted expulsive stage (and Credé considers the period protracted if over one hour in duration) favors the inoculation: further,

(4.) That rupture of the membranes more than three hours before the birth of the child not only prolongs the labor and thereby increases the opportunity for infection, but also renders it possible for the examining finger to carry the virus to the eyes of the child: also, —

(5.) That as boys are in the average larger than girls and therefore, *cæteris paribus*, entail a longer expulsive stage, they are more liable to be infected than girls.

(6.) That the incubation stage of the virus is at most not longer than five days; and that consequently blennorrhœa appearing later than five days after labor must be attributed to post-partum infection by the unclean fingers of mother or nurse, or by contact with infected sponges or linen.

(7.) That the normal secretion of the vagina cannot cause a specific blennorrhœa, but may give rise to a simple catarrh.

After trial of various methods, Credé now employs the following treatment: After the cord is cut, the child is bathed and the eyes cleansed with a bit of cloth and pure water: the lids are then separated a little, and by means of a glass rod a single drop of a two per cent. solution of nitrate of silver is allowed to fall upon the cornea. With the great majority of children no reaction follows this application; but in some cases, especially in those of premature birth, there appears several hours after the application a slight hyperæmia of the conjunctivæ without swelling, and a somewhat increased secretion: these appearances vanish, however, on the third day at the latest without treatment. Credé still employs the vaginal douche for the sake of cleanliness; but he does not think it has any especial value in preventing fœtal inoculation. Before the introduction of this method into the Leipsic Lying-in Hospital, blennorrhœa was observed in about ten per cent. of all cases: since June, 1880, when the measure was systematically adopted, the proportion has fallen to about two tenths of one per cent. A more favorable result could scarcely be expected.

FORCEPS IN BREECH PRESENTATIONS.

Prof. W. T. Lusk has reported[1] to the Practitioners' Society of New York a case in which he applied forceps to the breech. A primipara, aged thirty-two, had had a long first stage, when the cessation of pains made operative interference necessary. The breech presented high up in the pelvic cavity with both thighs flexed. Unsuccessful effort was made to extract the breech by traction with the index fingers hooked into both groins: it was then decided to try forceps. One blade of the ordinary Simpson forceps was applied over the sacrum, the other over the posterior surface of the opposing thigh. The forceps did not slip: the breech was brought to the perinæum, and a living child weighing eight pounds was delivered in fifteen minutes from the beginning of the operation. The only injury occasioned by the forceps was a slight abrasion of the abdomen, which healed quickly.

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[1] New York Medical Record, November 3, 1883.

Hospital Practice and Clinical Memoranda.

SALIVARY CALCULI OF THE RIGHT SUBMAXILLARY GLAND.

BY J. BRADFORD COX, M. D., SAN JOSE, CAL.

Mr. J. D., aged fifty-two years, born in Prussia, single, a mechanic, in January, 1879, had an inflammation of the right submaxillary gland, which lasted two or three weeks. The abscess which resulted, instead of breaking externally, notwithstanding poultices to promote it, discharged very freely through Wharton's duct. There was a continuous discharge of pus through that duct until May 29, 1882, when he called at my office for treatment.

An examination showed the gland to be a very little larger than normal and indurated. Pressure on it caused pus to flow from the outlet of the duct near the frænum linguæ. An ordinary silver probe passed readily along the course of the duct to the gland. The touch revealed either necrosed bone or a calculus, the removal of which I assured him would be necessary before he could recover.

As he had consulted several other physicians, and used various remedies without benefit, he consented to an operation. This consisted in cutting into the gland from the inside of the mouth with an ordinary bistoury, wrapped with a roller bandage except at the point. The end of the probe, passed through Wharton's duct, served as a guide. When the opening was large enough I introduced a pair of bullet forceps and removed two calculi. The larger is irregular in shape, with a smooth surface on one end; the remainder of the surface is quite rough. It is thirteen millimetres long, eight broad, and seven thick. The smaller is flat shaped, smooth on one side, where it probably rested against the other. There is a similar smooth place on the end of the larger which corresponds in shape and surface with this. It is rough on the other side and edges. It is seven millimetres long, five broad, and two thick. They are dirty brown in color; the rough projections lighter than the dark background; very hard, having the appearance of brown quartz on the smooth surfaces. Internally the larger one is snowy white. It shows under the microscope an amorphous scaly detritus, many of the fragments having the shape of the epithelium from the mucous membrane of the mouth, but no definite forms of crystallization.

At the time of writing the patient is entirely well. The duct is larger in calibre than normal; and the gland secretes what appears to be healthy saliva, which can be pressed out through the duct.

— The statement of the *British Medical Journal* that its weekly issue amounts to eleven thousand six hundred and fifty copies — a "circulation about equal to the combined circulation of all the other weekly medical journals published in England" — seems a little startling until it is remembered that the British Medical Association numbers ten thousand and fifty, to each of whom a copy is furnished. It follows that its circulation among non-members, including the exchange list, amounts to about sixteen hundred.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

J. B. SWIFT, M. D., SECRETARY.

October 17, 1883. Dr. C. P. Strong reported

AN UNUSUAL CASE OF OBSTETRICS.[1]

Dr. Sherman asked if there was any hæmorrhage from the fibroids.

Dr. Strong said there was none. He feared there would be, and ergot was given immediately after delivery with the idea of preventing it.

Dr. Sherman asked if any bad effects were seen from the continued use of ergot, and spoke of a case where the continued use affected the sight, the trouble stopping on discontinuing the drug, and being reproduced when the medicine was resumed.

Dr. Strong said he had never seen any trouble himself, but had seen cases of the kind reported. In one case he had given it continuously for seven months without any bad effect. At first it was given for two weeks, then stopped for a few days, and then resumed, but finally it was taken continuously.

Dr. Sherman asked the strength of the solution of chlorinated soda.

Dr. Strong replied at first he used one to ten, but this being too strong it was reduced to one to twenty, which was very grateful to the patient. He used two quarts of the solution four times a day. In intra-uterine injections he would not use it because if there was any pus present it would make a coagulum which might obstruct the canal.

In regard to the collapse, he attributed it to shock caused by the carbolic acid solution entering the uterus.

Dr. Sherman said that while he was at the Lying-In Hospital he had given a great many intra-uterine douches of carbolic solution. At first they were given very hot, temperature of 115° F. or 120° F., and with these he had seen cases of collapse. Afterwards the temperature was reduced to 105° F., and no cases of collapse were seen. He thought the symptoms were caused rather by the heat than the carbolic acid.

Dr. Cobb said he had frequently applied pure carbolic acid and a solution of equal parts of carbolic and glycerine to the interior of the uterus, and had never had any bad effects from it.

Dr. Strong replied that carbolic acid of full strength would have such an effect on the mucous membrane, smearing it over with a coagulum, that absorption would be prevented. In these cases the symptoms were not seen, but were produced when the carbolic was in a weaker solution.

Dr. Sherman asked if there had been any symptoms of poisoning after the shock.

Dr. Strong answered there were none. Several days after there was a scanty flow of dark-colored urine, which at first he was inclined to attribute to the carbolic, but as the patient had the same thing when no carbolic had been used he did not think it could have been due to that.

Dr. Cobb said he used carbolized douches in all his cases, and had never seen any bad effects from them.

Dr. Strong said he never had before this case, but now he had concluded never to use carbolic acid for these douches. He thought there were other disinfectants which were just as effectual, and from the use of which such symptoms had never been reported.

Dr. Liebmann asked if these symptoms might not be due to the fluid passing through the Fallopian tubes.

Dr. Strong replied that in the puerperal uterus where the os was so widely open, allowing a free exit, it must be extremely rare, but in the non-puerperal uterus it might happen.

Dr. Liebmann spoke of an article which he had recently seen where the idea was advanced that the hot douches caused an acute inflammation in the mucous membrane, this causing œdema which prevented hæmorrhage by pressure on the vessels, and the shock which was sometimes seen was caused by this acute inflammation.

Dr. Sherman asked if there was any post-partum hæmorrhage.

Dr. Strong said there was none. Fifteen minims of Wyeth's aqueous extract of ergot was given subcutaneously as soon as the placenta was removed.

Dr. Strong spoke of putting the patient under the influence of opium immediately as a preventive measure in cases where peritonitis is feared. In his case the patient was given opium enough to just affect her without narcotism, and this was kept up for ten days. She did not complain of a pain, nor was there any tenderness following the manipulation.

Dr. E. O. Otis asked what Dr. Strong would use as a vaginal injection.

Dr. Strong replied that in both his obstetric and gynæcological cases he used a solution of chlorinated soda. There was one objection to it, its odor, which resembled iodoform. He had never used boracic acid as a vaginal injection, but had used it in cystitis. He used a saturated solution with enough hot water added to raise it to the required temperature. He spoke of a case of paralysis of the bladder where this solution was used as a preventive. As long as the bladder was washed out with it there was no trouble, but on discontinuing the acid cystitis developed, which was stopped by renewing the acid washings. He did not think it was a sufficiently powerful antiseptic for vaginal douches.

Dr. Cobb asked if Dr. Strong used vaginal douches in all cases of labor.

Dr. Strong replied it depended on the attendants. If they were sufficiently intelligent and reliable he used the douches, but if they were not he merely had the genitals bathed with some antiseptic solution. He thought that among the better class of patients they would consider themselves neglected unless the douches were given. In cases where intra-uterine douches were needed he always gave them himself.

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RHODE ISLAND MEDICAL SOCIETY.

The usual quarterly meeting of the Rhode Island Medical Society was held in Providence, December 20th, the President, Dr. Job Kenyon, in the chair.

The secretary being absent Dr. F. B. Fuller, of Pawtucket, was appointed secretary *pro tem.*

As recommended by the Board of Censors, Drs. Clarence M. Godding, of Providence, and Philip K. Taylor, of Kingston, were admitted to fellowship.

THE MEDICAL EXAMINER QUESTION.

Dr. Lloyd Morton, of Pawtucket, read the report of the committee on the proposed law providing for medical examiners and abolishing the office of coroner in this State. The report included the draft of a law modeled after the medical examiner system of Massachusetts, but adapted to the legislative and judicial systems of Rhode Island.

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[1] See page 30 of this number of the Journal.

The proposed act was attentively considered by the Society, and will be submitted to the General Assembly in January.

A suggestion to expunge the name "medical examiner" and retain "the venerable title of coroner" was not favorably received. The committee who drafted the act, together with the President, were elected the committee to present the subject to the attention of the General Assembly.

Dr. D. H. Batchelder, of Cranston, read a paper on the Pathology and Treatment of Inflammation.

Dr. Herrert Terry, on behalf of Dr. A. D. Weeks, in whose practice the case occurred, reported

A CASE OF TUBAL PREGNANCY,

and exhibited the specimen. The patient was healthy, aged thirty-two, married two years, and eleven months before this illness had a normal confinement. The symptoms were sudden and severe. At four P. M. she felt a pain in the right ovarian region accompanied by faintness and vomiting. At seven P. M. there was a collapse, and she died four hours later.

At the post-mortem examination the abdominal cavity was found filled with blood. There was a rupture of the right Fallopian tube, within which was the fœtus. The fœtal head presented at the opening, which was about the size of a silver three-cent piece.

The following points were the most important[1]: —

(1.) The thinned edges at the point of rupture.

(2.) The decidua in the uterine cavity.

(3.) The partially developed placenta and the chorion villi in process of atrophy.

(4.) The corpus luteum in the ovary of the opposite side.

Dr. Anita E. Tyng, resident physician and superintendent of the Woman's Hospital in Philadelphia, reported three cases of ovariotomy.

ANEURISM OF THE THORACIC AORTA.

Dr. Charles O'Leary reported the following case: —

A man, thirty-four years of age, had suffered from continual pain in the back for four years. All through his illness there had been a pulsation in the lumbar region strong enough to visibly lift the fingers. There was no bruit. Aneurism was suggested, but its origin could not even be guessed. Several eminent physicians saw the case, and all agreed that, the possibility of aneurism excepted, it was a case of transmitted pulsation. The pain in the back was at times severe, extending into the left gluteal region and along the course of the sciatic nerve. It was worse if the patient moved about, and he was often compelled to stop and stand awhile when on the street. He used morphia hypodermically.

He was last seen by Dr. O'Leary five days before his death, and was then suffering intensely from pain in the back and left knee, for which two and a half grains of morphia were given before ease was obtained. A tumor could be felt through the abdominal walls, apparently connected with the left psoas muscle. The patient died in a convulsion.

At the autopsy an aneurismal sac was found extending from the eleventh dorsal to the fifth lumbar vertebra. The eleventh and twelfth dorsal and fourth and fifth lumbar vertebræ were eroded, and there were a few loose pieces of bone. The left psoas muscle was pushed outward and greatly thinned. The sac extended somewhat to the right of the spine in the dorsal region, and communicated with the lower part of the thoracic aorta just above the diaphragm on the left side. The sac had not ruptured.

The President appointed delegates to other State medical societies as follows: —

Maine, Drs. G. W. Porter, of Providence, and D. O. King, of Pontiac. New Hampshire, Drs. C. H. Fisher, of Providence, and Ariel Ballou, of Woonsocket. Vermont, Drs. E. M. Snow and C. H. Leonard, of Providence. Massachusetts, Drs. O. W. Brown and A. E. Ham, of Providence. Connecticut, Drs. G. T. Swarts, of Providence, and F. J, Smith, of Coventry. New York, Drs. G. P. Baker and E. T. Caswell, of Providence.

Following adjournment the Society was entertained by the President.

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PATHOLOGICAL SOCIETY OF PHILADELPHIA.[2]

C. B. NANCREDE, M. D., RECORDER.

Thursday evening, December 13, 1883. **Dr. J. H. Musser** in the chair.

CALCIFIED PERICARDIUM. DOUBLE MITRAL DISEASE.

Ella S., white, aged twenty-three, was admitted to the University Hospital in September, 1880, complaining of palpitation and dyspnœa, and suffering from an œdematous and eczematous condition of the lower extremities. She was a girl of regular habits, somewhat exposed to changes of weather and to wet, doing no very hard work. She had had the diseases peculiar to childhood, but never rheumatism nor chorea. Her father had had acute articular rheumatism, and died suddenly; beyond this there was nothing peculiar in the family history. Three years before admission she first noticed slight palpitation and dyspnœa on exertion. For some time before that she had been subject to frequent attacks of epistaxis. One year afterward dropsy appeared in the ankles, and spread upward. The palpitation and dyspnœa became more troublesome, her flesh and strength failed, and she was compelled to quit work and come into the hospital. When first seen she was pale, anæmic, weak, breathless on exertion. The heart's apex beat was in the seventh interspace, one inch outside of the nipple line; action strong and heaving. Best heard over the apex beat, but transmitted feebly up toward the base of the heart and well out into the axilla, was a loud, blowing systolic murmur. There was no pain in the heart nor tenderness on pressure over it, nor had there ever been. Over the lungs were scattered moist râles; the respiratory murmur was harsher on the left than on the right. Cough was slight with some mucous expectoration. The lower extremities were œdematous, and the abdominal cavity about half filled with fluid. The liver was slightly enlarged. The urine was normal in quantity, and contained neither albumen nor casts.

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[1] Cases recently reported: D. D. Gilbert, M. D., Boston Medical and Surgical Journal, December 6, 1883. C. H. Briddon, M. D., New York Medical Journal, December 8, 1883.

[2] Continued from page 17.

Under treatment the urine became copious, the œdema gradually disappeared, and the heart action became stronger and more regular. In a few days friction sounds appeared at the base of the right lung. Any slight exposure would bring on an attack of intense congestion of the lungs with dyspnœa that often threatened life, and with these attacks there was often congestion of the kidneys with suppression of the urine. Between the attacks the heart retained its power well, though it slowly dilated. At intervals she complained of dull pain in the hepatic region. The rough respiration noted at first over the left lung became more and more marked till finally over a small area just below the spine of the scapula it had developed into bronchial breathing. Friction sounds came and went. There were always moist râles scattered through the lungs. The expectoration was mucous or rarely muco-purulent. Three months after she came under observation there was developed at the second right intercostal space, and carried out into the arteries of the neck, a systolic murmur differing in pitch and tone from the mitral systolic. About this time, too, she complained of pain in the heart whenever its action was excited. Soon afterward albumen was found in the urine, but no casts; this was the only time it was ever detected. Fourteen months after she was first seen there was noticed just inside the apex beat, and carried indistinctly toward the base, a harsh, short murmur, immediately preceding the systolic murmur, and separated from it by an exceedingly short but appreciable interval. This murmur was noted on several occasions afterward, but was much more frequently absent than present. Its appearance and disappearance seemed to be attendant on no definite conditions. Soon after it was first noticed she had several attacks of epistaxis, and afterward occasional slight hæmorrhages from the lungs. She was discharged in March, 1882, and was readmitted last September. She had been gradually losing ground. Seven months before she took cold; the dropsy returned and persisted. When seen the whole body was œdematous, and the abdomen enormously distended. The apex beat was in the fifth interspace in the midaxillary line. The systolic murmurs were, perhaps, louder, but beyond this had not changed. Over an area between the left nipple and the sternum was heard a harsh, low-pitched, presystolic murmur. It was much more apparent than the former presystolic murmur, but had the same characters. Its point of maximum intensity was just to the left of the sternum. It was constant. The respiratory murmur over the left lung was very much harsher than over the right. Below the spine of the scapula the breathing was sometimes blowing with mucous râles, sometimes cavernous with gurgling râles. The expectoration was mainly frothy mucus. She died three weeks after admission in a fit of dyspnœa.

Autopsy seven hours after death. General dropsy, most marked in the lower extremities and genitals. On the lower part of the abdomen there is a marked varicose condition of the cutaneous lymphatics. Cavity of the pericardium is completely obliterated by adhesions. The two pericardial surfaces and the fibrous tissue connecting them had been changed into a calcareous plate, three inches broad, completely encircling about its middle the heart with the exception of a space one inch wide on the posterior surface of the left ventricle. This calcified condition extended for one inch on the anterior surface of the pulmonary artery. The heart, with the calcified pericardium, weighed twenty-eight ounces. The auricles were dilated, their walls thinned. The ventricles were dilated, their walls thickened and undergoing fatty degeneration. The leaflets of the mitral valve were thickened and rigid; the mitral orifice was very decidedly narrowed. In the inner surface of the left auricle were several calcareous patches. The aorta was very small, scarcely admitting the index finger, and showed patches of atheroma. The lungs were chronically congested and œdematous, the condition being most marked on the left; there was no breaking down of their substance. The abdomen contained five gallons of straw-colored serum. The peritonæum was thickened and roughened. The liver weighed three and one half pounds, and was cirrhotic. Its capsule was much thickened and adherent to surrounding structure. The mucous membrane of the stomach was mammillated and thickened. The kidneys showed cyanotic induration.

SECTION OF FIBROMA MAMMÆ.

Presented by Dr. MacConnell for Professor Pancoast.

The patient was twenty-two years of age, and the growth was of seven months' duration. Fibromata of the breast are very frequently found, although some English authorities consider them to be of rare occurrence. They have been variously described under different names by writers. Birkett considers them a form of adenoma, Broca, adenoma with predominance of stroma, etc., etc. This tumor was of an ovoid shape, firm and elastic, and on section presented a maroon-colored tissue, which under the microscope is seen to be composed of dense bundles of mature fibrous tissue with but few nuclei. In some portions bands of wavy connective tissue are seen. The epithelial elements of the acini are hyperplastic.

SECTION OF LARGE SPINDLE-CELLED SARCOMA OF LOWER JAW.

Exhibited by Dr. MacConnell for Professor Pancoast.

The patient was a man aged twenty-four years. The growth had existed for about three years. The egg-shell crackle was readily elicited, the growth being of central origin. On section it presented a whitish appearance, and was permeated by spiculæ of bone.

LIVER OF CHICKEN WITH TUBERCULAR GROWTHS.

Exhibited by Dr. MacConnell.

The microscope clearly proved the nature of the growths.

Dr. Formad had seen four or five similar cases in chickens, and two in turkeys, in all of which he had detected tubercle bacilli.

Dr. Barton was much interested in two of the specimens presented by Dr. MacConnell. He was much surprised as to the nature of the tumor of the jaw, in that it was a spindle-celled and not a giant-celled sarcoma. Its site and duration would clinically have clearly indicated one of the myeloid variety. The sections of the mammary growth differed from those examined by him in that in adeno-fibroma the glandular elements were more evenly distributed, whereas this section reminded him of his former studies of an elderly normal gland, such large tracts are found without any traces of gland tissue; whereas in all adeno-fibromas examined by him the adenomatous and fibrous elements were relatively more evenly distributed, giving the idea of the neo-genesis of both, and not the atrophy of one, and the proliferation of the other.

Recent Literature.

Surgical Applied Anatomy. By Frederick Treves, F. R. C. S., Assistant Surgeon and Senior Demonstrator of Anatomy at the London Hospital, etc., etc. Illustrated with sixty-one engravings. Philadelphia: Henry C. Lea's Son & Co. 1883.

This little volume pleases the eye by its neatness and compactness, and we are glad to find the pleasant impression much strengthened by a perusal of its contents. Many writers have of late attempted the difficult task of writing an Applied Anatomy, the need of which is felt more and more every day. There is an increasing and perfectly justified aversion to the insistence on dry and useless details which are frequently taught simply because they are in the books. *Facile princeps* among recent works on anatomy as applied to surgery stands Tillaux's Anatomie Topographique, but it is large and in a foreign language. Mr. Treves has given us an excellent addition to our library by writing a book that is not one on surgery, but one on anatomy, bringing out its surgical applications. We think it very much to be regretted that he has given but passing notice to its medical applications also. He might have done so without making the book unwieldy, and then it would have been invaluable as a text-book on topographical anatomy. As it is it goes a long way towards supplying a want. Mr. Treves is well read in the anatomical and surgical literature of other countries. His illustrations are for the most part taken from the works of Braune, Rüdinger, Tillaux, and Agatz. We notice a rather curious mistake about the *calcar femorale* of Merkel or the "true neck of the femur" of Bigelow. Mr. Treves ascribes its discovery to Merkel, and refers to the *American Journal of Medical Sciences* of 1874, which can have contained at most only an abstract of the paper which appeared in *Virchow's Archiv* of that year, not apparently being aware that the structure had been described by Bigelow in 1869. Probably it is through an oversight that he describes it as being on the anterior instead of the posterior part of the neck of the femur. It is a serious error to state that the pleura descends behind only to the spine of the eleventh dorsal vertebra, as it has been found as low as the transverse process of the first lumbar. We are inclined to question the statement that the quadratus lumborum is not usually cut in colotomy, and regret that the author does not point out the frequency of a mesentery to the descending colon. The surface anatomy of the different parts is generally duly discussed, but we should have liked a section on the back as a whole according to the plan pursued by Holden. We regret that the mediastina are barely noticed. It is incorrect to say that the trachea is immediately in front of the œsophagus in the neck. The section on the head is in many respects excellent. Taken as a whole the book is very satisfactory. To be sure there are mistakes and omissions, but it is a good and useful compilation that we believe will be very popular among students. We cannot close, however, without wondering what would have been the fate of an American at the hands of English critics, should he say that an organ "has been found herniated" (page 325). We trust this expression will be found "herniated" *out* of the future editions which we hope to see of Mr. Treves' book.[1] T. D.

— Professor Huxley, at a recent meeting called for the purpose of ameliorating the condition of the population of the East End of London, narrated experiences which could be duplicated by many who have been engaged in dispensary practice in the great cities of this country, but who may not know that they have so illustrious a *confrère.* Professor Huxley said: "Some forty years ago I was very familiar with certain portions of the East End, — one of those waterside portions where you find all the peculiar conditions of the East End in their typical state. I was at that time engaged in the business of my original profession of medicine, and it was my duty to attend the poor of the parish in that particular region. I therefore became familiar with their lives in a manner which is rarely possible to any but the clergyman and the doctor. I remember as if it were yesterday the condition in which a great proportion of those people lived, and it was such that I found in those recent statements which have been brought before you nothing specially novel and nothing unfamiliar. A great majority of the persons who used to come to me complaining of this and that were simply undergoing slow starvation, mitigated by bread and the stuff to which they gave the name of tea. I remember as if it were yesterday a poor deformed creature who was earning her living by making shirts, who came to me with those complaints, — illness and weakness, and all the rest of it, — and to whom I said, what was quite true, 'You want nothing but food.' I recollect the woman throwing out her hands and showing a few half-pence, hardly sufficient to cover her palms, and exclaiming, 'If that be so, how am I to get food?' I have spent hours in a den in which there was scarcely room to turn, attending to the sufferings of a woman who was about to add to a numerous family, the ordinary resting-place of whom was underneath the bed. . . . I left that scene to my great satisfaction, and some time after embarked on a voyage around the world, where I had an opportunity of seeing savage life in all conceivable conditions of savage degradation, and I can assure you in this experience of mine I found nothing worse, nothing more degrading, nothing so hopeless, nothing nearly so intolerably dull and miserable as the life I had left behind in the East End of London. For although the savage may perish of hunger or violence, and never knows whether his life may be his own twenty-four hours, yet there is life in him, he is a man, he is not a mere machine ground down to bring out so much mechanical energy at the expense of so much food; and I most certainly say that if the alternative were presented to me to choose between the life of one of those people in the East End or that of the savage, I would distinctly choose the latter."

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[1] Since writing the above we find "herniated" in Dunglison, but are none the more inclined to retract our criticism.

Medical and Surgical Journal.

THURSDAY, JANUARY 10, 1884.

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NERVE STRETCHING.

The second Bradshaw lecture was lately delivered before the College of Surgeons of England by its President, Mr. John Marshall, who chose for his subject Nerve Stretching for the Relief or Cure of Pain. The first of the lectures on this foundation, that by Sir James Paget, treated of new forms of disease, and the second, not inappropriately, discusses a new operation for the relief of disease.

The lecturer, himself an enthusiast in his subject, discusses it thoroughly from both the physiological and therapeutical stand-point. The obstinate character of the cases in which recourse is had to the operation (sciatica, locomotor ataxia) seems to justify almost any therapeutic measure which affords even a meagre prospect of relief, while the enthusiasm with which the operation has been taken up in various quarters shows that this prospect has been considered by many quite the reverse of meagre.

At the outset it was proposed not only to relieve the pains of locomotor ataxia, but to retard pathological processes in the spinal cord in such diseases by stretching the sciatic nerves. Wonderful cases of relief from ataxia were reported, but more extended study of cases seems to have shown that when the immediate effect of the operation has passed away the patient may be expected to relapse into his former condition with only a temporary relief of symptoms to repay him for the discomfort and risk attending the operation. Four consecutive cases in which the operation was thoroughly performed by Tiersch, of Leipzig, were reported in the Journal (March 2, 1882) in which not only all the other symptoms of locomotor ataxia returned in full force after a certain period, but special note was made of the fact that after this period the pains were in no case in the least degree lessened. Such results as these have led various authorities to denounce the operation in unmeasured terms. Mr. Marshall takes quite the opposite view, and seems to regard the operation as worthy of a far greater degree of consideration than it at present enjoys. The probability of cure of sciatica he considers great, while the results in relieving the pains of locomotor ataxia he finds by no means discouraging.

In forming an opinion on theoretical grounds of the probable value of nerve stretching in these two affections the different character of the pains must be taken into consideration, and a general idea of the changes produced by the operation must be kept in mind. In sciatica, as stated by Mr. Marshall, the pains arise probably from irritability of the small nerves which supply the sheath of the sciatic nerve. This explains the distribution of the pain along the course of the nerve, for if the source of irritation were in the sciatic nerve itself the pain would be referred to its extremities rather than along its course. In locomotor ataxia, on the other hand, the pains probably indicate merely the points to which are referred the effects of irritation of the posterior nerve roots in the spinal cord or where those nerve roots leave the cord.

After stretching alterations are visible both in the sheath of the nerve and in the nerve itself, the fibres of the former, for example, are straightened and compressed, while the nerve itself undergoes changes varying in degree according to the force employed, complete degeneration of the nerve elements following excessive stretching, to be succeeded later by regeneration. Motor and sensory functions are in this case modified, and disappear to return during the period of regeneration. Whether the spinal cord itself is materially affected by the operation is extremely doubtful, although Mr. Marshall seems to favor the idea of vaso-motor and trophic changes, and seriously suggests the desirability of stretching the nerve downward in disease of the cord, and upward in sciatica. Such changes must, however, be looked on as purely hypothetical, and it is not easy to see how stretching the sciatic nerve can produce lasting benefit in diseases of the spinal cord or even mitigate the pains accompanying those diseases. The irritation to nerve roots produced by degenerative changes at the spinal origin of the sciatic nerve can hardly be materially affected by stretching the nerve in its course through the thigh, unless, possibly, as a secondary effect of the powerful peripheral irritation. In point of fact the results of the operation in such cases up to the present time would hardly encourage a conservative surgeon to undertake the operation.

In regard to neuralgias the prospect seems somewhat more encouraging, both theoretically and judging by statistics. Many of the small nerves in the sheath of the sciatic must be so stretched by a forcible operation as to lose their functions permanently, and if the stretching is done so near the seat of pain as to destroy the nerves whose irritability causes the pain, a radical cure is by no means impossible. In point of fact the statistical results of the operations for sciatica, while open to the distrust attaching to all statistics of this sort, are so favorable as to justify reserving our opinion on this branch of the subject for the present.

There is a third class of cases in which Mr. Marshall considers nerve stretching indicated, namely, cases of painful ulcer, neuromata, and similar peripheral lesions. From this view we should on theoretical grounds decidedly dissent, for although the pain from such peripheral irritation may be lessened temporarily by destroying the conductibility of the nerve, there is no reason to assume that the relief from pain will remain permanent after the regenerative process has restored that conductibility.

One consideration, and by no means an unimportant one to the practitioner, seems to have been treated rather lightly by the lecturer; this is the *danger* of the operation. Nocht reports one death in twenty-four cases, even in sciatica, a fact by no means to be forgotten in prescribing the operation for a disease in itself not dangerous. As to the danger in diseases of the spinal cord, when we remember that the number of cases considered hardly reaches fifty, the conclusion drawn in the following sentences by Mr. Marshall seems rather startling: "With regard to the dangers of nerve stretching in tabes, if you read the cases, you will find that they are comparatively few. One patient died from chloroform, another from thrombosis in the veins, another from pyæmia due to inattention to antiseptic dressings, a fourth from a similar cause. Then we may record three or four cases in which, undoubtedly, the death may be attributed to disease of the spinal cord set up by nerve stretching, but one of these was a case of spasmodic disease. In other words, the peculiar dangers of the disease for which this operation is performed, superimposed upon the dangers to which all operations are liable, render the mortality so great as to offer a serious impediment to its adoption."

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THE NATIONAL BOARD OF HEALTH. THE REPORT FOR THE YEAR 1882–1883.

THE Report of the National Board of Health for the year ending June 30, 1883, shows that of the $50,000 appropriated by Congress for aid to State and local boards of health the sum of $49,947.95 was spent in inspecting immigrants, to control the spread of smallpox, in maintaining the Mississippi River-Inspection Service and the refuge stations at Sapelo Sound and Hampton Roads until October 20, 1882, and the Ship Island Station until November 15th (to accommodate a late-arriving infected Austrian bark). Of $17,500 appropriated for the other expenses of the Board, a little less than $5000 remained unexpended at the end of the year. For the present year Congress has appropriated only $10,000 for all purposes.

The Board has since its creation done work of the greatest practical value, in stamping out yellow fever in New Orleans in 1879, and in restricting its ravages to Memphis in the same year, in establishing quarantine stations in case of cholera or yellow fever importation, in securing sanitary reports from our foreign consuls, in organizing a system of river, railroad, and general inland medical inspection, in restoring confidence where shot-gun quarantines had formerly prevailed, in securing useful legislation to control pestilences, and, most of all, in sanitary surveys and scientific investigations of the utmost importance.

The Board has had a splendid opportunity and it has done good work. For the last two years, however, there has been an evident lack of confidence in it at Washington, the direct result of which has been that Congress has placed in the hands of the President the large appropriation of $100,000 each year, to be used in controlling infectious disease; and the President, through the Secretary of the Treasury, has disappointed the National Board of Health by putting this money at the disposal of the Marine Hospital Service. The Board has apparently not been able to see, what has been so obvious to others, that this action has meant most decidedly that its exsitence in its present form is no longer desired. In any other country than the United States the resignation of its members would accordingly have been speedily placed in the President's hands.

The Board has had an exceedingly difficult task to perform. Most of it has been done thoroughly well. How some of it has been done may be inferred from the thirty pages out of one hundred and two of the report before us, devoted to the old quarrel with the Louisiana Board of Health, and which probably few people are interested to hear now. There may have been fault on both sides, but the issue is an old one and settled long ago.

If the matter of maritime inspection and control of vessels capable of bringing infectious diseases to our ports is left in the hands of the Marine Hospital Service, so far as it can be regulated by a central authority with the coöperation of the various local boards of health, there will be enough for a national health organization to do in supervision of vital statistics, in making sanitary surveys, in chemical analyses of food, air, water, in carrying out scientific investigations, in examinations of the causes of disease and special outbreaks of disease, in suggesting legislation to protect the public health, in advising local boards regarding the means for controlling epidemics, and, if necessary, establishing inspection stations under their own supervision and control, working in harmony with the Marine Hospital Service and State and local boards, in cases where the interests of several States might seem to conflict, or where coöperation is needed.

In that case, the basis of representation of the Board should be very much widened, the members should include other occupations and interests than the medical, annual meetings would probably be sufficient, and some sort of an executive board should be permanently employed in Washington, with duties similar to those of the already established sanitary bureaus of England, France, Italy, and Germany.

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THE MASSACHUSETTS BOARD OF HEALTH.

THE part of the inaugural address of his excellency Governor Robinson which refers to the Board of Health, Lunacy, and Charity is of considerable interest to the medical profession of Massachusetts, and, in so far as her old Board of Health was a model for others in various parts of the country, anything affecting it concerns a wider audience.

We cannot, in speaking for the medical profession, express disappointment or surprise that the Governor should not have seen his way clear to recommending at the present moment a division of the present complex organization, nor do we desire to urge a measure, however desirable in the abstract, out of season as well as in season. But, whilst realizing perfectly by what a variety of considerations political action is and must be controlled, we should be very much disappointed, and in this we believe we express the sentiments of a large and influential part of the profession, should next year's Governor not recommend changes neither "radical nor sweeping," which to this year's Governor seem injudicious.

In the mean time it is unnecessary to scrutinize or criticise his excellency's remarks, which appear in another column, too closely. If not spirited they are at least eminently prudent. Exception might be taken to the expression "a thorough reorganization of the administration of the public charities as accomplished by the Legislature of 1879," and to the statement that "a considerable saving was effected in the operation of the official machinery." Neither is it "plain" that the division of the present conjoined Board, whose name is typical of its cumbrous and vicious organization, would necessitate payment of additional salaries and outlay. No saving has been effected by the union of the Board of Health, nor would additional expense be incurred — even in the supervision of small-pox — by its separation. Good work can be done by the present organization under the most favorable conditions, but better work could and would be done — certainly in the department of health — by a separate board than by a sub-committee.

The one change which his excellency does suggest, and that in the form of a query, relates to a union in the administration of charities of the departments for in-door and out-door poor. Such a change it is, we believe, entirely within the province of the Board of Health, Lunacy, and Charity to effect without action on the part of the Legislature; and, in fact, the action of the Board at its last meeting, only two days after the inauguration, in accepting the resignation of the Superintendent of Out-door Poor, to take effect February 1st, would indicate that such a change had been for some time contemplated.

Health and an unincumbered organization for its supervision are among the most important interests of a State, but it is also true — and this as professional men we may have a tendency at times to forget — they are not the only ones. Another year, it is to be hoped, will make a restoration of a separate Board of Health possible. In the mean time we may heartily reiterate Governor Robinson's, to us not unfamiliar, protest against the introduction of politics, and we may add of personalities, into these questions of charities and sanitation.

* * *

THE PRIZE OFFER BY THE WORSHIPFUL COMPANY OF GROCERS, LONDON.

WE have made room in this issue of the JOURNAL for the announcement of the offer and the conditions of the first quadrennial Discovery Prize of £1000 for original research in sanitary science, emanating from the Worshipful Company of Grocers in London. The document is dated May 30, 1883, and seems to be a little slow in circulating; the offer of the prize was referred to in our columns as long ago as last August. The subject proposed — the discovery of a method by which the Vaccine Contagium may be cultivated apart from the animal body, in some medium or media not otherwise zymotic — is well chosen and should excite competition, being directly in the fashionable line of scientific research of the day. Such a discovery to silence the clamor of popular prejudice, we imagine, is even more to be wished in a country like England, where animal virus is less used, than with us. But the discovery and the process of teaching it would be welcome everywhere.

The name of the Company of Grocers associating itself with the advancement of original research in sanitary science suggests some curious reflections. This fraternity was originally denominated the "Pepperers," and was incorporated under its present name in the reign of Edward III. The Livery Companies of London were originally incorporated to benefit trade, to train artisans, to repress bad workmanship, and to exercise benevolence, especially to members of the guilds and their families, of which functions they are represented as performing none at the present time. The Grocers' Company in 1450 obtained the office of "garbeller of spices," which gradually entailed a supervision of the adulteration of food and drugs, with power of prosecution, and the City records show at different periods that these duties were performed very energetically. In 1664, the physicians having obtained a charter of incorporation which seemed likely to abridge the sphere of the company's medical control, the following notice, according to Herbert, appears on their books: Divers members of this company trading in drugs made request and suit for the countenance of the courts in the freedom of their trade, against the invasion of the College of Physicians, who, having lately obtained from his Majesty a patent, with new and strange power of privilege and search, seizure, fine, and imprisonment, are attempting the passing of a bill in Parliament for the ratification of the same, which, if effected, will be an insupportable inconvenience and prejudice.

Among other curious duties of the Grocers was that of deputing two of their fraternity to stand all day with two of the Ironmongers at Bishopsgate to see that no citizen passed through wearing any dress that his position did not entitle him to wear. Herbert's "City Companies" and Gilbert's "The City" give many details of the development of the London Livery Companies which would be interesting to the historically inquisitive.

Within late years the pressure of public opinion has constrained some of the most wealthy of these companies, of which the Grocers is one, to devote a portion of their enormous revenues to other purposes than feasting, and the present prize offer is one indication of good results from much agitation of the great abuses attaching to the administration of these revenues. It was estimated that the Goldsmiths' Company alone expended for feasting during one year in their hall the sum of £30,000, and the total average annual expenditure of all the Livery Companies, with the accessories of their halls, etc., for feasting was stated, in 1876, at no less a sum than £150,000.

A quadrennial £1000 withdrawn from such an amount, though seeming like a large prize to sanitary science, is but a small alleviation to the burden under which the livers of these livery men labor. It should, indeed, as far as it goes, be twice blessed.

MEDICAL NOTES.

— We understand that Messrs. Weeks and Potter, prominent wholesale druggists, have withdrawn their appeal, and paid their fine in the suit brought against them by the Massachusetts State Board of Health for selling laudanum of inferior strength.

— A new out-patient building at the Massachusetts General Hospital, in memory of the late Dr. George H. Gay, for years a member of the surgical staff of that hospital, was opened January 1st. We shall publish a fuller account of it.

— W. Brewster Platt, M. D., of Baltimore, a graduate of the Harvard Medical School a few years ago, was last month admitted a Fellow of the Royal College of Surgeons, England.

— The Cartwright Lectures for 1884 will be delivered by Prof. Burt G. Wilder, M. D., of Cornell University, at the hall of the Young Men's Christian Association, corner of Twenty-Third Street and Fourth Avenue, New York, on the evenings of February 2, 4, and 6, 1884. The general subject will be Methods of Studying the Brain.

— The following are the lecture arrangements at the London College of Physicians for 1884: The Gulstonian Lectures will be delivered by Dr. Clifford Allbutt on March 7th, 12th, 14th, the subject being Chapters on Visceral Neuroses. The Croonian Lectures will be delivered by Dr. Hughlings-Jackson, on March 19th, 21st, 26th; subject, Evolution and Dissolution of the Nervous System. And the Lumleian Lectures by Dr. James Andrew, March 28th, April 2d, 4th; subject, The Ætiology of Phthisis.

— *Virchow's Archiv* for December contains a summary, by Dr. Uhde, of Braunschweig, of the examinations of pork for trichinæ in the Duchy of Brunswick. The total number of carcasses of swine examined was 120,766. Of these eleven were found to contain trichinæ, and 109 were otherwise diseased.

— The statue of Liebig, at Munich, has been mutilated by the pouring over the entire left side of the figure of some dark-colored liquid, which has corroded the marble. The perpetrators of the outrage have not been discovered.

— Chloroform water, which is much employed in the Paris hospitals, is prepared as follows, says *L' Union Médical* (November 22d), according to Professors Lasègue and Regnauld's formula: An excess of chloroform is poured into a bottle three parts filled with distilled water, and, after repeated shaking, the mixture is allowed to stand until the extra chloroform is deposited, and the liquid quite clear. The transparent portion is then to be removed by a siphon, forming a saturated solution of ten grammes of chloroform per litre. Applied on compresses, either in its pure state or diluted with a half or its whole weight of water, it is found to relieve superficial pains; but when these are more deeply situated, a very hot linseed-meal poultice is first applied, which is afterwards replaced by the compress of chloroform water. Active revulsion is thus produced, which relieves the pain. Associated with a weak solution of opium it relieves vague dental pain; and with syrup of morphia it is successfully given internally for various forms of malaise from indigestion, such as gapings, eructations, sense of weight, etc. It is also useful as a palliative in cancer of the stomach.

— Dr. Sedan (*Gazette des Hôpitaux*, September 15th) reports the case of a young man, nineteen years of age, who for nine years was in the habit of taking daily between one hundred and one thousand grammes of ether. When first seen by Dr. Sedan, at ten years of age, he had anæmia, with a souffle accompanying the first sound of the heart, but preserved nevertheless a very satisfactory general condition. He became one of the most promising students of the Lyceum, was quick, brilliant, intelligent, laborious, and successful. He confided to Dr. Sedan that he drank ether, and that was the secret of his success; he reasoned like a man, and promised not to use the stimulant except to assist the efforts of his intelligence. From that time he commenced increasing amounts of ether, twenty to thirty, fifty, eighty, one hundred grammes a day, and as much at night in vapor. Still he was at the same time engaged in working out the most difficult questions in the higher mathematics. Neither parental authority nor medical advice availed to break him of the habit. He finally consumed nine hundred to one thousand grammes a day, mostly by the mouth. He was undersized, and with a feeble constitution. No immediate disturbance showed itself at first, and he finally died of mitral insufficiency. During the last year of his life he used both ether and morphia subcutaneously.

— The English census reports show that the proportion of the blind to the population has not only decreased with each successive enumeration since 1851, in which year account of them was taken for the first time, but the decrease in the decade ending in 1881 was much greater than in either of the preceding intervals. The number of cases in 1881 was 22,832, which was one blind person in every 1138.

NEW YORK.

— At the first meeting of the Academy of Medicine in the new year, held January 3d, the following officers, all New Code men, were elected: Vice-President, Dr. Robert F. Weir; Member of the Board of Trustees, Dr. Cornelius R. Agnew; Treasurer of the Board of Trustees, Dr. Frederick A. Castle; Member of the Committee on Admission, Dr. Daniel Lewis; Member of the Committee on Ethics, Dr. C. Dixon Tarley; Member of the Committee on Education, Dr. W. Gill Wylie; Member of the Committee on Library, Dr. Abram Jacobi. At the same meeting a very fine life-size portrait of the late Dr. James R. Wood, painted by Mr. Thomas Hicks, was presented to the Academy by Dr. F. H. Bosworth, on behalf of a number of old office students of the deceased surgeon. This was followed by a memoir of Dr. Wood, by Dr. Frederick S. Dennis, after which Dr. Thomas Addis Emmet read a memoir of Dr. J. Marion Sims. The annual reports of the treasurer, the board of trustees, the treasurer of the board of trustees, the recording, corresponding, and statistical secretaries, and of the various standing committees were also read either in full or constructively by title. From them the following items of interest are taken: The receipts of the Academy for the year just closed were $4,249.57, and the disbursements $4,429.78. During the year seven resident Fellows, one non-resident Fellow, and one honorary Fellow have died, and there has been one resignation of membership. Twenty new resident Fellows have been elected. The roll of the Academy now shows 380 resident Fellows, eighteen non-resident Fellows, forty-three corresponding Fellows, and six honorary Fellows. The number of visitors during the year was 4699, and there were received 721 bound volumes, 1839 pamphlets, and 7349 copies of medical journals. The estimates of the expenses of the library for the ensuing year were as follows: for salaries $1212; journals, $650; incidental expenses, $138; total, $2000.

— The Attorney-General has begun a suit in the Supreme Court against the Eclectic Medical College of New York for the annulment of its charter and the dissolution of the corporation controlling it, on the ground that the college has been issuing diplomas in blank, and has sold them to incompetent persons who have filled them in with their own names. The County Medical Society, through its counsel, Edward C. Ripley, Esq., has been engaged since last April in tracing the history of certain diplomas issued by this college, and it is stated that the facts show that the plan of granting diplomas is as unscrupulous as that exposed and put a stop to in the American University of Philadelphia.

— The "New York Anthropological Society" was organized December 28th, with the Rev. Dr. E. P. Thwing as president, Dr. R. Ormiston vice-president, and Dr. A. D. Rockwell, secretary.

— At their last meeting the Aqueduct Commissioners decided to construct the new aqueduct of the size of fourteen feet internal diameter, and that its northern terminus should be at the present Croton dam. The construction of the Quaker Bridge dam, which is designed to form a reservoir capable of holding 32,000,000,000 gallons of water, has not yet been definitely determined upon.

— The amount of the collections on Hospital Saturday and Sunday has not yet been announced; but, on account of the more complete and extended organization of the movement this year, it is supposed that it will be largely in excess of the sum contributed in 1882. The "Hymn for Hospital Sunday," composed by a clergyman, was sung in a number of churches on the 30th of December.

— Dr. E. Darwin Hudson has been appointed a visiting physician to Bellevue Hospital.

Correspondence.

HOSPITAL ABSENTEEISM.

Mr. Editor, — I have read with interest the communication in your journal signed "Nestor," on the subject of medical absentment from hospital duties; and while I agree in the main with the principles therein expressed, yet I think there is another side of the question which deserves consideration. I too have done my full share of hospital work, and while I have fully appreciated the honor and responsibility of a position on the staff of a public medical institution, yet have I never failed to take a reasonable respite from my work at some period of my term of service, not only for the sake of rest, but also to afford my juniors in the out-patient department opportunities of becoming familiar with duties which some day must devolve upon them.

I fail to see that dignity or duty suffer any detriment from my so doing. A fortnight's vacation during one's term of service, on the contrary, is a distinct benefit in more ways than one; and I venture with all due respect to assert that had "Nestor" pursued this course, his own health would have been better, and that of his patients no worse. Senex.

HOSPITAL ABSENTEEISM.

Mr. Editor, — Can you pardon the follies of youth? If so, extend your clemency to me, for I have yielded to the temptation to burst into song, and express "Nestor's" sentiments on the subject of medical absentees in poetic patter. Should my effort find admirers, please inform them that I am willing to exchange the copyright of my song for an engraving or colored print (composition of subject must include at least one cadaver) for office or waiting-room decoration.

THE SONG OF THE ABSENTEES.

Let others auscult or percuss,
 Examine all sorts of secretions
Of ill-smelling patients who fuss,
 Prescribe building-up and depletions.

Let others work hard and perspire,
 Pant, struggle, e'en fail in the race,
While we pack our traps and retire,
 Assured in advance of a place.

While we roam the hills or the waters,
 Intent upon pleasure or gain,
Let them stay the slaughter of paupers
 Who in the hot city remain.

To them be the privilege given
 Of hospital work without stint;
Let them lay up riches in heaven,
 But [illegible] print!

Gamboge.

SEA WATER FOR STREETS, SALT ON STREET RAILWAYS.

Boston, *January* 3, 1884.

Mr. Editor, — Can you tell us what there is "*injurious to health*" in watering streets with sea-water, or in putting salt on street railway tracks? By rapid thawing of snow or ice there may be produced too great cold perhaps for horses' feet, which, however, do not ordinarily come very near the rails; or possibly the salted water may be irritating to sore or tender hoofs. But if such be the case, what has it to do with "the public health?" How can the public health be injured by watering streets with sea-water in summer, when all are urged to dip themselves into the ocean itself for health's sake; or by the running off into drains and cesspools in winter of salted ice-water slightly ferrated by the iron rails of the railway?

One would naturally think these things innocent; and yet they have frequent denunciations from Boards of Health; and courts are besieged to put a stop to such proceedings.

Please, Mr. Editor, enlighten on these points frequent inquirers and Nesciens.

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DOWNWARD DISPLACEMENT OF THE TRANSVERSE COLON.

Mr. Editor, — Dr. Thomas will find, in Bright on Abdominal Tumors, Sydenham's Society's edition, pages 247–250, some remarks on displacement of the transverse colon, with a diagram of a case (Fig. 67), exactly like those reported by him. Esquirol, Maladies Mentales, Paris, 1838, tome i., page 462, speaking of the same lesion in insanity, says: "Quelquefois le colon transverse descend en forme d'arc au dessous du pubis et jusque dans la cavité pelvienne." Both authors give cases of the various other forms of displacement, but not of the particular U-shaped variety here spoken of. I have had no time to look into the subject any farther, but think the references above given must show that it is by no means so rare as the Philadelphia gentlemen seem to suppose. Yours respectfully,

Edward T. Williams, M. D.

January 4, 1884.

Miscellany.

GOVERNOR ROBINSON'S INAUGURAL.

HEALTH, LUNACY, AND CHARITY.

The following is the portion of his excellency Governor Robinson's inaugural address relating to the above important subjects: —

The Legislature of 1879 accomplished a thorough reorganization of the administration of the public charities, — abolishing some boards, consolidating others, and simplifying the whole system. Undoubtedly a considerable saving in the operation of the official machinery was effected. The Board of Health, Lunacy, and Charity, as then and now constituted, consisting of nine persons, is given general supervision over the State lunatic hospitals, the State Almshouse, the State Workhouse, the State Primary School, the State Reform School, and the State Industrial School. Other powers, ample and specific, are granted, enabling the Board to hold substantial control over those institutions and over other matters committed to it. The Board also takes cognizance of the interests of health and life among the citizens of the Commonwealth, and acts as Commissioners of Lunacy. Surely no board in this State ever was intrusted with graver concerns and heavier responsibilities. I am sure that most faithful, disinterested, and efficient service, without a dollar of compensation, has been rendered by the members of that Board, and they are fairly entitled to the appreciation and gratitude of the citizens of the State and, most of all, of the poor unfortunates whom the charities of Massachusetts support and save.

The consolidation effected in 1879 was not brought about without opposition from very wise and devoted persons, many of whom, if not all, still believe that no satisfactory work can be done until a separation is made, and there are three boards or commissions instead of one. There is an apparent incongruity in the present arrangement, it is true; but in many particulars the three branches are closely allied, and may be harmoniously and effectively worked together. It is not possible that each member on such a board can be an expert in all the matters before it. They must make investigations and reach results through subcommittees; and yet it is quite common in public affairs to manage important interests in just this way. I have been urged to recommend to you an abolition of the Board, and the creation of two or three in its stead. But after much reflection and extended inquiry I must withhold that recommendation for the present. It is plain that the adoption of the suggested plan would necessitate payment of additional salaries and other outlay. Though there is much in the propositions that I approve, still I am persuaded that the people, whose servants we are, look with suspicion and disfavor upon the needless multiplication of boards, commissions, and agencies, and approve the practice of the strictest economy in their behalf. My own inclination at present would be toward a still further reduction and simplification that would bring all our public institutions more directly under the supervision of one board; but my experience and observation in the management of so great trusts will not, in my judgment, justify me in recommending radical and sweeping changes. Let the work of the Board be searchingly scrutinized, not only in its economical bearings, but as well in its response to the demands of humanity and justice. Political partisanship has no proper place in such an organization, or in the examination and estimate of its transactions. Whatever else we do, let us see to it that we keep politics out of the charities.

I am reënforced in the conclusions already stated, in the fact that unusual interest has been excited during the last year in the official acts of the Board, and in the conduct and condition of the various institutions under its charge; and the report of the Board, presenting their views and conclusions, will attract extraordinary attention. It is but justice that we consider it. Moreover, a joint special committee was created by your immediate predecessors to investigate several of the institutions; to consider plans and theories; to examine institutions in other States, and to present their findings and conclusions to you. Their report will undoubtedly give you valuable information and help. I desire to suggest that I fear there may be a tendency to an unnecessarily large force of clerks, agents, assistants, superintendents, and employees appointed by the Board under statute authority. May not the departments of the out-door poor and the in-door poor be united, saving the compensation of several persons, and in no degree impairing the efficiency of the service? If you agree with me, this retrenchment can be effected without difficulty. It is probable that other savings can be accomplished, and in that direction I shall turn my attention and now invite yours. I ask your attentive consideration to the several reports submitted by the boards of trustees. They speak from an abundant observation and experience.

LUNATIC HOSPITALS.

There is an imperative demand for increased accommodations for the insane. The hospitals are crowded, and hundreds of inmates are compelled to occupy temporary cots, or beds in the corridors and upon the floors. I believe great economy of room is possible under a wise system of classification, separating the harmless, the criminal, and the dangerous, and other improved arrangements which professional knowledge and practical experience will advise. Let us adopt any and every reasonable expedient before we enter upon the construction of another hospital, or incur large expense in experiments in one field or another to test a theory. The financial affairs of the hospitals are reported in excellent condition. The surplus accumulated at Taunton, Worcester, and Northampton has been increased; while at Danvers the treasurer's report shows a balance of $1172.14, so that the $10,000 appropriated for an anticipated deficiency has been added to the surplus.

MEETING OF BOARD OF HEALTH, LUNACY, AND CHARITY. RESIGNATION OF SUPERINTENDENT OF OUT-DOOR POOR.

Dr. H. B. Wheelwright's resignation as Superintendent of Out-door Poor was accepted, to take effect February 1st. Messrs. Fallon, Noble, Dean, Haggett, and Walcott voted to accept the resignation, although Dr. Wheelwright wished the term extended to April 1st. Meanwhile his department will be put in charge of the charity committee of the board. There was some animated discussion on this subject, but the result showed a large majority against the doctor. Ex-Governor Talbot intimated that those who wished to press this matter were active from personal spite. Colonel Haggett said he should throw the remark back in his face, and that he was not actuated by personal spite. Tewksbury has 1170 inmates, and will take no more at present. Miss E. C. Putnam was formally thanked for her efforts to reclaim wayward children by her plan of auxiliary visitors. Messrs. Talbot and Walcott were instructed to take advice of counsel as to having the State pay the Boston City Hospital for patients sent there.

THE CHILDREN'S HOSPITAL.

The fifteenth annual meeting of the managers of the Children's Hospital was held in this city, in December, and the following officers were chosen for the ensuing year: President, Robert C. Winthrop; Vice-President, John C. Phillips; Treasurer, John G. Wetherell; Secretary, Francis H. Brown; Managers, Charles Faulkner, William Ingalls, Charles H. Fiske, Jeremiah Abbott, Alanson Bigelow, J. P. Spaulding, H. G. Pickering, Roland C. Lincoln, J. Montgomery Sears, Oliver W. Peabody, Philips Brooks, Charles L. Young. The managers, in their annual report, say that the past year has been in many respects experimental in the management, care, and testing of the new building, and that they are well satisfied with the result. The entire cost of the building, including furniture and equipment, has been about $125,000. It is now wholly paid for. The hospital has now accommodations for sixty patients, which is double the number receivable in the house formerly occupied on Washington Street. Each of the two wards has twenty beds; there are five rooms for private patients, and three rooms designed for special cases, for those which need the quiet of a separate apartment. This year the aggregate of the house bills (as also the total cost of the maintenance of the hospital) has been double that of the previous year. This is due to the increase in the number of employees, and to the cost of their wards. The average daily number of children approximately in the former building was eighteen, and the annual expenses were, exclusive of rent, about $7500, making the daily cost for each patient about $1.14. In the present building the average has been thirty-seven patients per day, and the year's expenses have been $16,501.28, making the daily cost for each patient about $1.22. This record has been compared with those of similar institutions in Massachusetts, and the comparison is very favorable and satisfactory. The number of children received and treated in the wards during the year is 279, and the total number since the establishment of the hospital is 2033; in the out-patient department about 1000 in the last year. The report acknowledges aid received from the Ladies' Aid Association, the Sisters of St. Margaret, and others, and speaks appropriately of the deaths of Nathaniel Thayer, formerly president, and of Isaac Thatcher.

SURGEON-GENERAL HOLT.

Dr. A. F. Holt, of Cambridge, has been appointed Surgeon-general on the staff of Governor Robinson, and has accepted the position. Dr. Holt was graduated in medicine at the University of Vermont in 1860, and enlisted in April, 1861, as a private in a Cambridge company, for which the claim is made that it was the first raised, and which became Company C of the Third Volunteer Regiment. Returning home at the end of his three months' service he was made assistant surgeon of the Thirtieth Massachusetts Regiment. A year later he was surgeon of the First Texas Cavalry, then major and lieutenant-colonel of that organization, of which he was in actual command at the close of the war. His military career was distinguished for bravery and he was made the subject of a complimentary general order from the Department of the Gulf for his courage in bearing away the wounded from under fire. Since the war Dr. Holt has been engaged in general medical practice in Cambridge, where he has filled the office of City Physician. He has been medical examiner since 1879, receiving his commission from Governor Talbot. We understand that his excellency has chosen to make appointments to his personal staff from those who saw actual service during the war, and in his selection of Dr. Holt he has a surgeon-general who by personal and professional qualities will ably fill and adorn the honorable position.

— A correspondent of the *New York Medical Journal*, December 29th, narrates the case of a young man in whose rectum a hard, green pear, measuring three and a half inches by two, had been placed by companions while he was in a state of intoxication. It was removed by lithotomy forceps (the patient being in Sims' position) with some hæmorrhage and temporary paralysis of the sphincter ani.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 29, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	563	197	18.16	17.76	.89	7.48	1.78
Philadelphia	846,984	425	149	20.21	11.75	2.82	10.58	3.29
Brooklyn	566,689	234	79	14.52	14.52	8.54	5.12	4.70
Chicago	503,304	208	86	24.48	7.68	5.28	10.08	4.80
Boston	362,535	209	69	21.03	12.43	2.82	9.56	1.43
St. Louis	350,522	143	51	23.10	10.50	2.10	12.60	4.20
Baltimore	332,190	197	81	28.56	13.77	1.51	11.73	3.02
Cincinnati	255,708	89	28	19.04	13.44	8.96	4.48	—
New Orleans	216,140	150	48	24.00	10.66	2.00	4.00	.66
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg (1883)	175,000	56	12	10.74	14.32	5.37	3.58	—
Buffalo	155,137	57	23	19.25	14.00	1.79	7.16	5.37
Milwaukee	115,578	47	26	25.56	8.52	—	19.78	9.89
Providence (1883)	116,755	49	10	10.20	18.36	2.04	4.08	2.04
New Haven (1883)	73,000	—	—	—	—	—	—	—
Charleston	49,999	37	13	21.60	10.80	2.70	5.40	—
Nashville	43,461	16	4	18.75	12.50	—	6.25	—
Lowell	59,485	29	9	13.80	13.80	3.45	3.45	—
Worcester	58,295	20	11	20.00	8.00	8.00	12.00	—
Cambridge	52,740	19	7	10.52	21.04	5.26	—	—
Fall River	49,006	26	6	19.25	19.25	—	11.55	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	16	6	6.25	6.25	6.25	—	—
Springfield	33,340	16	3	37.50	18.75	6.25	12.50	—
Salem	27,598	9	1	11.11	11.11	—	11.11	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	7	0	—	28.56	—	—	—
Holyoke	21,851	8	1	12.50	12.50	12.50	—	—
Chelsea	21,785	12	3	8.33	16.66	—	8.33	—
Taunton	21,213	7	2	28.56	—	—	—	—
Gloucester	19,329	2	2	—	—	—	—	—
Haverhill	18,475	—	—	—	—	—	—	—
Newton	16,995	0	0	—	—	—	—	—
Brockton	13,608	5	1	20.00	20.00	—	20.00	—
Newburyport	13,537	3	0	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	4	1	—	—	—	—	—
Sixty-four Massachusetts towns	248,988	82	10	15.85	15.41	2.45	15.41	—

Deaths reported 2725 (no reports from District of Columbia and New Haven): under five years of age, 939: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 543, consumption 419, lung diseases 400, diphtheria and croup 226, typhoid fever 70, scarlet fever 67, diarrhœal diseases 52, measles 35, malarial fever 35, cerebro-spinal meningitis 16, erysipelas 14, whooping-cough 12, puerperal fever 10, small-pox six. From *diarrhœal diseases*, New York 18, New Orleans nine, Boston seven, St. Louis four, Baltimore, Cincinnati, Charleston, and Fall River two each, Philadelphia, Brooklyn, Chicago, Lowell, Cambridge, and Taunton one each. From *measles*, Baltimore 16, New York five, Philadelphia four, Brooklyn three, Buffalo two, Chicago, New Orleans, Pittsburg, Milwaukee, and Lowell one each. From *malarial fevers*, New Orleans 12, New York seven, Baltimore five, Brooklyn four, Chicago three, St. Louis two, Charleston and Nashville one each. From *cerebro-spinal meningitis*, Fall River three, New York, Cincinnati, and Springfield two each, Philadelphia, Milwaukee, Charleston, Nashville, Lowell, Salem, and Taunton, one each. From *erysipelas*, New York eight, Philadelphia and Boston two each, Cincinnati and New Orleans one each. From *whooping-cough*, Boston three, New York, Philadelphia, and Baltimore two each, Brooklyn, Chicago, and New Orleans one each. From *puerperal fever*, Chicago three, Philadelphia, Boston, Buffalo, Milwaukee, Providence, Charleston, and Springfield one each. From *small-pox*, Philadelphia four, New Orleans two.

Seven cases of small-pox were reported in St. Louis; diphtheria 26, scarlet fever 25, and typhoid fever 10 in Boston; scarlet fever 17, and diphtheria six in Milwaukee.

In the 79 cities and towns of Massachusetts, with an estimated population of 1,170,947 (estimated population of the State 1,922,530), the total death-rate for the week was 21.05 against 18.60 and 21.60 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending December 15th, the death-rate was 22.6. Deaths reported 3735: acute diseases of the respiratory organs (London) 471, measles 125, scarlet fever 105, whooping-cough 80, fever 59, diphtheria 40, diarrhœa 33, small-pox (London seven, Birmingham, Liverpool, and Sunderland two each) 13. The death-rates ranged from 13.9 in Portsmouth to 29.2 in Manchester; Bradford 16.1; Leicester 20.5; Sunderland 20.7; Sheffield 21; London 22.7; Nottingham 23.6; Birmingham 24.3; Leeds 25.1; Liverpool 25.3. In Edinburgh 20.8; Glasgow 26.3; Dublin 32.1.

For the week ending December 8th, in 170 German cities and towns, with an estimated population of 8,725,681, the death-rate was 23.4. Deaths reported 3922; under five years of age, 1711; consumption 563, lung diseases 465, diphtheria and croup 281, diarrhœal diseases 124, scarlet fever 92, measles and rötheln 68, whooping-cough 52, typhoid fever 48, puerperal fever 19. The death-rates ranged from 30.5 in Dortmund to 14.1 in Kassel; Königsberg 29.1; Breslau 26.9; Munich 27.3; Dresden 26.5; Berlin 25.2; Leipzig 24; Hamburg 23.5; Cologne 22; Frankfort a. M. 16.0; Strasburg 25.4.

For the week ending December 8th, in the Swiss towns, there were 27 deaths from lung diseases, consumption 22, diarrhœal diseases 17, whooping cough four, diphtheria and croup two, typhoid fever two, puerperal fever one. The death-rates were, Geneva 13.3; Zurich 12; Basle 17.5; Berne 27.1.

The meteorological record for the week ending December 29th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Dec., 1883.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7. 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 23	30.604	2	4	12	56	64	79	66	NW	NW	NW	20	3	4	C	F	S	—	—
Mon., 24	29.930	21	34	2	100	100	90	97	NW	NW	NW	3	10	3	S	Sl	O	—	—
Tues., 25	29.935	29	34	24	77	95	100	91	NW	NW	NW	5	3	10	O	O	S	—	—
Wed., 26	30.141	31	37	26	90	79	88	86	NW	S	S	3	3	2	O	O	O	—	—
Thurs., 27	29.666	40	49	30	80	100	100	93	SE	SE	SW	6	14	7	O	G	R	—	—
Fri., 28	29.524	26	48	21	77	40	51	56	W	W	W	29	28	15	O	C	C	—	—
Sat., 29	30.164	27	35	19	70	60	64	65	SW	SW	W	4	14	5	C	C	C	—	—
Mean, the Week.	29.995	25	34	13				79										23.30	1.06

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; Sl., sleet.

THE WORSHIPFUL COMPANY OF GROCERS, LONDON. ORIGINAL RESEARCH IN SANITARY SCIENCE.

FIRST QUADRENNIAL DISCOVERY-PRIZE OF £1000.

1883–1886.

Subject to the conditions of the Company's scheme, the Court now announces, as the matter of competition for this Prize, the following Problem: —

"To discover a method by which the Vaccine Contagium may be cultivated apart from the animal body, in some medium or media not otherwise zymotic, — the method to be such that the Contagium may by means of it be multiplied to an indefinite extent in successive generations, and that the product after any number of such generations shall (so far as can within the time be tested) prove itself of identical potency with standard Vaccine Lymph."

The Prize is open to universal competition, British and Foreign. Competitors for the Prize must submit their respective Treatises on or before the 31st of December, 1886; and the award will be made as soon afterwards as the circumstances of the competition shall permit, not later than the month of May, 1887. In relation to the Discovery-Prize, as in relation to other parts of the Company's Scheme in aid of Sanitary Science, the Court acts with the advice of a scientific Committee, which at present consists of the following members: John Simon, C. B., F. R. S.; John Tyndall, F. R. S.; John Burdon Sanderson, M. D., F. R. S.; and George Buchanan, M. D., F. R. S. All communications on the subject are to be addressed to the Clerk of the Grocer's Company, Grocers' Hall, London, E. C.

Grocer's Hall, *May* 30, 1883.

For the Conditions of Candidature and Award, see underneath.

QUADRENNIAL DISCOVERY PRIZES IN SANITARY SCIENCE.

Purpose of the Foundation. — (1.) The Quadrennial Discovery-Prize of £1000 is intended to reward original investigations which shall have resulted in important additions to exact knowledge in particular, previously defined, sections of sanitary subject-matter.

(2.) During the pleasure of the Court, the Court will, once in four years, propose some subject for investigation; and a period of at least three and a half years will on each occasion be allowed for the investigation of the subject that has been proposed.

(3.) In determining, on each occasion, what particular subject shall be proposed for the Prize, careful regard will be had to all the scientific circumstances of the time; both as the urgency of existing needs for particular kinds of knowledge, and as to the expectations which may reasonably be held that discovery in the needed kinds of knowledge can be made within the allowed period.

Candidature for the Prize. — (4.) The Discovery-Prize will be open to universal competition, British and Foreign.

(5.) The period allowed for the competition will begin with the day of announcement of the subject for investigation, and will end with the last day of the fourth following December.

(6.) Any person who desires to be registered as a candidate for the Prize must deliver, or cause to be delivered, at the Hall of the Company, within the allowed period, a letter in which he declares himself to be a candidate for the Prize, and the treatise on which he bases his candidature; such letter, and such treatise, to be addressed to the Clerk of the Company, who will give a dated receipt for the same. The competition-treatise of a candidate may, if the candidate so prefer, be delivered in successive parts, each bearing its proper date.

(7.) Each treatise in competition for the Discovery-Prize must be an original work by the candidate who sends it in. It may be a treatise which he has published at any time within the allowed period, or may be a treatise which he has not previously published.

(8.) Although candidature is not restricted to any one nationality, all treatises, and all communications with the Company in relation to them, must be in the English language. Translations into English of competition treatises published (within the allowed period) in a foreign language will be received on a like footing with treatises originally in English.

(9.) All treatises must be in print.

(10.) Each treatise must bear the name of its author.

(11.) Any particular candidate may be required to demonstrate practically to the Court, or to persons acting on their behalf, any fact or result which he claims to have discovered.

(12.) Candidature will be held to imply that the candidate undertakes to accept as regards himself the award which the Court shall make.

Award of the Prize. — (13.) The Discovery-Prize being intended to promote the fullest possible elucidation of the given subject, the respective merits of candidates will be rated by that standard; and, if the Court be advised that the most meritorious candidate has produced an original solution of the main scientific problem or problems involved in the matter of the competition, the Court will award to him the entire Prize.

(14.) Should the Court be advised that no candidate has solved the main scientific problem or problems, but that valuable progress towards the object has been made by one or more of the candidates, or that collateral discovery valuable to sanitary science has been incidentally made by some candidate in his prosecution of the main research, the Court will apply such portion of the Prize as they may see fit in recognition of merits thus brought to their notice.

(15.) In estimating the originality of treatises, the Court will have regard not only to the state of knowledge which existed at the time when the subject for investigation was announced, but also to such later advances of knowledge as may have been made up to the time when the treatises were sent in.

(16.) Where two or more candidates equally claim to have made discovery in the subject-matter of the Prize, further information may be required of them in support of their respective claims, and the Court will judge between the claims as they shall think right. Each candidate will have been at liberty to notify to the Court at his own time any discovery which he believes himself to have made. — See above, § 6.

(17.) Neither the Prize, nor any portion of it, will be awardable to any person who has not formally declared himself a candidate for the Prize. — See above, § 6.

(18.) The awarding or withholding of the Discovery-Prize is to be entirely in the discretion of the Court, and the Company is not to be under any legal responsibility with regard to the same.

Original Articles.

CASES OF LESION OF THE BRAIN CORTEX ATTENDED WITH UNILATERAL SYMPTOMS.[1]

BY S. G. WEBBER, M. D., BOSTON.

CASE I. GASTRALGIA; SYMPTOMS OF CEREBRAL LESION FOLLOWING VOMITING; UNILATERAL SPASM; MENINGEAL HÆMORRHAGE.

In February I was asked to see Mrs. W., a friend of one of my patients. She seemed to be suffering from a slight "cold," and was soon better, but remained rather weak. March 9th I saw her again. She was then suffering from an eruption which resembled in some respects urticaria, a local swelling of the skin, slightly red, which itched and smarted. There had been disturbance of the stomach for a few days previous, but not sufficient to attract much notice, simply a sense of distention and flatulence. The eruption soon disappeared, and later reappeared; the gastric distress was temporarily relieved, but two days later she had much trouble with wind in the stomach; the temperature was 100.4° F., the pulse 102; there was also nausea and an aversion to food. The distress from flatulence was not constant, but recurred at intervals, and continued several hours; sometimes the ingestion of food seemed to give rise to an attack. These were relieved by spirits of chloroform, and by careful feeding with milk, lime-water, and a very small amount of brandy, she gained steadily, and by the 17th was receiving about two quarts of milk in twenty-four hours. On the 17th there was an attack of flatulence, during which she strained hard to raise the gas, and had a pain on the right, just below the breast.

From the 18th to 22d the right side and back, to right of the spine, were the seat of most distress; occasionally the flatulence gave trouble. There was tenderness at first just below the right breast, then over the lower edge of the ribs, finally below the ribs, near the spine. All motions of the body were painful. Physical examination of the lungs showed nothing abnormal. The urine was normal. Once after taking tincture of aconite on account of dryness of skin and slight elevation of temperature the pulse became irregular. The amount of food taken at this time was very small. The pulse ranged from 96 to 120. The temperature was about 100° F., once ran up to 102° F. She was fed by enema, an egg beaten up with pepsin being given every four to six hours.

From the 20th till her death Dr. Mack, of Salem, her family physician, saw her nearly every day, and made valuable suggestions in regard to treatment.

The pain in the side was diminishing, and the amount of morphia was decreased. She seemed to be gaining. On March 22d, while straining in vomiting, she felt a sharp, severe pain in her neck and head. This was followed by very severe headache and an unwillingness to move the head, and later an attempt to move the head gave rise to expressions of pain, and every passive motion of the head was resisted.

From the 22d to 28th there was a gradual failure. Intelligence gradually diminished; she lay without speaking unless spoken to, and then answered very briefly; at length there was almost no response to questions, but she seemed to know her daughter; she moved her hands, drew up both legs or straightened them out at will, evidently suffered from distress in her head, slept only for a short time without waking, took a larger amount of food, had a temperature generally below 100° F., but in the evening of the 27th it was 102° F.; pulse about 90 to 96; respiration 22 to 30.

On the 28th she showed almost no sign of consciousness, would swallow liquids which were placed in her mouth, but seemed unable to swallow solid food. It was necessary to catheterize her. During the morning visit the left pupil was larger than the right; both responded to light. Respiration was occasionally interfered with; in the afternoon it ceased for a few seconds, and she became cyanotic. At six P. M. pulse was 120; temperature 102° F.; respiration 40. At eight P. M. she had had three spasms, and had a fourth during the visit. Both eyes were open and in constant vibratory motion; the face, especially the left side, was contorted; both eyes turned towards the left in extreme conjugate deviation; she raised the right hand, trembling, towards the head. The left hand and leg did not move sufficiently to disturb the bedclothes if at all. The spasm continued less than a minute. After it was over the left hand and leg were found to be completely paralyzed. There was no reflex action on irritating the skin of hand or foot, though on the right reflex action was perfect. Pulse was 120; respiration 40; temperature was not taken.

From this time the spasms were more or less frequent until the twelve hours preceding death, when there were none. After many of the spasms respiration ceased for one minute or longer, and the skin became very cyanotic. There was no gesture showing any sensibility excepting once when the position of the head was changed, she groaned and put her right hand to her head, and once when a subcutaneous injection was administered in the right arm she made a motion showing that she felt the prick. The convulsions underwent a slight change, the left hand and arm were more agitated, the right less. I saw one which began with opening the eyes; rapid convulsive agitation of the lids, of the left side of face and left arm, and to a less degree of the left leg; the whole body was moved, both eyes turned to the left as far as was possible, the head was not turned, the right side was much less agitated than the left. When the spasm ceased both eyes returned to the right and respiration ceased for nearly a minute, the skin became deeply cyanotic, and after breathing was reëstablished the dark color faded out very slowly. The pulse varied from 100 to 120; the respiration between the convulsions was about 36; the temperature when taken on several occasions varied little from 100° F.

Death occurred quietly on the morning of March 31st.

The autopsy was made two hours post mortem. There was a very abundant development of adipose. The heart was small; there were three or four small rough nodules on the mitral valve, not recent; the lungs were healthy, a few small ecchymoses under the pleura. Stomach, many small ecchymoses in the mucous membrane. Liver, spleen, intestines, normal; a medium-sized calculus in the pelvis of the right kidney.

The skull was of normal thickness, no undue adhesion of dura mater. Under the dura mater, between that and the pia mater on the right side over most of the posterior two thirds of the right hemisphere, was a clot of blood (Fig. 1); this did not reach quite to the vertex, extended into the middle fossa at the base, reached as far forward as the posterior extremities of the second and third frontal convolutions, as far back as the perpendicular fissure above, and extended under the occipital lobe below, but not to its posterior extremity.

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[1] Read before the Boston Society for Medical Observation, November 5, 1883.

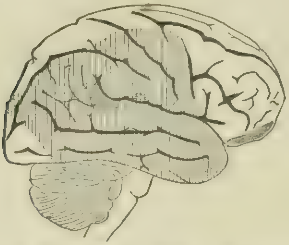

FIG. 1. Horizontal shading below fissure of Sylvius shows location of hæmorrhage; above fissure of Sylvius, the small spot of softening; perpendicular shading shows extent of meningeal hæmorrhage.

The first frontal convolution and the upper part of the superior parietal lobule were not covered by the clot.

The origin of the hæmorrhage was in the posterior and external part of the temporal lobe, near the point at which the supra-marginal gyrus merges into the first temporal convolution; this region was torn up by the blood which had broken through near the posterior extremity of the fissure of Sylvius so as to give rise to the meningeal hæmorrhage. The cerebral substance around the primary clot was softened and discolored to a limited extent, but the clot was firm, about the size of a walnut, and had undergone almost no change. On the upper side of the fissure of Sylvius in the anterior part of the supra-marginal gyrus was a small spot of softening, but no hæmorrhage. No blood was found in the ventricles.

The vessels, both arteries and veins, in the membranes were filled with firm dark coagula. The veins on the right side were very full. The arteries at the base were small, with extremely thin, delicate walls; no atheroma.

The ganglia at the base were healthy; in the white substance on the right side were several spots of punctiform hæmorrhages; one small spot, very superficial, was also noted near the acoustic striæ in the floor of the fourth ventricle.

No miliary aneurisms could be discovered with the naked eye.

This case is of interest in several particulars. The pain in the right side and back during a part of the time may well have been caused by the calculus in the pelvis of the right kidney, displaced perhaps by severe straining during an attack of flatulence.

At first I could discover nothing but acute gastralgia or dyspepsia. I examined carefully with a view of discovering some other condition of ill health, but could not; a decided improvement led to an expectation that the patient would recover until the attack of vomiting on the 22d, which was followed by the severe pain in the head. It was by no means easy to decide where or how severe the mischief was, there was no paralysis, there were no cerebral symptoms excepting the pain and the rather rapid loss of mental power. The patient was naturally taciturn, rarely volunteered any remark, and when ill more quiet than usual; it was not considered very singular that she said little after the 22d, but in a day or two it was evident that she received fewer impressions than normal; she did not answer when addressed, but knew her friends, and could be easily aroused to partial consciousness. With the light furnished by the autopsy it seems probable now that there was word dumbness, and that the indifference was due to the loss of power to understand what was said. As this was not suspected at the time she was not examined with a view to discover such a condition.

When the convulsions began on the 28th the lesion was more clearly revealed. I thought then that there was probably meningeal hæmorrhage, and as the left side was paralyzed I located it on the right, yet the convulsions at first seemed most marked on the right. The left side of the face was convulsed, the right hand was tremblingly raised to the head. There might now be a reasonable doubt whether the motion of the right hand at this time was truly convulsive, whether it was not a voluntary or at least a reflex action, an attempt to carry the unparalyzed right hand to the convulsed side of the face. The next day the spasms affected the left arm, and the right side was scarcely moved during the convulsions.

The conjugate deviation of the eyes during the convulsions towards the convulsed and paralyzed side, in the interval between the convulsions away from the paralyzed side, caused me to definitely localize the lesion above the crura cerebri, that is, I thought the hæmorrhage was over the surface of the right hemisphere. Of course I did not attempt to diagnosticate the extent of the hæmorrhage; it was certain that the motor centres were irritated. It is interesting that the centres for the face and arms were covered by the clot, but the centres for the lower extremity were almost entirely free, and the spasmodic action was very slight in the leg.

The remarkable condition of the arteries and veins, filled with coagula, and the small ecchymoses in the brain and other organs, is explained by the interference with respiration. Several times she seemed to be dead, but by artificial respiration life was prolonged a few hours. The disturbance of respiration may have been due to the increase of intercranial pressure.

The above peculiarities made this case one of the most perplexing and interesting; perplexing until the spasms showed where the lesion was. Not that there was any doubt as to the presence of some kind of cerebral lesion after the attack of pain in the head, but its nature and location were in doubt.

CASE II. SPASM ON LEFT, COMMENCING IN EYES, EXTENDING TO FACE AND LIMBS. LOCALIZED MENINGITIS AND CORTICAL ENCEPHALITIS.

The second case presents symptoms very similar to those noted towards the close of life in the preceding. There is no history of the patient's condition previous to her entrance to the City Hospital, except that she had been quarreling with another woman, and was arrested for assault. In the morning she was found to be unconscious and in spasms, and was taken to the hospital. When seen about 9.30 A. M. she was unconscious, head drawn back, the back and legs were not in the position of opisthotonos. About once in a minute or minute and half occurred a convulsive seizure lasting from half a minute to a minute. The spasm commenced with conjugate deviation of the eyes towards the left and deviation of the head towards that side, then the left side of the face was affected, the eyelid winking rapidly, and the muscles of the lower part of the face twitching spasmodically; in a few seconds the left arm was drawn up in tonic contraction, then almost immediately it was in clonic convulsions, and finally the left leg was slightly affected. After running through the whole side the spasm soon subsided and the patient became quiet; then both eyes were turned to the right, and this conjugate deviation to the right persisted during the interval between the attacks. In the interval also the left hand was limp and fell heavily when raised; the right arm fell slowly, and once there was a spontaneous motion of the right hand.

The pupils were of moderate size, reacted slightly to light, the cutaneous reflexes were absent, the patella reflex was normal, no ankle clonus. There were such loud bronchial râles, groaning, and other noises made by the patient that the chest sounds were obscured. There was a slight œdema of the feet; the urine had a specific gravity of 1020, contained a trace of albumen, many hyaline, a few granular, casts.

By noon the convulsions had become less frequent, and by eight P. M. had ceased.

The next day the left arm was paralyzed, the eyes were turned to the left, head was still retracted, turned a little to the left; this contraction of the head was spasmodic, resisting efforts to correct the position.

She died about fifty hours after entrance.

Autopsy. Brain. On right, over posterior part of third and lower and posterior parts of second frontal convolutions, almost entirely in second and just lapping on third frontal convolution, not implicating ascending frontal, but coming up to it, was a very firm adhesion of pia and dura mater.

Moderate amount of serum in arachnoid, also moderate injection of vessels. On the right, over lower third of ascending frontal and ascending parietal, middle of first temporal and posterior part of second temporal convolutions pia had a distinctly yellow tinge. On left the whole of the third frontal convolution, and from the supraorbital, extending as far back as ascending frontal, showed a yellowish discoloration as on right. On the left, after removing membranes, the cortex over third frontal convolution in middle, fully one and one half inches antero-posteriorly, still discolored; discoloration not extending through whole of gray cortical substance. On right, on removal of pia, the spot which was adherent to dura was also adherent to the brain substance, and membranes could not be removed without damage to brain substance. The whole of the posterior part of the third and lowermost part of second frontal convolutions were yellow and flaccid as if covering a cyst, extending one and three eighths inches antero-posteriorly, and one and one quarter inches transversely. Ascending frontal and ascending parietal slightly discolored, ascending parietal rather more deeply, and at one spot cortex deeply changed. First temporal also slightly discolored, and posterior part of second temporal corresponded with discoloration seen through pia. (All this evidently an old condition.) Figs. 2 and 3.

Ventricles contained normal amount of fluid. Venæ Galeni much injected. Intra-ventricular portion of both optic thalami and anterior corpora quadrigemina had a decided yellow color. To a less extent posterior corpora quadrigemina had a yellow tint. On left side yellow discoloration in pulvinar extended half an inch deep, except at anterior portion, where it extended more deeply. On right side yellow discoloration penetrated pulvinar one eighth of an inch. Discoloration of corpora quadrigemina entirely superficial. Olfactory lobes both yellow.

No fracture of skull. Few ecchymoses of scalp.

Lungs. Old pleuritic adhesions. Posterior third of left lung acute pneumonia in second stage. Right lung acute pneumonia not so far advanced, also one inch above interlobular fissure and near posterior border of lung a recent infarction three quarters of an inch long, extending into lung in irregular conical shape.

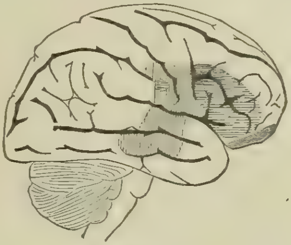

Fig. 2.

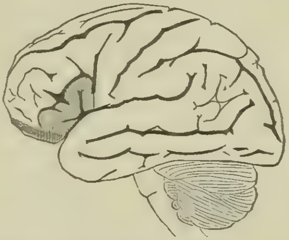

Fig. 3.

Figs. 2 and 3. Darkest horizontal shading shows the seat of firmest adhesion; lighter horizontal shading, seat of destruction of cortical substance; perpendicular shading, the portion having a yellowish tinge.

Other organs not remarkable.

In this case by not taking into account my ignorance of the patient's previous history, and by considering that she had been in health up to the time of the first attack, I was led into error and diagnosticated an injury implicating or near the lower portions of the ascending central convolutions, or a meningeal hæmorrhage over this region. No injury to the skull could be discovered, therefore I thought it most likely there was hæmorrhage. The autopsy showed that the seat of the lesion was correctly defined, though it extended more anteriorly than was thought likely, but the nature of the lesion was different, being a chronic meningitis of long standing. The condition of the lungs was not recognized before death. The tracheal râles were so loud as to obscure the respiratory sounds, and also the convulsions attracted the greater share of attention.

CASE III. UNILATERAL SPASM. CORTICAL ENCEPHALITIS.

M. F. was in the City Hospital several times. Probably in 1873 for rheumatism, though under another name; then in 1877 for intermittent fever. Again under his later name he entered in March, 1880, having been found in his room delirious. He answered questions, but his talk was not quite intelligent. There was continuous trembling of the left arm and thigh; the pupils contracted equally; the tongue was protruded straight; there was no facial paralysis; there was a strong systolic souffle in the second intercostal space on the left and right. He had several rheumatic attacks, and was discharged relieved June 7th.

July 29th he was brought in again unconscious, said to have had several fits; he had several after entrance; the teeth were clinched, pupils contracted equally and insensible, left arm and leg twitched. In the evening he was excited and wild; the next day he was confused; right pupil was smaller than the left. He remained only two days.

October 11th he was brought to the hospital in a fit, and had many more after entrance. Twenty grains chloral and forty grains bromide potassium were given, after which the fits ceased and he slept all night.

No mention is made of a recurrence of the convulsion until October 23d, when the muscles of the left side of the face were noticed to twitch. The tongue protruded strongly to the left; the right side of the face moved a little more than the left. During the visit on the 24th he had an attack; the mouth was drawn strongly to the left, the jaws were slightly convulsed, while the left side of face, forehead, and ear twitched, the left eye was closed by spasm of the orbicularis. The right forehead and right orbicularis were also convulsed. The twitching extended to the muscles of the neck, but was not perceptible below the neck. A smart slap on the left side of the face caused the spasms to diminish, though they continued afterwards.

These convulsive seizures recurred frequently. I saw several, and it is noted a few times that there was conjugate deviation of the eyes and head to the left; the left arm and leg were sometimes contracted and tremulous. One day the twitching of face and arm was almost constant; once, later, the left side of the face was relaxed; the left eye was not closed. When seen asleep the face was quiet, on awaking the twitching returned.

The urine throughout was found to contain albumen, hyaline, and granular casts.

During the last part of his life one knee-joint became much swollen and contained fluid. Bedsores had formed, and he finally died exhausted.

Autopsy. Brain. (Figs. 4 and 5.) Right hemisphere. Membranes adherent over the cortex on both sides of perpendicular fissure, extending downward as far as inter-parietal fissure or a little below that, forward not quite to the ascending parietal convolution. Also a very slight amount of adhesions at base of fissure of Sylvius. The first temporal convolution was quite atrophied, about one half as thick as normal, and had a yellowish color. This color also extended backwards to the interparietal fissure and a little above the fissure of Sylvius. Around lower end of central fissure two or three small spots where membranes were adherent and cortex was removed with the pia mater. Over vertex membrane œdematous, considerable serum in subarachnoid tissue. Arachnoid thickened and opaque. At the base arteries all normal.

On left hemisphere color normal. No adhesion or atrophy except about an inch from median fissure on ascending parietal fissure, a spot one quarter of an inch long, one third of an inch wide, oval in shape where the membrane pulled off a thin layer of cortex. About half way between fissure of Rolando and anterior extremity of brain, implicating the second frontal convolution, and to a very slight extent the first, there was a cyst about three quarters of an inch in diameter.

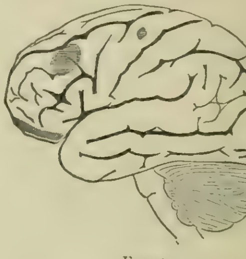

FIG. 4.

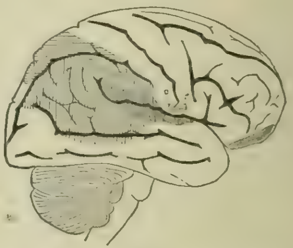

FIG. 5.

FIGS. 4 AND 5. Horizontal shading shows in Fig. 4 the location of the cyst; in Fig. 5 the points where the membranes were more or less adherent; perpendicular shading shows the parts which had a yellowish tint; the deepest shading where was the deepest tint.

On opening the ventricles the right optic thalamus bulged up more than the left, and had a yellowish hue.

The paracentral lobe on right side had somewhat of a granular appearance. Over the portion which was discolored yellow a very decidedly marked atrophy of cortical gray substance was noted, which was reduced in thickness about one fourth. The discoloration extended into fissure of Sylvius and implicated the island of Reil.

Lungs. Slightly œdematous and adherent in posterior and lower portions. Old cicatrices in apices. Bronchi contained considerable fluid of a serous character.

Heart. Not abnormal.

Spleen. Atrophied and anæmic.

Liver. Rather small, and on microscopical examination the acini rather granular and borders indistinct.

Kidneys. Rather small. Surface irregular and capsule adherent. Many Malpighian bodies were sclerosed; the convoluted tubules were granular.

Knee-joint. Much pus and fluid (synovial) and some crystals resembling fatty acicular crystals.

The cortex where least diseased showed simply an increase of spider cells in the outermost layer. As the amount of disease increased this layer of spider cells was somewhat thicker, but soon there was only to be noticed an aggregation of very small cells with relatively large nuclei. The blood-vessels running through this layer were more prominent than in a normal cortex. This layer was not very firm, and was easily torn, so that in preparation it was sometimes impossible to avoid tearing it, and thus the outermost layer of the cortex was separated from the deeper parts. Where the change was most advanced the whole depth of the cortex was affected; many vessels were dilated much beyond the normal diameter. Where the change was less advanced the deeper layers of the cortex contained nerve cells which seemed to be healthy.

In these cases we have an example of unilateral spasm due to lesion of the cortex of the brain. In two the motor centres, which corresponded to the groups of muscles affected with convulsions, were most diseased; these were according to the rule. Not that these centres were more diseased than other parts; had they been those muscles would have been paralyzed, but they were evidently sufficiently affected to be the seat of an irritation. In the last case the centres for the affected muscles were apparently very slightly affected. Other parts of the brain were much more extensively diseased. Of course in judging of the seat of disease in cases of spasm due to cortical lesion we cannot limit the disease to exactly the motor centres. When it passes beyond those centres we may have no special symptoms developed to show us how far it has extended.

Conjugate deviation of the eyes due to spasm was present in all these cases. It followed the normal course as it is seen when due to lesion of the hemispheres, towards the side on which the limbs were convulsed. The rarity of conjugate deviation of the eyes from spasm makes this feature of the cases of interest.

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WHAT IS MEANT BY NERVOUS PROSTRATION?[1]

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The popular conception of the condition now known as "nervous prostration" is a state of debility, in which nervous derangements predominate. A man actively engaged in business or in public life presently finds himself unequal to his daily tasks; he suffers odd sensations in his head; his digestion is disordered; he is weak; wakefulness, mental depression, and a thousand and one new sensations of strange character and fearful portent are superadded. The unfortunate subject of these ills now recoils from his work, gives himself up to the consideration of his symptoms, and relaxes his hold on the interests and occupations of his life. All the world declares that he has "nervous prostration," and this explanation satisfies. Physicians say "neurasthenia" or "hypochondria," according to their habits of mind or to their training. Sometimes this condition is called the "American disease." Indeed, there is a general notion, widely prevalent, that neurasthenia is a peculiarly American malady. The late Dr. Beard was the apostle of this dispensation, and he not only was noisy and persistent in his advocacy of that view, but claimed, indeed, to have first clearly defined neurasthenia, and to have classified under this designation the numerous symptoms pertaining thereto. If we cannot admit Dr. Beard's claim in its entirety, if we experience repulsion at his tremendous but unconscious egotism, we are still compelled to acknowledge that his work in this connection is the most important that has appeared. He was peculiarly fitted to differentiate this malady by reason of the quickness and acuteness of his intellect, his power of analysis in its subtlest aspects, and his far-reaching, his omnivorous faculty for related facts.

The term *neurasthenia*, advocated by Beard, is by no means of recent origin. The corresponding French word, used in the same sense as we now employ it, has been a stock word of French neurological medicine for fifty years. Under the terms spinal irritation, hysteria, hypochondriasis, the nervous state, etc., symptoms of the same character as those now included in the word neurasthenia have been described. Besides the general state, similar derangements of functions of particular organs have been separately considered, as palpitation of the heart, headache, flatulence, impotence, etc. In the word neurasthenia — popularly, nervous prostration — the whole morbid complexus is included. The question I have to consider is whether this is a real, a substantive disorder. Are the notions now generally entertained about it founded on a true conception of the condition?

I need not enlarge on the importance of a correct understanding of a morbid state, which is supposed to be due to the conditions of modern, especially of American, life. Without stopping now to question the soundness of the prevailing doctrine, I will place before you the clinical history of two cases, representatives of the two types of neurasthenia. These may be designated respectively as the *congestive* and the *anæmic* varieties. The latter are greatly more numerous, but the former are not uncommon, as Beard admits.

CASE I. THE CONGESTIVE TYPE.

Mr. ——, aged forty-four, president of one of the largest railroad corporations of the West. He is now a robust man, five feet ten inches in height, 196 pounds in weight, and has a very dark complexion, his type of constitution being the so-called bilio-nervo-sanguineous. Beginning his career at an early age in a subordinate position, he has, by the force of a superior intellect and of a physique that no labor could subdue, risen to the highest office, and now controls vast interests. Ambitious, enterprising, resolute, he has carried these faculties into all his work, and has shrunk from no tasks, however severe — from no responsibility, however onerous. As he has risen in position, social engagements have also added to his burdens. His mode of life has changed to some extent. His habits have become more sedentary, although diversified by frequent railroad journeys; the pleasures of the table, including wine-drinking and late suppers, have been more and more indulged in; excessive smoking has been added to these indulgences; and thus, whilst his physical powers have been slowly impaired by bad hygiene, the demands on his mental powers have increased. Extensive interests, uncertain, often precarious, business arrangements, and the incessant watchfulness required when vast combinations may be wrecked through failure at any point, demand the highest use of every faculty; and thus to work is added worry.

Three years ago Mr. —— observed that he was not feeling well, and that he could not work as before. He became dull, especially after meals, had a constant headache, dizziness and throbbing of the temples; he applied his mind with difficulty, and all of the head symptoms were increased by the efforts made; he had a good, rather a keen appetite; a heavily coated tongue, flatulence, constipation, and some colic pains. The bladder was rather irritable, especially at night; sexual inclination had declined with lessened power, and various ill-defined but annoying sensations were felt about the penis, scrotum, and perinæum. During the first year the symptoms increased; the attacks of vertigo were sometimes very severe, so that he had to support himself for a moment to save him from falling. On several occasions he became very much dazed, even lost consciousness momentarily, and once wandered some distance from the proper route he was taking. Anomalous sensations of creeping and crawling, coldness and tingling, and often a burning heat, were felt in the scalp; sudden detonation in the centre of the head apparently; buzzing and singing in the ears, and very constant headache, were also experienced. In the extremities, the tongue, and the genitals, there were felt peculiar tingling, numbness, coldness, creeping, and similar sensations. During the whole time of the existence of his symptoms Mr. —— suffered from depression of spirits, a deep melancholy in fact, and he lived in constant apprehension of failure of mind.

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[1] Read before the Philadelphia County Medical Society, December 19, 1883.

Physicians whom he consulted in the West located the malady in the brain, diagnosticated cerebral hyperæmia, the prelude to softening.

When Mr. —— came to see me, sixteen months ago, the symptoms just detailed continued, and were rather increased than diminished. The objective examination furnished the following details: —

His face is full, the eyelids puffy, and the lower lid swollen into a bag; the conjunctivæ are injected, the sclerotic muddy, and the pupil sluggish in movement. On ophthalmoscopic examination, the fundus is seen to be injected, small vessels prominent, veins swollen. There is no optical defect, except that due to his age. The membrana tympani is also rather deeply red, and vessels too small to be seen under ordinary circumstances are now in view. Hearing is unaffected. Motility, sensibility — the tactile, pain, and temperature senses — are unaffected; and the reflexes remain normal, although probably a little sluggish. The electrical reactions are normal.

His tongue is heavily coated, the breath foul. His appetite is good, but a sense of fullness at the epigastrium persists for several hours after meals; acidity and eructations of rather foul gas now and then occur. The stools have the normal appearance — consistence, color, and odor. The urine is copious, acid, specific gravity rather high (1025 to 1030), and there are traces of sugar, as is usual under such circumstances.

The action of the heart is good, the pulse regular, the tension of the vessel rather high. The respiratory movements and murmurs are normal. The area of hepatic dullness is rather enlarged, and the splenic dullness seems, also, to be increased.

Subjectively the following symptoms are experienced: Various strange sensations in the scalp; a persistent headache; blurred vision at times; vertiginous feelings occurring irregularly and of varying severity; despondency, vague apprehensions; fear of places, especially of crowded assemblages; difficulty of deciding questions very trivial or otherwise, in place of former promptness; impaired memory for persons, names, and things.

Notwithstanding this extended list of symptoms Mr. —— did not have an ill look, but, on the contrary, on superficial examination, appeared to be robust. To him and to his immediate family the situation seemed in a high degree alarming. The surrender of his position and his business interests was regarded as imminent. To the apprehension awakened by his head symptoms was added the diagnosis of cerebral congestion, and hence the profound melancholy into which he was plunged.

Commentary. My conclusion was that the disturbance in the functions of the brain and nervous system were secondary to derangement of the assimilative processes — of the primary and secondary assimilation — and that to the functional disorder thus caused are added the effects of introspection and the realization by the centres of conscious impressions to an unusual extent of ordinary peripheral excitations. My reasons for coming to this conclusion will appear hereafter. The remedies consisted in a careful regulation of the diet, in baths, exercise, in a reduction of the hours devoted to work, but not the cessation of work; in the use of a laxative quantity of sodium phosphate daily, and in the administration of the aqueous extract of ergot, with the chloride of gold and sodium, and a minute quantity of bichloride of mercury. If time and space would allow the details of the hygienic management — so important in these cases — could very profitably, I think, occupy our attention, but I must pass on to the next case.

CASE II. THE ANÆMIC TYPE.

Mr. ——, aged fifty-seven, lawyer by profession. His type of somatic constitution is the nervo-sanguine; weight, 145 pounds; height, five feet nine inches. He has immense mental energy, extraordinary quickness of perception, a capital logical and critical faculty, and fine oratorical power. These native abilities, conjoined with extensive cultivation, soon placed him amongst the foremost men at the bar of the city where he practiced, and have long maintained him in that position. For many years he has been a dyspeptic, and suffered much from eructations of gas, from acidity and flatulence. At times — months, even years intervening — he has experienced very severe seizures, accompanied by extreme mental depression, alternating with as extreme mental exaltation. During the past five years he has had two attacks of gout, neither severe nor protracted. During the whole course of his professional life he has sustained no reverses, encountered no other anxieties than those of a successful lawyer, and has been rather singularly free, indeed, from the worries of life. Receiving, last summer, the nomination as a candidate to an important office, this cultivated gentleman, scholar, and lawyer, this man of nice tastes and high tone, entered on a canvass marked by vituperation and slander to an unusual extent. About the same time some business interests became entangled and caused no little worry. During the campaign he visited some malarious districts, and spoke several times at night in the open air. A speaker of great readiness and power, he never suffered from any considerable fatigue after public speaking, and hence he was now surprised to find himself exceedingly tired after even a brief effort. He began to have drenching night sweats, lost his appetite, grew weak, and was compelled to return home. It was then ascertained that he had malarial fever, and he was treated accordingly. But at this time and subsequently symptoms not necessarily of malarial origin appeared. He became frightfully dyspeptic, had enormous eructations of gas, and very considerable flatulence; his arms and legs had a numb feeling, attended with "pins and needles;" he walked with some difficulty, partly because of weakness; he was somnolent, and slept a good deal, and his spirits were extremely depressed, especially on awaking in the morning. During these periods of depression he was so overwhelmed with despondency that he was apprehensive he would lose his self-control entirely.

When he placed himself under my charge he had still a slight daily paroxysm of fever, the exacerbation occurring in the morning, but this disappeared in a few days under the action of some efficient doses of quinine. He was very weak, pallid, and emaciated, and slept a good deal of the time. He had no headache; his vision was rather dull, and ideas and speech slow. Every morning on awaking he was profoundly melancholic, and all the annoyances which the campaign had developed were gone over in his mind. He could talk of nothing else, think of nothing else than his ill feelings and the disagreeable political and personal slanders of which he had been made the victim. He complained much of the numbness of his hands, of weakness in the limbs, and he talked incessantly of his depressed feelings. The bladder became irritable, and he was compelled to rise every two or three hours during the night, the urine being acid, and depositing heavily of uric acid. Presently the somnolence was displaced by insomnia, and he slept less and less, and rose in the morning haggard, exhausted, and horribly nervous and depressed. Ordinary hypnotics proved unequal to the effort to force sleep, and increasing doses of chloral became necessary. His mental activity, heretofore so remarkable, declined, and the effort to force his mind to the performance of any work, such as letter-writing, caused a sensation of fatigue. He also became undecided, even in small matters, ceased to have any inclination to go out and mingle with the public, and grew more and more averse to political movements. He reached a point finally when to meet strangers caused him great distress, excited the circulation, and induced a cold sweat.

As it became indispensable that he should resume the canvass he made a strong effort, and notwithstanding the fatigue, mental and moral depression, and exposure of public speaking, hand-shaking, and other matters of political expediency, he actually improved somewhat. The insomnia, irritable bladder, and hypochondriasis, however, continued, but to a less degree. In a few weeks, by means chiefly hygienical, I succeeded in stopping the chloral; natural sleep was resumed, although it remained somewhat fitful. Suitable dietetic regulations, baths, exercise, and medicines, *pro re nata*, removed, or at least greatly modified, the principal symptoms. Two weeks at Atlantic City accomplished no little good, and when he returned to Philadelphia last week he appeared to be nearly his old self.

Commentary. In this case we have exhibited that complexus of symptoms entitled neurasthenia or nervous prostration in its anæmic form, produced by several factors, moral and somatic. The moral were very influential, but unless the conditions producing bodily depression had occurred, the former causes could hardly have effected such results. Long-standing dyspepsia had prepared the way, malarial intoxication and fatigue contributed an important series of changes, and upon this weakened bodily state were precipitated crushing moral influences.

These cases whose histories I have just read are typical; each is the representative of a group. The causes are complex. The effects are not limited to one organ or set of organs, but involve the system in general. To name this malady from the disturbance in one system seems to me an error unless the definition is sufficiently elastic to include all the functions affected. Neurasthenia names one only of the parts involved. To entitle this the "American disease" is a strange misnomer. It might with more propriety be called the "French disease," for a condition known as "the nervous state," as "nervism," as "neurasthenia," and similar terms, has been recognized and frequently described by French writers from an early period in this century. In France have existed the causes in the most influential form. The frequent political convulsions, the exacting social life of the great cities, and the harassing struggle for existence inseparable from the state of the great mass of the population induce — if any mere external conditions can — that which is called nervous exhaustion. There are two factors supposed to be especially influential in this country, work and our exciting political and social life. I believe that the effect of these is greatly overrated.

The brain, of all the organs of the body, illustrates in the most perfect manner that which has been happily styled "the principle of least action." That is, to execute given tasks it expends the least possible force, or, to express the same idea in another form, its work is done with ease with the minimum of effort. Given a certain amount of repose — sleep — and supplied with proper nutriment — healthy blood — the brain will do its allotted work continuously during its working — the waking — hours. So far from being injured by severe labor carried on under normal conditions, the brain is improved by it. Mental activity, like muscular exercise, keeps the brain in a healthy state. When, therefore, a man says he is suffering from the effects of mental overwork I want to know what his vices are. Worry may be one of these. Worry is exhausting. The worries of life do infinitely more harm than the work of life, how onerous soever it may be. The cases I have just read illustrate this.

I deny that life is more exciting on this side of the Atlantic. The one prize of life is money, and to get possession of it is the supreme purpose, to the attainment of which every energy is put forth. Is it less so elsewhere? Who are the peoples that despise money, and make no effort to obtain it? Here life is less exciting because our political condition is stable, and but comparatively little exertion is required to secure a comfortable subsistence. I am speaking now of the mass of the population, and not of the few consumed by ambition for political and social distinction, or led by a pitiless greed. It is the very ease and luxury of our American life that cause mischief. It is the indulgence in eating and drinking, the abuse of alcohol and tobacco, sexual excesses, sedentary habits, and too luxurious lives generally that induce the state of the system called nervous exhaustion. If I had time each of these should be considered in relation to this subject. In the first case I narrated the pleasures of the table and disordered assimilative functions caused the trouble. In the second case, dyspepsia, malarial toxæmia, and unusual fatigue were the pathogenic factors. In both the effects of these causes were increased by moral influences; in one, the anxieties involved in vast business enterprises; in the other, the excitement of a hot political contest. These moral causes would have had no injurious effect had not the somatic conditions been unfavorable.

I come now to the most difficult part of my subject. I have to answer this important question: Why are the somatic derangements caused by the conditions referred to in some cases accompanied by the mental and nervous symptoms which belong to neurasthenia? Why do some subjects with indigestion and assimilative disorders, or with the results of dyspepsia and malaria, suffer from the derangements of the mental and nervous functions and not others? I might here take refuge behind an accepted generalization, and say that the presence or absence of the neurotic type of constitution explained the difference in the result. There is aptness in this explanation, but it is not entirely adequate. There is a mental condition of great importance, and unless we comprehend this we fail to realize all the possibilities of the nervous side of these cases. I, however, barely hint at the main points under these circumstances. Besides, I wish to avoid a too metaphysical discussion of the subject.

In the conduct of life every man who has a position to make or to maintain exerts a certain moral force to hold himself up to his work. Some men are so happily constituted that they are quite unconscious of the effort and stand in the front, serenely confident. Others are all the time laboring; they feel it and know it; and like the soldiers of Thomas's corps at the battle of Chickamauga, sorely pressed, now and then look back to see whether their grim and resolute commander is still behind them with his invincible courage. Men conscious of the effort making to keep up need but little excuse to surrender themselves to their sensations. At the present time nervous prostration is much feared; its symptomatology is a common subject of discussion; and hence, if a man who is familiar with its character is arrested in his career by some of the ailments supposed to belong to it, his imagination readily supplies the rest. When a man begins the study of his bodily sensations, having a certain model in his mind, he has little difficulty in filling out the details. All the world knows that when the attention is strongly fixed on an organ of the body functional disturbances of it ensue, and finally structural changes may be induced. No part of the body is without sensation, even in health. To perceive these sensations the attention needs to be withdrawn from external things and concentrated on the part. Thus it is when the subject of neurasthenia pursues his introspection; he becomes conscious of numerous sensations, which, because now felt for the first time, are new. Under these circumstances, also, the seat of conscious impressions becomes more acutely perceptive. Suggestion adds its quota of symptoms.

To the indefinite and multiplying nervous symptoms developing thus subjectively must be added the reflex. Headache, vertigo, tinnitus aurium, amaurosis, diplopia, hallucinations and illusions, defects of speech, paralysis, are reflex symptoms on the part of the brain; palpitation, intermittent pulse, angina pectoris, laryngismus stridulus, asthma, are amongst the reflexes of the respiratory organs and heart; neuralgia, anæsthesia, and other disorders of the sensory nerves, and local paralyses, affections of the motor nerves, included amongst the nerve reflexes, may all be dependent on reflex excitations proceeding from the stomach. Indeed, there is no symptom in Beard's catalogue of those belonging to neurasthenia that may not be due to merely reflex influences having their initial seat in the digestive apparatus. It follows that the term neurasthenia, or its common equivalent, nervous prostration, is either inadequate or it expresses too much, — inadequate if the complex of symptoms includes the functional disturbances of all the organs affected, expresses too much if the malady is a merely nervous one.

In reply to the question: "What is meant by nervous prostration?" I respond, "A disease usually functional, situated in one or more organs, during the course of which reflex disturbances of the brain occur, and numerous subjective sensations in all parts of the body are realized by the consciousness."

I deny that neurasthenia is a primary nervous affection, or that it is a substantive disease. I hold that it is symptomatic and secondary.

This conception fixed in the mind, the treatment of neurasthenia is successful or unsuccessful according to the measure of our skill in localizing the initial disturbance, and in addressing our remedies to that as well as to the general state.

THROMBOSIS AND THE CONDITIONS WHICH FAVOR ITS DEVELOPMENT.[1]

BY C. H. BROCKWAY, M. D., LYNN, MASS.

Says a recent writer, "There is no more intricate problem awaiting solution at the hands of the clinical and pathological investigator than that of the clotting of the blood in the vessels during life." And I think I do not overstate the case by saying that no more appalling accident is brought to our notice from time to time than the sudden supervention of thrombosis or embolism, alarming and distressing the patient, — if, indeed, he escape immediate dissolution, — terrifying his friends, and causing the gravest anxiety to the physician. This event, moreover, is seldom looked for, but comes with startling suddenness in the course of diseases and morbid conditions which up to that moment had apparently been progressing favorably.

Let us look for a moment at the conditions which favor thrombosis. (1.) A stagnant or arrested circulation, as in some cases of pulmonary thrombosis, in which the clots in the arteries are probably the result of obstruction in the circulation through the lung capillaries. (2.) A mechanical obstruction around which coagula form. (3.) And most important of all (as Playfair says in writing on this subject) cases in which the coagulation is the result of some morbid state of the blood itself.

There is, probably, no condition in which the predisposing causes of thrombosis exist in so marked a degree as in the puerperal state, and many of them are clearly exhibited even during the period of gestation. In pregnancy the blood is more watery, is deficient in red globules, and contains a larger proportion of fibrine, which must be looked upon as a waste product. So long as the excrementitious elements generated in the mother's system and that of the fœtus are freely eliminated all is well, and this natural expelling of waste products goes on without disturbance while the lungs, heart, and glandular system generally are in good working order; but if for any reason the elimination of effete materials is impeded there is at once a gathering of noxious matters in the blood which promptly poisons that life-giving fluid. And yet notwithstanding the excess of fibrine and proneness of the blood to clot during pregnancy, thrombosis is rare in this condition, the eliminative processes being ordinarily active enough to carry away the waste products; both nervous and vascular tension are high, and the glandular system works with rapidity. The marked exception as regards the kidneys, however, demands a passing remark. There are cases of sufficient frequency to come under the occasional notice of each one of us in which the kidneys fail in their proper office and permit the excrementitious elements of the urine to be retained in the blood. In such an event that fluid is loaded with a morbid and poisonous material composed not only of urea but probably of other effete materials which would be eliminated in a freer state of the abdominal circulation. In death from this form of poisoning thrombosis does not occur (so far as I can learn). If the theory of Richardson be tenable this fact may be accounted for by the presence of large quantities of carbonate of ammonia in the blood of those suffering from uræmic intoxication, thus keeping the fibrine in a state of solution.

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[1] Read before the Essex South District Medical Society at Salem, December 18, 1883

The great majority of cases of thrombosis in lying-in women occur a variable number of days after delivery. What are the new conditions left by labor which predispose the patient more than ever to the accident of blood-clotting in the vessels. The frequency of the heart's action has been much lowered and vascular tension diminished. The drain of blood following the birth has been considerable, perhaps excessive; this causes an increased activity of absorption of good and bad material alike. During pregnancy the waste products are gotten rid of without much difficulty, the excretory organs working hard under the stimulus of a heightened vascular and nervous tension. After labor, with that tension lowered, the eliminative system is called upon to do a much greater amount of work. In fact it is in danger of being overstrained. As soon as uterine involution is well under way a great quantity of noxious material is poured into the blood. In most cases, to be sure, this is quietly expelled by the natural processes, and no untoward event occurs, but no one can for a moment doubt that the woman is in a precarious condition. This irruption of effete matter is apt to furnish that very ferment (for want of a better term) which recent writers declare to be necessary to precipitate in various localities the fibrine which was already in excess in the blood. The thrombosis thus produced is often a *conservative* measure, inasmuch as coagulation is apt to first take place in the uterine veins and pelvic vessels generally, thus protecting the blood as a whole from immediate infection. These venous plugs or thrombi after a time undergo a process of disintegration with a view to their ultimate removal. During this period one of the clots may become loosened from the wall of the vessel or a portion may break off from the main body of the coagulum and, entering the systemic veins, be carried along by the venous current until it reaches a vessel too small to allow of its onward progress, where it remains, plugging that vessel and, of course, producing the same symptoms as if a thrombus had originally formed at that point. This migratory plug is an embolus, showing that embolism is but an accident of thrombosis, and cannot occur but as a sequel to that event. When a clot is loosened from one of the pelvic veins and passes upward it usually ends by plugging the pulmonary artery or one of its branches, and thus causing those terrible results of pulmonary obstruction which so often end the life of the patient. It was formerly asserted by the most eminent German pathologists that this obstruction was *always* due to an embolus, and that primary thrombosis in the pulmonary arteries was an impossibility. This view was combated by Playfair, who produced many clinical facts to support his belief that coagulation of fibrine took place in the right side of the heart and pulmonary arteries. He reports twenty-five cases of sudden death after delivery in which accurate post-mortem examination had been made, and the results are important and instructive. In seven of them there was distinct evidence of embolism, and not one of those patients died before the nineteenth day. In fifteen of them no evidence of embolism was found to account for the plugging of the pulmonary vessels; they all died within two weeks with one exception, and some in two or three days. The fact of death occurring so soon is in itself against the theory of embolism, as time is required to induce those degenerative changes which lead to the separation of a clot in the peripheral vessels.

Thus far I have briefly sketched the chief conditions which favor thrombosis, and have drawn illustrations from puerperal cases because the literature of the subject is comparatively rich as applied to lying-in women, and it is through these reported cases, and the commentaries that have been made upon them, that the majority of the profession has been instructed in the effects of blood-clotting in the vessels during life. But this affection, as you well know, is not peculiar to pregnancy and the puerperal state.

It may and does occur as a complication of common diseases, and this paper is especially written to draw your attention to this fact, and to illustrate it by two cases of scarlatina occurring in my own practice, in which there was strong evidence of thrombosis of the pulmonary artery. The first patient was a boy of ten years, enjoying previous good health. He was seized with scarlatina. The eruption came out freely, the fever was high (105° F. the second evening), but not unusually so, and there was nothing about the case to cause any anxiety until the sixth day. At this time the boy showed symptoms of marked exhaustion, the eruption had considerably faded, and the cervical glands, which had been moderately swollen for two or three days, suddenly grew large and painful, the pharynx was congested, and there was some pain on swallowing, but the symptoms referable to the throat were not significant. He breathed naturally, and there was nothing to draw one's attention to the chest. His appetite had failed, and he looked decidedly ill without any assignable cause other than the general blood-poisoning common to the disease. This on the sixth day. On the afternoon of the seventh I was hastily summoned, and found him suffering with horrible dyspnœa and gasping for breath. The attack had come on suddenly, so the father said. The boy's face was rather pale. When I first arrived, only a few minutes after the attack came on, the heart was beating tumultuously; the respiratory sounds were natural. Strong mustard poultices were applied to the front of the chest, and brandy with the aromatic spirits of ammonia was freely given. In half an hour the heart beat grew feebler and fluttered, the respirations became very short, and he was soon dead.

No post-mortem examination was allowed, but I think the symptoms were too significant to admit of any doubt regarding the occurrence of pulmonary obstruction, and that from a coagulum in the right heart, and extending into the pulmonary artery.

The next case was also a boy, a trifle younger, perhaps seven years of age. In him the eruption was well developed, and the fever active for a few days, when he showed marked signs of exhaustion. With the other case fresh in mind (both occurring the same year), although there was nothing in this child's condition to warrant an expectation of heart clot, I watched him carefully, and took pains to have him well nourished and the secretions kept in an active condition. at least the skin and bowels, the latter acting rather freely of themselves. The urinary secretion was fairly good; there was a trace of albumen in the urine, if I remember aright, but no œdema or uræmic symptoms. I gave him the carbonate of ammonia in two grain doses every hour. This was not well retained, as he vomited frequently both medicine and food. This irritability of stomach I had noticed in the boy before when treating him for various disorders. The parents considered that he always had "a weak stomach," as they termed it, and this symptom did not alarm me. He was bright, and complained of no head symptoms. This was his condition after he had been ill a week and a half, when his father came in haste for me one evening. I found the boy greatly distressed for breath, a symptom which had come upon him suddenly. His dyspnœa was nearly as great as in the fatal case above narrated. His heart beat rapidly and was feeble. His respirations were of a gasping character. He was given brandy by the mouth and rectum, and mustard was applied to the chest. This relieved the violence of his dyspnœa somewhat, but yet he was evidently in a critical condition. The attempt at stimulation by the mouth was soon abandoned as he instantly rejected it. The vomiting had no apparent effect upon his breathing. He continued in this way throughout the night, being worse at times, but relieved by the stimulant, and especially by having him breathe an atmosphere surcharged with the vapor of water, as is customary in cases of croup. The next day he was more comfortable, though still much distressed. He was kept quiet, sinapisms applied to the chest, and brandy given at intervals when his symptoms demanded it. He gradually recovered. It may be doubted whether this was a case of pulmonary obstruction, but the symptoms were well marked, and to me unaccountable on any other hypothesis.

Playfair records a number of cases of recovery with symptoms the same as above recorded occurring in women after labor. As he says, "if the obstruction be only partial and sufficient blood pass to keep the patient alive," recovery is surely not impossible.

Cases of sudden death from thrombosis occur now and then in diphtheria. Flint says that he lost one patient in acute rheumatism from the sudden occurrence of a coagulum in the right ventricle, passing into and obstructing the pulmonary artery. Tanner believes that the sudden death of many patients with croup is due oftener to thrombi than to asphyxia.

One word as to treatment. In the way of preventive medicine I know of nothing unless we give as a routine practice the carbonate of ammonia in large doses in all cases whenever we have reason to think the occurrence of heart clot possible. But this hardly seems practicable, and its efficacy is doubtful. The eliminative organs should be kept in active condition by every means in our power, and I have thought that the sulphite of soda might be freely used with benefit in all septic conditions of the system.

Hospital Practice and Clinical Memoranda.

TWO CASES OF UTERINE POLYPUS.[1]

BY FRANCIS MINOT, M. D.

THE first patient was a married woman, forty-nine years old, who had never been pregnant. General health good till about three years ago, when the menstruation became frequent and profuse. For the past three months the hæmorrhage had been continuous. She entered the Massachusetts General Hospital in a very anæmic and debilitated condition. The uterus could be felt above the pubes, and was not apparently enlarged. On vaginal examination the cervix was found to be very large, spherical in shape, with an opening in the presenting part into which the finger could penetrate with some difficulty. A smooth, hard mass was felt within it, not adherent to the walls of the cervix. On account of want of space the pedicle of the tumor could not be felt. A loop of twisted wires was passed over the tumor and tightened by an écraseur until the pedicle was cut through. The tumor was then removed without much difficulty, the os being incised in two directions to permit its exit. The vagina and cervix were carefully sponged out with a solution of carbolic acid, and the vulva was covered with salicylated cotton. Scarcely a drop of blood was lost. The perinæum was frequently bathed with carbolic acid solution. The operation was done March 16th. The next day there were no symptoms, but on the 18th the temperature rose to 100° F., and carbolized vaginal douches were ordered. On the 19th there was a chill; on the 20th, vomiting. The temperature continued to rise, the abdomen became tympanitic and tender, and she died March 22d at midnight. The tumor was an ordinary fibroid of the size and shape of a lemon. In addition to the carbolic douches eight grains of quinine were given every four hours, besides morphia, etc. It was found, after the patient's death, that there was a case of erysipelas in an adjoining room, and, notwithstanding the precautions taken, there can be no doubt that the fatal result was owing to septicæmia originating by contagion.

The second case was that of a married woman, who entered the hospital at about the same time as the above, and whose history was almost identical with hers. The tumor was wholly extruded from the uterus, and occupied the vagina. It was somewhat smaller than the first, and was nearly spherical. It was drawn down with hooks, and separated from the stalk before the latter could be severed with scissors. The patient was carefully isolated, and every precaution was taken to prevent infection. There was no untoward symptom, and she left the hospital in a few days, well.

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[1] Read before the Obstetrical Society of Boston, March 10, 1882.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

AT a meeting of the Boston Society for Medical Observation, held November 5th, DR. C. M. GREEN reported the following

CASE OF MAMMARY CANCER. OPERATION. SUBSEQUENT CATARRHAL PNEUMONIA, WITH CANCER OF THE LUNGS. AUTOPSY.

In January, 1882, I was consulted by Mrs. T. on account of a small tumor of the left breast. The patient, a widow, forty-five years of age, the mother of one child, had been for several years in poor general health. Although in fairly comfortable circumstances she had worked very hard; her appetite was fickle; her digestion poor; and she rarely partook of animal food. She had passed the climacteric a year and a half before without incident. One year before I saw her she noticed a slight, non-offensive discharge from the left nipple, which was somewhat excoriated and sore. At times the discharge would cease and the soreness disappear. Four months before she consulted me the nipple was noticeably retracted, and three months later the discharge began to be offensive.

On examination the gland was found to be hard, the size of a small orange, and the nipple retracted; the integument was firmly adherent to the gland, and was excoriated about the nipple; there was a sero-purulent discharge sufficient to stain the linen. No enlargement of the axillary glands could be detected. I considered the growth to be cancerous, and advised its immediate removal.

A few days later I excised the entire gland by the usual operation, removing all the subcutaneous tissue, and as much of the integument as I thought necessary. There was very little hæmorrhage; four or five bleeding points only were tied with carbolized catgut. A drainage tube was inserted; the skin united with catgut sutures covered with antiseptic gauze, and supported with adhesive straps and a binder. There was but slight discharge from the tube, and on the fifth day union by first intention had apparently taken place except over a small extent. But two days later most of the sutures were found to have dissolved, and the wound gaped. The drainage tube was, therefore, removed, and the wound dressed with carbolized oil and left to granulate. Two weeks after the operation the patient was eating more than she had for years and was in every way comfortable. The wound was filled with healthy granulations.

Dr. W. F. Whitney very kindly examined the tumor and pronounced it to be scirrhous cancer. He found, too, to my regret, that cancerous digitations had been cut across by my incision on the sternal side; and I, therefore, watched the case with expectation of a recurrence of the growth in the cicatrix. I determined, too, that thereafter I would follow the advice of Professor Gross and remove the integument more freely, even at the expense of a large suppurating wound.

The patient continued in good general health until the following December, when she took a cold from sleeping in a room, the ceiling and walls of which had been wetted through a leaky roof. This cold proved to be the beginning of the end. Although improving in some respects, in the following March the patient had lost flesh and strength and suffered much from cough and dyspnœa. There were fugitive sibilant râles over the entire left lung; sibilant and abundant fine moist râles over the right scapula and at the base of the right lung, with dullness on percussion. The expectoration was scanty and of a white, frothy character. There was some pain under the right scapula. It was clearly, to my mind, a case of catarrhal pneumonia. In April fine, moist râles were heard also over the base of the left lung, and the respiratory murmur was harsh over both apices. The pulse was rapid and weak; the respirations increased in frequency and shallow; the cough and dyspnœa considerable. There was pain and a sense of suffocation referred to the epigastrium.

The treatment adopted alleviated the symptoms, but the disease pursued the usual course. With the knowledge of the preëxisting cancer of the breast I was, of course, alert to discover symptoms of a secondary growth elsewhere. There was as yet no return of the growth in the cicatrix. Although later on there was great pain through the base of the left lung, requiring morphia, it was apparently ascribable to pleurisy, and the physical signs were at no time indicative of pulmonary cancer. Nor was I able to discover any physical evidence of cancer of the stomach, although a sense of pain and constriction in the epigastrium and occasional vomiting pointed to the possibility thereof. Early in June the temperature was for the first time observed to be elevated. From this time decline was progressive, and death occurred one month later. The day before death the patient vomited blood once or twice. At the time the explanation was not clear to me, but the post-mortem examination revealed the source of the hæmorrhage.

The autopsy was made by Dr. Gannett twenty-six hours after death. His report is as follows: —

Body medium-sized, fairly developed, much emaciated. Rigor mortis present. The left breast absent, its seat occupied by a healed cicatrix, by estimate fifteen centimetres long. Diaphragm right and left at the upper border of the third rib. Pericardium contained about forty centimetres of clear fluid. Pericardial surfaces not remarkable. Heart diminished in size; left ventricle contracted and empty; right ventricle and auricle moderately distended with dark-red coagula. Aortic valves sufficient; mitral admitted tips of three, tricuspid tips of three, fingers. Valves and cavities not remarkable. Muscular substance of a dark-brown color. Coronary vessels not unusual.

The left pleural surfaces, adherent laterally and over apex by tolerably firm adhesions; on the right side pleural surfaces adherent throughout by firm adhesions. The left pleural cavity contained no fluid. Both lungs only partially retracted; showed numerous irregular depressions, with here and there portions of lung substance projecting considerably above the surrounding parts; such portions were pale, and showed beneath the pleura numerous alveoli as large as pins' heads. On pressure over the left lung numerous small nodules could be felt within. On section of the left lung, at the apex, were several cavities, varying in size from a pea to a filbert, with nearly smooth walls and thick curdy contents. In the lower lobe were numerous gray, firmer nodules about the size of a large pea; from many of these small drops of a puriform fluid could be squeezed. There were also a few grayish, slaty nodules, denser than the last, and with irregular borders. The right lung had similar appearances, except that there were no cavities in the apex, and the nodules were far more numerous in the lower lobe, making it dense and firm. In several places in this lung the walls of the larger bronchi were much thickened; many of the lumina contained cheesy or puriform material.

Examination of various parts of the lungs after hardening gave the following appearances: The peribronchial connective tissue very much thickened in many places, and in it were numerous long and rather narrow spaces or alveoli filled with large epithelial cells atypically arranged. The lung substance in the immediate neighborhood had a similar appearance. Many of the smaller nodules described above showed a mesh-work made up of the usual lung structure, but the spaces were filled with nests of large, well-defined epithelial cells and nothing else. Other portions of the lung showed the appearances characteristic of a catarrhal pneumonia with here and there areas of interstitial pneumonia.

Spleen somewhat diminished in size, pale, of the usual density; on section, follicles and trabeculæ distinct; pulp considerably diminished in amount. Kidneys somewhat reduced in size, pale, of the usual density; capsule detached with some difficulty, leaving here and there a roughened, granular surface; on section cortex uniformly diminished, surface pale; nothing unusual detected. Ovaries considerably diminished in size; external surfaces irregular, showing numerous cicatricial depressions; density increased; on section show a dense, grayish surface. In the left parovarium was a thin-walled cyst, with clear fluid contents, about the size of a filbert. Beneath the peritonæum, covering the uterus and in the uterine wall, were two dense, grayish tumors about the size of a pea. The stomach, on the lesser curvature, showed two losses of substance of the mucous membrane about five millimetres in diameter extending rather more than half way through the mucosa; one had a black (hæmorrhagic) base. There were also a few superficial hæmorrhagic erosions of mucous membrane. The intestines had nothing remarkable. Liver reduced about one fourth in size, usual density, brown color; on section acini small, centres distinct as brown points. Under the peritonæum at two points were grayish nodules the size of a split, dried pea. Bile ducts pervious. Nothing abnormal observed about the pancreas or aorta. At the sternal end of the cicatrix mentioned above were two nodules, the size of filberts, of grayish color; on section showed a grayish surface with numerous opaque specks.

Post-Mortem Diagnosis. Brown atrophy of heart. Chronic adhesive pleurisy. Chronic catarrhal pneumonia with cavity formation. Chronic interstitial pneumonia. Cancer of the lung. Chronic peribronchitis. Simple atrophy of spleen and kidneys. Parovarian cyst. Fibro-myomata of uterus. Brown atrophy of liver. Cancer of liver (probably). Cancerous nodules over sternum.

It will be seen, therefore, that there was abundant microscopic evidence of cancerous new growth in the lungs. Whether this process had its origin prior to the development of catarrhal pneumonia I am unable to say, but there were no symptoms referable to the lungs until after the exposure to cold and dampness, when the catarrhal process developed in natural sequence.

The cancerous nodules at the sternal end of the cicatrix were plainly attributable to the incomplete removal of the original growth; and this experience teaches, as was remarked above, that it is wiser to remove the integument freely and leave, if necessary, an open wound to close by granulation.

In similar cases I would not again close the wound with catgut sutures, especially where the tension is great; silk or silver wire would be, in my opinion, preferable.

Dr. **Webber** then read a paper on

CASES OF LESION OF THE BRAIN CORTEX ATTENDED WITH UNILATERAL SYMPTOMS.

In reply to Dr. Blake the reader said that these unilateral spasms affect one or a few groups of muscles, and are caused by lesion of the cortex due to hæmorrhage, tumor, or meningitis. In the second case there was no previous history, and the unilateral spasms alone would not show the nature of the lesion.

Dr. **Draper** asked if the diagnosis of meningeal hæmorrhage made in the first and second cases was not very rare without external violence.

The **Reader** thought it was not so rare as hæmorrhage into the cerebral substance. In this case it seems to have come first in the substance of the brain and spread thence to the meninges. One reason for the diagnosis was that the patient had had long-continued brain symptoms which were suddenly followed by unilateral spasms. The previous history precluded chronic disease of the brain. In some rare cases one might have an abscess or tumor in the brain with no symptoms previous to such an outbreak. As to the examination of the fundus of the eye the reader said that it was not possible to make it in all these cases on account of the spasms. If there was a chronic meningitis on the surface of the hemisphere often no change was found in the eye, but in trouble at the base of the brain or with tumor such an examination would often show definite change in the fundus, and might be of use in making a differential diagnosis. In the first and second cases reported there was a strong retraction of the head, but no opisthotonos; also there was considerable reflex resistance to rectifying that position, but the lesion was not the same in the two cases. In reply to Dr. Williams the reader said that conjugate deviation of the eyes is of limited value as a means of localizing lesions of the brain. This deviation is due to two causes: either paralysis of the external rectus and the opposite internal rectus or spasm of these two muscles. When the deviation is due to paralysis, if the eyes are turned away from the paralyzed limbs, towards the side on which the cerebral lesion has occurred, the lesion must be above the pons; if the deviation is due to spasm and the eyes are turned towards the convulsed limbs, away from the cerebral lesion, the lesion must be above the pons. These forms of conjugate deviation are only of value as localizing symptoms to this limited degree; no opinion can be formed as to the exact seat of the lesion in the hemispheres. If, however, in paralysis the eyes are directed towards the paralyzed side, away from the cerebral lesion, or in convulsions away from the convulsed limbs towards the cerebral lesion, the conjugate deviation indicates that the lesion is in the pons, in the vicinity of or implicating the nucleus of the sixth nerve. In this respect the deviation is of value as locating the seat of disease within very narrow limits.

See page [illegible] of this number of the Journal.

ANEURISM OF ASCENDING AORTA.

Dr. J. G. Blake then reported the following case: —

M., aged sixty, carpenter, married; his father died of typhoid, mother of paralysis, and two sisters of phthisis; has one brother living; was intemperate when a young man, but now takes only an occasional drink; no history of syphilis. Three years ago had a pain accompanied by a severe cold in the right side near the nipple and in the right arm. This kept him in bed only a week. First saw the reader about twenty-one months ago, when he complained of cough and pain in the chest and arm, the cough was worse at night and when lying on the affected side, which brought on a choking sensation in the throat. He referred the pain to the junction of the third rib with its cartilage, and on placing the ear over the part a strong pulsation was felt which extended over a surface about as large as a silver dollar. With the stethoscope the sounds were those of a normal heart. No bruit was detected, but there was an absence of respiratory murmur about the pulsating point, and loud bronchial respiration over the upper part of the chest, back and front, with sibilant râles over the lower part. The position of the heart and its sounds were normal, but the heart seemed to strike the chest with abnormal force. Pulse 80. His voice was husky, but he said this was always so. There was no difference in the pulsation of the radial arteries.

About four months ago I examined him again. There was a slight bulging of the chest at the point where the pain was greatest, and the pulsation covered a larger area, but was not so strong as before. There was no bruit over the tumor. Heart sounds normal. The cough was very troublesome. He can lie only on the affected side, for when he turns on the other it brings on the choking feeling. There are signs of effusion in the right pleural cavity, and the face, eyelids, and right arm are much swollen. Urine normal.

Two months before his death the chest was aspirated, in consultation with Dr. Bowditch, and two quarts of clear serum were withdrawn, which gave great relief to the breathing. The swelling of the face and arm diminished rapidly, and almost disappeared. In about three weeks after the tapping the arm again became œdematous, also the face and neck, and the eyelids were so much swelled as to almost close the eyes. Three weeks before his death he expectorated some bloody mucus, and a week later coughed up some three ounces of frothy blood, and four days afterward some blood clots of a very dark color. For a week before death he took no nourishment, partly on account of the difficulty he had in swallowing.

The autopsy, by Dr. E. G. Cutler, showed the following condition: —

The body was extremely pale. Face and upper parts of body quite œdematous. On opening chest there was slight absorption of the cartilages and distal ends of the second, third, and fourth ribs, and of the intercostal muscles between them on the right side. The right pleura contained about two quarts of dark, loose, coagulated blood. The heart, not enlarged, was displaced somewhat towards the left. There was an aneurism of the anterior and right lateral portion of the ascending aorta, beginning half an inch above the aortic valves and ending an inch short of the innominate artery. In size it was about as large as the two fists. Rupture had occurred in the most dependent portion into the right pleural sac. A large laminated clot was found inside the aneurism about two inches in thickness. The wall of the aneurism gradually disappeared and merged into the surrounding tissues, principally the pleura and pericardium. The right lung was collapsed, and occupied a small area; its surface was covered with a few shreds of recent fibrine; the pleura was injected and thickened. The source of the hæmoptysis was not discovered. The other organs were not diseased.

Dr. Bowditch stated that when he examined the patient on May 8th he found the heart sounds normal; the respiration obscure over a large space in front, to the right of the sternum, and extending from the first to the fifth rib; on full inspiration a few sonorous râles were heard, but no bronchial respiration. In the centre of this space, over the third rib, flat percussion was found, but no bellows murmur there or over the heart. On the back the respiratory murmur was lessened over the entire right side; there was no area of dullness, but a less resonant sound on percussion. On taking a full breath a few sonorous râles were heard at the end of the inspiration. Just below the scapula, on the right side, was a slight prominence.

Dr. Blake said that after the removal of two quarts of fluid from the chest by aspiration the area of flatness extended from the base of the lung to the middle of the chest in front. On the second tapping the serum was tinged with blood.

ABNORMAL ELASTICITY OF SKIN.

Dr. Ingalls then showed a photograph of a man on exhibition in Boston with an abnormal elasticity of the skin. A fold of skin could be taken at the clavicle and raised to the level of the eyes, and when released at once returned to its usual smoothness and position. This had been so from birth, but may have been increased by practice.

ABDOMINAL ANEURISM.

Dr. Stevens briefly mentioned a case of a man of sixty-three years who had an indistinct pulsation below the ensiform cartilage. Last June he went to Swampscott, and while out rowing was suddenly taken with severe pain in the epigastrium. Some eight weeks later the swelling below the cartilage had tripled in size, but there was no more pulsation than would be expected from a tumor lying in contact with the aorta. A diagnosis of malignant disease of the pancreas was made. The patient died suddenly, and at the autopsy an abdominal aneurism, the size of a hen's egg, was found. There was also a new dissecting aneurism of double the size filled with a clot.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

MALFORMED FŒTUS.

Dr. Green exhibited a drawing of the fœtus, which he had seen in the summer, and gave the following account of the case: The woman, a prostitute, twenty-four years of age, primipara (or said to be so), sustained a severe fall when six weeks pregnant. When seven months pregnant she again fell — on the pavement. She continued her vocation until within five days of labor, which was normal in every respect, resulting in the fœtus, a drawing of which was shown to the Society. It was an example of Förster's monopod (the left leg was wanting), and peropod (as wanting part of the right leg), or, in sum, a pero-monopod. Förster intimates that these deformities are caused very early in pregnancy, from the second to the sixth week. Dr. Green suggested that the accident at the sixth week was perhaps the cause of the abnormity.

TWO CASES OF UTERINE POLYPUS.[1]

Dr. Minot reported the cases and exhibited the specimens.

Dr. Forster reported the case of an Irishwoman who presented a tumor between the labia. On the Sunday previous to the meeting Dr. Forster removed the mass, which was then external, and attached by a pedicle about five inches in length. Hæmorrhage had existed during four, and protrusion for the last two, months. The tumor in the vagina had acted as a valve, causing the blood to be forced past it. It was exhibited to the Society, was of a flattened oval shape, and measured originally about one and a half inches in its longest diameter.

Dr. Baker asked Dr. Minot if he used scissors or écraseur in the removal of fibroid polypi.

Dr. Minot replied that he always used scissors if possible, and he had never known hæmorrhage to follow; but when the tumor is very large it is sometimes very difficult, or even impossible, to reach the pedicle with scissors, and the écraseur is then very serviceable.

Dr. Baker said that he agreed entirely with Dr. Minot, notwithstanding the fact that the text-books lay so much stress upon the écraseur. The contractile power of the uterus excited by the traction of the polypus in drawing it down is such that hæmorrhage from it is very rare.

Dr. Elliot stated that he had recently had a case which brought up the question of the cause of hæmorrhage in these cases of uterine fibroid. It was well known that small fibroids contained very few large vessels, and yet they may give rise to terrible hæmorrhages. Looking up the literature he had found very little attention paid to the matter. In the cases mentioned the tumors were taken to Dr. Gannett, who found the investing mucous membrane much thickened, its vessels and glands enlarged, in fine, a condition of hyperplastic endometritis, which is a well-known cause of uterine hæmorrhage. In the case of a middle-aged woman who had been flowing for about fifteen years, at times, and who had had no children, Dr. Elliot found a loss of blood at each menstruation sufficient to saturate sixty or seventy napkins. The patient was seen in consultation with Dr. John Homans; the uterus was dilated, and a small polypus removed. But at the next catamenia the patient flowed about the same as before. After watching the case awhile Dr. Elliot determined to scrape out the uterus. This, after dilatation, was accordingly done, and a hyperplastic endometritis was relieved, so that, at the next menstruation, the flow was in normal amount. Dr. Elliot thought that the rupture of a blood vessel was very seldom the cause of these hæmorrhages, that the strangulation of the pedicle by uterine contractions causing a state of passive congestion in the tumor was not an infrequent cause, but that this hyperplastic condition of the mucous membrane of either the tumor or the uterus, or of both together, was by far the most common cause.

DERMOID CYST OF THE RIGHT OVARY.

Dr. Blake read the case. (Paper reserved for revision.) Specimens of hair and teeth from the cyst were exhibited to the Society.

Dr. Baker presented a specimen of hair not unlike in character and origin that just shown by Dr. Blake. The case was of a hospital patient four years ago, and was considered to be one of abscess. The aspirator needle carried up behind the uterus gave a fluid-like pus; a free incision opened the peritoneal cavity, into which the air entered with a good deal of noise. The fluid proved to be not pus, but fat, and upon this circumstance was founded the diagnosis of dermoid cyst. An incision about one inch long was made into the cyst, and its edges united with those of a corresponding incision in the posterior cul-de-sac. Injections were repeatedly made, at one time a mass of hair presented and was removed, later a mass of tissue containing teeth and bone, which was also taken away. Knowing the difficulty of destroying the interior of the cyst, Dr. Baker passed a Sims' speculum *into* it and applied the thermo-cautery to the whole surface. This was four years ago, and the patient has remained well since, with no appearance of any return of the cyst.

DIAGNOSIS AND PATHOLOGY OF DERMOID CYSTS.

Dr. Gannett, in response to a general request, stated that if hair is found the diagnosis is easy enough; it is difficult to get hair through the exploring needle, but fat comes, and this is diagnostic, particularly in the region of the ovary. Dr. Gannett showed two specimens of the fat.

As to the pathology, it was originally supposed, fifty years or more ago, that dermoid cysts represented the results of an ovarian pregnancy, and where such tumors were found post mortem in unmarried women serious aspersions were raised against the moral character of the individual. But as later similar tumors were found in young children before the age of puberty, and further, in the male testicle, it became obvious that some new theory of their origin was necessary.

In later years they have been thought to be congenital; that during fœtal life a portion of embryonic tissue remained in the ovary, and later developed into a dermoid cyst.

Recently Waldeyer has advanced the idea that as any ovarian epithelial cell may become an ovum, so any such cell may develop into one of these tumors.

Dr. Gannett mentioned the fact of the association of dermoid cysts with other tumors of the ovary, he having observed two cases of combination of sarcoma with dermoids, and three cases of dermoid cyst in connection with well-marked cystomata.

THE DELIVERY OF THE SECOND FŒTUS IN LABOR WITH TWINS.

Dr. Green read the paper.

Dr. Reynolds said that the statistics quoted in regard to varieties of twin presentations had interested him and had surprised him. The general results differed very materially from those with which he had hitherto been familiar.

Bearing in mind the shape of the pregnant uterus, and the alterations impressed upon it at the time of labor, it had always seemed to him instructive to note the very great predominance of the longitudinal attitude of the two children. It should be remembered that the folded breech forms the bulky end of the fœtus, that the hard and compact head does not need for its accommodation an equal amount of room. On the other hand the fundus of the uterus and the upper part of the body are proportionally more developed.

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[1] See page 58 of this number of the Journal.

In accordance with these facts that arrangement in which both children are placed longitudinally and both heads are in the lower half of the uterus is the more common; a longitudinal attitude with one head at the fundus and one low down comes next in order of frequency, and a similar attitude with both heads at the fundus is comparatively rare; the tendency toward a presentation of the head end of the offspring thus asserting itself in multiple pregnancy as it does in the single form, and as it does also with the multiple pregnancy of the lower animals.

The uterus which has lately undergone distention from twins must often resemble in its want of power, and in its flaccid condition, that of a multipara in whose case successive children have been forced with difficulty through a pelvis somewhat contracted. It may well be conceived that under these circumstances a trunk presentation of the second child may easily develop, as the writer of the present paper has so forcibly urged. Without very convincing testimony it is hard to believe that before labor either one of the living twins can hold a transverse attitude.

Four years ago Dr. Reynolds attended a third pregnancy, when a mother of slight and delicate frame gave birth to two large males. Both heads were at the fundus; over that which lay at the left angle such intense discomfort was felt for many days before birth that no change of position could be tolerated, the patient lying all the time on one side, "unable to move," and in pitiful distress.

In the light of some recent contributions to the study of the mechanism of labor the view which the paper takes, that the point at which the vertebral column of the fœtus meets the head is the main factor, or even the only agent, in bringing about flexion of the head or its extension, is perhaps somewhat too absolute.

DR. GREEN said that if the uterus were emptied too quickly there would be increased danger of post-partum hæmorrhage. He also considered the dorsal position as occasioning greater danger to the perinæum upon the descent of the fœtus.

DR. BLAKE said that he had considerable experience with cases of twin birth. He had seldom found the membranes of the second child ruptured, and it had been his custom to wait from ten to twenty minutes after the birth of the first child and then perform the rupture. He had never had any difficulty with cases of twins; never had had to turn the child. In natural labors he preferred the dorsal position of the mother.

DR. LYMAN asked Dr. Green if he thought there were greater danger of rupture of the perinæum with the patient lying on her back than when on her side. He thought the difference in results between Paris and London, where these different positions were in vogue, did not sustain any such view.

DR. GREEN replied that the weight of the head on the perinæum would be greater in the dorsal position.

DR. RICHARDSON asked if the weight of the head was any factor whatever in the cause of ruptured perinæum.

DR. GREEN said that he had accepted the statement of books, and had had regard to the custom in Germany. Rupture no doubt depended in great measure upon the condition of the perinæum.

DR. RICHARDSON stated that in the few cases of twins which he had looked up the great majority of bad cases were due to interference, and especially to attempts to hurry on the labor.

DR. GREEN explained that he did not advise interference but avoidance; during the period of uterine inactivity he would keep the hand on the uterus in order to maintain a correct position.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

DISCUSSION ON NERVOUS PROSTRATION.

DECEMBER 19, 1883. **DR. MILLS**, in opening the discussion on Dr. Bartholow's paper,[1] by request of the chair, said: I understand that Dr. Bartholow denies that a disease exists, primarily nervous in origin, which can be called neurasthenia. He classes all cases so called under two heads, congestive and anæmic, and holds that the symptoms presented are chiefly reflex effects of digestive or other visceral troubles. I have no doubt that many cases are to be thus explained, but we have others in which the cerebral condition is primary. In cases with the symptoms as detailed in the paper we may, perhaps, clearly ascribe them to the causes and conditions referred to by Dr. Bartholow, but other cases may be explained in a different manner.

In individuals whose higher ganglionic centres are so constituted, from bad inheritance or poor training, or both, that they cannot bear much strain, when subjected to this strain these centres exhaust. We have certain functions called organic functions, respiration, vaso-motor action, etc., with centres in medulla oblongata and spinal cord. These functions must be maintained as long as the individual exists. Their centres must be nourished and sustained in a uniform way. Presiding over automatic movements, they must be kept in the highest tone, must have good blood and plenty of it. It is a principle brought out in the paper that local diversion of blood to any one organ or part will take it from other organs or parts; and we may, in accordance with this, have the higher brain diverting blood from the lower, or lower brain from the higher. We have *nervous* symptoms, the result of this overstrain of nerve centres, and the disturbance of the equilibrium of the circulation, thereby brought about.

I am inclined to differ from Dr. Bartholow and agree with Dr. Beard as to the propriety of the term "American disease." The social and business exigencies in this country are different, are more taxing than in Europe. In England, for instance, men become mature and enter public life at later periods than here. In France the difference is not so great, but the more absolute division of society into grades and castes prevents too fierce a struggle for high position. Here every man has the chance to rise to the highest position, and men enter especially political life in youth. Americans are not trained for special lines of life work. They often attempt work too high for their mental powers and break down.

DR. TYSON: I have many times asked myself the question, "What is nervous prostration?" The answer was always, "It is not a nervous disease, certainly not an organic nervous disease, and probably not a functional one. It is rather a condition of muscular fatigue, and it may be nervous fatigue. Most of the cases are accompanied by digestive derangements, which are responsible for many of the symptoms, most of which are reflex." At the same time I admit that some of the symptoms are puzzling, and not easily explained. Among these is the pain in the back of the head, often referred to as the result of "nerve tire," and sometimes regarded as an important indication of cerebral disorder, which it is not. In women uterine derangement is often responsible for the complex symptoms known as nervous prostration.

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[1] See page 53 of this number of the JOURNAL.

The point, however, that attracted me in the paper read was allusion to the condition of the urine in one of the cases. It was described as dark-brown, of high specific gravity, containing a trace of sugar. I have seen such cases, and think it not unlikely that the apparent sugar reaction is really due to uric acid, which is often abundantly present in these urines of deranged digestion. If we get rid of the excess of uric acid by allowing it to precipitate spontaneously, or precipitate it by the addition of an acid, the sugar reaction with the copper tests does not take place. Other characters of the urine, particularly its dark color and scantiness, are not usual to sugar-containing urine.

DR. ESKRIDGE: The most important point in the subject is whether the condition called neurasthenia is primarily a nervous disorder or a disturbance in other parts of the body. I would have been better pleased if Dr. Mills had elaborated more thoroughly his statements as to the organic functions. He said these functions must be well nourished, and that failure in them is due to failure in the upper nervous system. I would have liked if he had gone further in his explanation. Is this failure due to disturbance in the brain and upper portion of spinal cord primarily, or to failure in other parts of the body? Those who have paid attention to this subject say that break-down does not occur unconnected with either worry or vice. I have never seen a case from mental overwork alone. In five cases of neurasthenia of which I have notes one was from sexual excess; two from worry connected with family troubles; another from alcoholic excess with sexual vices; and the fifth from sunstroke followed by oversexual indulgences. In the last case it seemed as if the brain was primarily at fault. It appears to me that nervous prostration, so called, is a depressed condition of the whole system, the trouble manifesting itself as a general nervous condition secondarily after organs other than the brain have been primarily affected. The therapeutics also favor this view because the cases are benefited not by agents addressed to the nervous system alone, but by hygienic and tonic measures.

DR. GLASGOW: I have come to regard these cases as not nervous in origin, but as largely due to digestive troubles. They are cured by attention to the disordered functions. I have known a short residence in Atlantic City, without any medical treatment, to suffice for a cure.

DR. BARTHOLOW, in closing the discussion, said: The great question is, Is neurasthenia functional or does it arise from organic change in the nervous system? I maintain that it is largely reflex and frequently from gastric disturbance. Neurasthenia in women is associated with an anæmic condition and ovarian and uterine disorders. They are pale and weak, and if they are subjected to any moral or mental trouble give way, but if they are well nourished sustain any kind of shocks without suffering in health.

In regard to the term "American disease," and to the claim that the peculiar conditions of American life are causative of neurasthenia, it will suffice to say that in some of the European states a higher grade of education is maintained than in this country. In Prussia, for instance, every one is taught to read; education is more general than in Massachusetts. The struggle to maintain existence, and hence the demands on the brain, are severer than here, and although neurasthenia is said to be uncommon there are diseases similar to that called nervous exhaustion in this country arising from similar causes.

Worry has been mentioned as a cause of nervous exhaustion. Now worry hurts a man just in proportion to his condition. If he is in good health or phlegmatic in temperament the worry may be well borne, but if he is out of health worry will have a powerful effect on the nervous system. I do not deny that various causes may produce brain disease, but I deny that the so-called neurasthenia is due to an organic lesion of the nervous system. I maintain that it is part of a morbid complexus, a reflex condition, in large part, of maladies situated in the stomach, the liver, the uterus, or other organs.

Recent Literature.

The Dissector's Manual. By G. W. BRUCE-CLARKE, F. R. C. S., and CHARLES BARRETT LOCKWOOD, F. R. C. S. Philadelphia: Henry C. Lea's Son & Co. 1883.

This is a very excellent manual for the use of the student who desires to learn anatomy. It has the merit of not being in the least a compendium. It does not, for instance, give the origins and insertions of muscles, but it states what is to be found in each region, and tells how to find it. The authors insist that dissecting a part is not learning it, but that the student should go over the structures that he has exposed, comparing them with the accounts in the text-books of descriptive anatomy. The methods of demonstration seem to us very satisfactory, and we are especially glad that much attention is given to the dissection and study of the viscera. There are many wood-cuts, which for the most part are good and instructive, but we must say that the diagrams of the front and back of the body that make the frontispiece are extremely distorted and inaccurate. There is a very interesting chapter at the end on "dissecting questions," which form a part of some of the examinations in England. The student is asked to tell how any particular structure may be exposed, enumerating the parts that are exposed or divided in reaching it. The book, which is of the same series as Mr. Treves's Applied Anatomy, is neat and convenient. We are glad to recommend it.

T. D.

— "Boss, hab you gat any dem confound cunfortic pills?" "Yes. Do you want them plain or coated?" "Dunno. I want dem ones dat's whitewashed." He got 'em. — *Texas Siftings.*

Medical and Surgical Journal.

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STATE PROSECUTIONS FOR ADULTERATED DRUGS.

The daily papers of this city recently published in full the correspondence between the Boston Druggists' Association and the Health Committee of the State Board charged with executing the law against adulteration of drugs, a correspondence referred to in an editorial article of our issue of December 13th last. We believe the following statements bearing on this correspondence are correct, and should be kept in mind should any attempt be made to induce the present legislature of Massachusetts to repeal or render inoperative a law, more necessary than we had previously supposed, for the protection of the public at large and of the medical profession in the discharge of its duties to the public.

In each of the six prosecutions for adulterated drugs which have been made by the Massachusetts Board of Health, Lunacy, and Charity the adulteration has been proved.

In each case the drug was shown to be more than thirty per cent. below the pharmacopœial standard, about one fourth, one half, or two thirds being the most common proportions.

In no case was prosecution made until after a second violation of the law had been detected, and in all cases but one in the same drug. In that one case, however, there had been two violations in regard to another drug. The drugs were in every instance prepared by the firm proceeded against, and were sold either by a member of the firm or else in his immediate presence, and with his knowledge and consent.

In cases of adulterated drugs not prepared by the vendors, warning notices thereof, and not prosecutions, have followed the first detected violations of the statute.

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ANNUAL REPORTS OF THE PRESIDENT AND TREASURER OF HARVARD UNIVERSITY, 1882–1883.

The portion of these annual reports which particularly concerns the medical profession is that devoted to the Medical School and contributed by its dean. The completion of the new building, at a total expense of $321,415, of which possession was finally taken in October, has been previously noticed at length in our columns.

The whole number of students in attendance during the year was 240; during the first term 234; during the second term 219. Of these 116 had a literary or scientific degree. There were eighty-five applicants for the degree of Doctor of Medicine, of whom nine were rejected. Seventy received the degree of M. D. after a three years' course of study; six received the degree of M. D. after a four years' course; of these six, four received in addition the degree of A. M., two of these *cum laude*. The Fourth Class was composed of ten students, four of whom postponed graduation in order to become candidates for hospital appointments.

The results of the examinations for admission to the School are given in the following table: —

			Physics.	Latin.	English.	Elective.	Rejected.
1883.	June.	Offered.	25	25	25	25	3
		Conditioned.	8	8	5	3	
	Sept.	Offered.	18	18	18	18	1
		Conditioned.	2	9	4	2	

An elaborate table on page 99 of the report, whose length forbids reproduction, gives statistics of rejection at examinations in the different subjects studied by each class during the last four years. Those curious in the matter are referred to the original.

The following table, as last year, is given by the dean to show the increasing recognition of the value of the opportunities offered by the School for obtaining a medical education: —

NUMBER OF TERMS SPENT AT THE SCHOOL BY GRADUATES.

	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
Spent six terms.	22	14 47%	25. 69%	40 65%	41 85%	62 88%	39 86%	49 81%	79 91%	67 88%
Spent five terms.	2	7	5 1%	9	4	2 2%	1 2%	6 10%	2 2%	4 5%
Spent four terms.	6	6	4 11%	8	3	3 4%	4 8%	4 6%	4 4%	4 5%
Spent three terms.	5	0	2 5%	1	0	2 2%	0	1 1%	0	1 1%
Spent two terms.	3	3 10%	0	3	0	1 1%	1 2%	0	1 1%	0
Total graduated.	38	30	36	61	48	70	45	60	86	76

In the Dental School the number of students was twenty-six.

The School of Veterinary Medicine submits its first annual report. At the examinations held in June and September eleven candidates presented themselves for admission, of whom two were rejected. With the new Veterinary Hospital on Village Street and the accommodations offered at the Bussey Farm advantages for the study of comparative anatomy, physiology, and pathology will be gradually developed.

In the main body of the report the President insists upon the views previously expressed by the Faculty of the college in regard to intercollegiate contests in athletic sports, namely, that they demand further regulation by agreement between the colleges whose students take part in them, and that this can be done without discouraging the promotion of physical exercise and manly sports among college students. The department of hygiene and physical training is reported as being in general in good condition, and the Hemenway Gymnasium as being each year more and more patronized.

The department of the university which seems to cause its President the least satisfaction is the Board of Overseers, which he finds altogether too venerable and conservative, the average age of the elected members being, he calculates, fifty-seven years.

Although having but a possibly indirect relation to medical education, we cannot forbear quoting in full the closing sentences of his report where expression is given to the President's dissatisfaction with this venerable Board: "When the Act of 1865 gave to the alumni the power of electing the overseers it was imagined the electors, the larger part of whom would be young men, might choose a youthful or inexperienced Board. The actual result has been quite the reverse. Only one of the present Board is under forty, only ten of the thirty elected members are under fifty, and the average age of the elected members is fifty-seven. No member of the Board graduated in arts later than 1866, and on an average the Board may be said to have graduated more than thirty-five years ago, at a time when the university was very unlike the institution of to-day. Such elderly men may be distinguished representatives of the alumni, and may, perhaps, be in a position to enjoy the advantage of advice from sons or grandsons now or recently members of the university, but their personal recollections of college life are less serviceable to them as university legislators than the recollections of much younger men would be."

One of the most important objects in all schemes of representative government — the independence of the legislative from the executive departments — has been accomplished with the existing Board of Overseers. Whether the interests of the university would be better served by younger or more pliant overseers is for each elector to decide for himself.

— A woman was fined forty-eight francs in one of the departments, says the French correspondent of the *Medical Press*, for having performed the Cæsarean operation on a woman who died suddenly in the first stage of labor. The operation was performed at the instigation of the priest, who wanted to baptize the child. The instrument used was a razor, and there appeared to have been no attempt made to preserve the child alive, as, after baptism, it was replaced. The incident created some scandal in the country.

QUARANTINE AND HEALTH, CHARITY AND LUNACY IN THE CITY AND STATE OF NEW YORK.

In his last annual message the Governor of New York gives the following statistics in regard to the insane in that State: —

State Lunatic Asylum at Utica .	600 patients.
Hudson River State Hospital . .	306 patients.
State Homœopathic Asylum . .	260 patients.
Buffalo State Asylum . . .	329 patients.
Willard Asylum (chronic insane) .	1740 patients.
Binghamton Asylum (chronic insane)	412 patients.
County poor-houses and asylums .	1867 patients.
City almshouses and asylums . .	5010 patients.
In private asylums	493 patients.
Asylum for Insane Criminals . .	144 patients.
Asylum for Insane Emigrants . .	109 patients.
Total	11,270 patients.

Of this number 5015 are males, and 6255 females, and the total number given is 827 in excess of the number of insane reported for the previous year. We should like to have had the proportion of foreign and native born among these insane.

The following quotations are from the portions of the Governor's message referring to very important questions touching the quarantine and Health Officer of the port of New York: "In July, 1881, the Senate appointed a committee to investigate and ascertain the emoluments, and to examine into the administration, of the Health Officer, with a view of making the Quarantine Department self-sustaining, and framing such laws as may be of public interest. In concluding their report the committee state that they 'cannot refrain from expressing the opinion that the revenues of the Health Officer of the port of New York are out of all proportion to the professional skill and labor required to properly fill the office. Exceeding, as they do, the salary of any of the State officers, the Governor included, they constitute an anomaly in the administration of the Commonwealth which is uncalled for, inexcusable, and ought not to be permitted to continue.' Another fact appears in the evidence taken by the committee which is not referred to in their report. The present incumbent of the Health Office testified that in the year 1880 he paid between $9000 and $10,000 as a voluntary contribution to the party of which he was a member for political purposes. . . . In my judgment the Health Officer should be attached to the quarantine establishment, and be paid a fair salary, which, as well as the salaries of the other parties in charge of the department, and the cost of maintaining the buildings and property of the State used in connection therewith, should be met by fees and charges collected for services performed, which fees and charges should be fixed at no higher rate than is necessary to meet such expenses. The inauguration of such a system, it is believed, would insure an efficient administration in this important department, relieve the tax-payers of the State from present burdens, and subserve the interests of the commerce of the port."

In connection with the quarantine administration of the port the administration of the Health Department of the city of New York naturally invites attention. In the former a reorganization is suggested, in the latter it has been effected.

The estimate for the expenses of the Board of Health of the City of New York for the year 1884 was $540,799, but the appropriation was reduced to $402,775 by the Board of Estimate and Apportionment. The service of the Board was reorganized on the 1st of January, and hereafter the Sanitary Bureau will consist of seven divisions. The first will include one chief inspector and ten assistant inspectors, and during the summer months fifty additional assistant inspectors are to be added. To the second division will be referred all matters relating to adulterations of food and drink, and to offensive trades, and it will consist of one chief inspector, two special inspectors for offensive trades, and for tea, coffee, etc., one chemist, four milk inspectors, and six fruit inspectors (for three months each). The third division, which will have charge of complaints about sidewalks, etc., and the enforcement of ordinances, will include thirty sanitary policemen. And the fourth division will consist of the inspectors of vaccination and disinfection and their assistants. The fifth division will be in charge of the hospitals and the steamboat of the department. In the sixth division there will be one chief inspector, ten inspectors, and three clerks. And the Bureau of Vital Statistics, having charge of the records of births, deaths, and marriages, and of the granting of burial permits, is to constitute the seventh division. The whole will be under the charge of a sanitary superintendent, who will also perform the duties of register of records, and an assistant sanitary superintendent, who will also be chief medical officer in charge of the fifth division. The Board of Estimate and Apportionment reduced the appropriation for the Department of Charities and Correction from $2,149,627.60, the amount asked for, to $1,774,105.10.

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MEDICAL NOTES.

— We have just announced that the publication of the *Archives of Medicine* was to be suspended. We take pleasure in announcing that the publication, instead of being suspended as was at first announced, will be continued on the same general plan as that followed during the past six years.

— The new year has brought to us *The Æsculapian*, a new monthly journal of medicine and surgery, edited by Edward J. Bermingham, M. D., and published by Bermingham & Co., New York.

— An English physician states that he has known one of his prescriptions to be made up without his order to his patient more than three hundred times. He was paid for only one prescription.

— The *Waltham Backwoodsman*, a paper published to advocate the retention of the town form of government in Waltham, announces in its prospectus that "it will copy after its esteemed contemporaries in everything except blowing for a city government and publishing Warner's Safe Kidney Cure, Bull's Cough Syrup, and Lydia Pinkham's portrait;" in which matter it sets an example to certain so-called religious papers.

— The effectual separation of Milk and Water Streets by the Old South Church is supposed by certain antiquarians to be typical of the sentiments of the early inhabitants of Boston in regard to the mixture of two important articles of domestic consumption. The facts revealed by the milk analyst of the Massachusetts Health Board seem to show that the meandering of Spring Lane between the two streets left open the way for complications, as out of every ten specimens of milk examined nine showed an improper aqueous admixture.

— During the year 1883 there were reported to the Boston police 333 cases of runaway children, 89 of lost children, 251 of persons missing, and 23 of persons found dead. There have been reported to the department during the year 423 cases of sudden deaths, as follows: Murders, 5; suicides, 31; fatal accidents, 123; found drowned, 50; found dead, 27; burned to death, 7; other causes, 180.

NEW YORK.

— In his annual message Mayor Low, of Brooklyn, says, in regard to the water supply of that city, that there is literally no margin above its needs at present, and recommends the immediate enlargement of the distributing reservoir at Ridgewood to double its present size. In his opinion steps ought to be taken to secure an increase of 20,000,000 gallons daily, and eventually a supply of at least 100,000,000 gallons daily. The cost of this work, which would be distributed over several years, is estimated at about $4,500,000. He also recommends the appropriation of $1,500,000 or $2,000,000 to remedy the existing defects of the sewage system of the city.

— On the 9th of January a conference was held at the rooms of the Brooklyn Board of Health for the purpose of discussing the question of the prevention of contagious pleuro-pneumonia in cattle, at which representatives of the New York, Brooklyn, and State Boards of Health and of the United States Treasury Cattle Commission as well as a number of physicians from different parts of the State were present. The chairman, Dr. Raymond, Health Commissioner of Brooklyn, read a paper by Dr. McLean advocating inoculation, and a free discussion followed. At the conclusion of the debate Professor Law, of the Cattle Commission, presented a set of resolutions to the effect that Congress should be petitioned to appropriate a sufficient amount of money to stamp out contagious pleuro-pneumonia by providing for the appointment of a number of veterinaries to inspect all herds in infected districts, to indemnify owners for all cattle slaughtered by the government, and to forbid the movement of all cattle out of any infected State which will not take measures to stamp out the disease. The resolutions were adopted, and a committee was appointed to present them at a conference to be held on the same subject on the following day in Washington.

— Mr. Charles Lanier, treasurer of the Hospital Saturday and Sunday Association, announces that up to January 9th the contributions, so far as reported, amounted to $22,532.85.

— The will of Mr. Julius Hallgarten, a wealthy New York banker, who died recently in Switzerland, provides for a large number of charitable requests, among which are $50,000 each to the University of the City of New York and Dartmouth College, and $10,000 to Mount Sinai Hospital, New York.

— A committee composed of some of the leading physicians of New York, Boston, Philadelphia, Chicago, and other cities, of which Dr. Fordyce Barker is chairman, and Dr. George F. Shrady, editor of the *Medical Record*, secretary, have issued an appeal for contributions towards the erection of a monument in honor of the late Dr. J. Marion Sims.

— At a meeting of the Medico-Legal Society held January 9th the recently elected officers were installed. In his inaugural address the President, Mr. Clark Bell, stated that during the past year the membership had been increased from 267 to 314, of which number 147 were physicians and 154 lawyers. The draft of a bill was submitted which provides for the appointment of medical examiners throughout the State whose duty it shall be to pass upon the mental condition of persons before the courts in regard to whose sanity there is any question. A special committee was instructed to secure the passage of the bill by the Legislature if possible.

— At a meeting of the Society of Medical Jurisprudence and State Medicine held January 10th Dr. E. C. Spitzka read a paper on the Execution of an Insane Murderer. The murderer referred to was Graves, recently executed at Newark, N. J., in whose behalf the Governor and Court of Pardons refused to interfere. He said it was the most melancholy case of an insane criminal that had ever come to his knowledge, seven medical experts having pronounced Graves insane, and the post-mortem examination having fully substantiated their opinions.

PHILADELPHIA.

— The annual meeting of the Philadelphia County Medical Society for the election of officers and new members was held January 2d, when the following officers were elected for the ensuing year: William M. Welch, President (second term); William S. Forbes and S. R. Knight, Vice-Presidents; Henry Leffmann, Recording and Reporting Secretary; M. S. French, Corresponding Secretary; L. K. Baldwin, Treasurer; C. M. Seltzer, Librarian; H. St. Clair Ash, Censor. At this meeting there were among the candidates to be balloted for the names of two prominent women physicians connected with the Women's Medical College in this city. They failed to get the required two-thirds vote.

— A very full meeting of the College of Physicians was held January 3d, to listen to the address of the retiring President, Prof. Alfred Stillé, who devoted his time principally to a historical sketch of the development and growth of the library, which now contains over 26,000 volumes. Papers were read at the same meeting by Dr. Harrison Allen, on the Chronic Nasal Catarrh of Children, by Dr. Horatio C. Wood, on the Clinical Aspects of Brain Syphilis, and by Dr. J. Cheston Morris, on an interesting case with specimens.

The college is now in a prosperous condition, and every department shows new and increased interest and activity. A fund has been started for enlarging the building by adding another floor, one of the Fellows contributing a thousand dollars to this object, and has promised further assistance if needed.

The Nurse Registry Bureau had a successful year, and has contributed a considerable amount to the uses of the library. It is becoming each year better known and more generally used, until it is now considered a necessity.

— At the Conversational meeting of November 9th of the County Medical Society, Dr. John Ashhurst, Jr., presented a communication on the Treatment of Chancroid and Syphilis; discussion upon this paper being opened by Dr. J. William White. A large attendance of the members was had, and a general discussion held; full of interest, but, as might be inferred from the subject, containing little that was new.

— The Alumni Association of the Jefferson Medical College will give a reception to Prof. Theophilus Parvin on the 28th of January at the St. George Hotel, in this city. A large attendance is expected, and the reception will undoubtedly constitute one of the medical events of the winter.

— At the Pennsylvania Hospital Dr. J. M. Da Costa is using hypodermic injections of iron for anæmia, in a case of combined malarial toxæmia and lardaceous disease of the viscera, including the intestinal glands. To the other solutions for this purpose he prefers a double salt produced by the addition of pyrophosphate of iron to a solution of citrate of sodium. Two grains of the salt, in this form, are given every day, varying the points of puncture, but generally administering it under the skin of the extremities; in this form no abscesses have been observed. With other solutions of iron, including dialysed iron, abscesses were quite common even with every precaution as to the cleanliness of the syringe. In a case last winter of idiopathic anæmia (pernicious?) these injections not only arrested the patient in a downward course, but actually worked such a change that his strength and appetite returned and he was afterwards discharged in good health. This case is not called pernicious anæmia because the patient did not die; but if an opinion could be based upon the previous course of the disease, and his chlorotic condition at the time of the change in his treatment, no other diagnosis and no other prognosis would have been entertained than that mentioned by any ordinary observer.

— The leading druggists of this city becoming disgusted with the patent medicine traffic have decided after the 1st inst., not to deal in those proprietary medicines which are sold as merchandise to non-medical dealers. It is now, and has been for some time, indeed, considered very bad "tone" for a scientific pharmacist to exhibit patent medicines in show cases, or have their lying placards hung up in the store; much less would one of our principal apothecaries think of assuming the responsibility of recommending articles of whose composition he is ignorant. The druggists all over the country are alive to this evil, which has grown to such proportions as to seriously threaten the future of legitimate pharmacy. Fortunately the public has acquired a healthy skepticism with regard to advertisements of panaceas, even when they appear in religious papers, and endorsed by clergymen and members of Congress. How soon will this country attain to the degree of civilization of Japan, and appoint a government commission to examine all patent medicines that are offered for sale, and publish the formula upon each package sold. We do it with guano, why not with cough syrups?

— The recent annual report of the Library Committee of the College of Physicians showed that there have been added to the library this year 2186 volumes, 2107 pamphlets, 2862 numbers of journals.

The total number of volumes now in the library is 26,359. For the ensuing year the library will be kept open, except on Sundays and legal holidays, from ten o'clock A. M. to five P. M.

There are in the collection 3381 duplicates, and particular attention was called to this fact, inasmuch as it affords a rare opportunity to other libraries of augmenting their list at comparatively small expense.

The report of the Committee on the Directory for Nurses showed that the

Number of nurses registered December 1, 1882			209
Added during the year		104	
Lost by striking from roll	6		
Lost by withdrawal	4	10	
Net gain			94
Present number			303

Total number of nurses furnished during the year 733; an average per month of 61, as against 49 for last year.

Largest number (February)	84
Smallest number (August)	34
Sent outside of the city, but within the State	63
Sent to other States	59
Wet nurses furnished	17
Of registered nurses, there are males	39
Of registered nurses, there are females	264
Graduates of training schools	60
Non-graduates	243

The amount given to the library during the last year was $200, and for the present year $300. Many physicians take great trouble and waste much valuable time in hunting up nurses personally; or, having obtained a good nurse through the Directory, they transfer her from one patient to another directly, instead of through the Directory. Were they to use the Directory they would obtain the *same* nurses and add to the income of the Directory, and so to the appropriation to the library.

It is the desire of the committee to make the Directory also a bureau for all needed information for the sick; and they have in contemplation measures by which if any one desires to obtain boarding in the country or at the sea-side for cases of whooping-cough, or for recent cases of measles, scarlet fever, or dipththeria, and for information concerning all appliances for the sick, such as invalid chairs, wheel and other crutches, bed-rests, fracture, water, or air beds, etc., he may obtain the object he seeks at the Directory.

Correspondence.

"SEA-WATER" (?) AND SALT IN THE STREETS.

Mr. Editor, — Will you permit me to ask "Nesciens" when and where any Board of Health or any individual ever protested, or had the chance to protest, against watering the streets with "*sea* water"? Will "Nesciens" also tell us whether he can imagine any harm in carting back upon and evaporating from the surface of the streets the *sewage* which has at great expense been carried off beneath those very streets?

Will he further tell us whether, should the streets at any time become dry after the dust became thoroughly saline from pure sea-water, such saline particles would, more than ordinary dust, produce agreeable sensations and healthful results when applied to the mucous membranes of eyes, nose, and air passages by the unrelenting zephyrs?

Will he also tell us in what city it is that horses' feet "do not ordinarily come near the rails"? I had supposed that in the vicinity of the rails was just where horses' feet do come, especially of the pair of horses which precede between the rails each horse car that runs upon the rails, and that the mingling of salt and ice produced an intensely cold and corrosive mixture, which not only must be directly injurious and uncomfortable to the feet of the horses, but must produce a temporary shrinkage of the shoes and a permanent rusting of the nails that could not be advantageous.

Quærens.

Cambridge, *January* 12, 1884.

SEA-WATER FOR STREETS; SALT ON STREET RAILWAYS.

Boston, *January* 13, 1884.

Mr. Editor, — Permit me to answer the questions in your last issue of the Journal by "Nesciens" on Sea-Water for Streets, Salt on Street Railways. He asks four different questions concerning things which he seems to think are naturally innocent, wonders that boards of health denounce them, and that the courts are besieged to put a stop to such proceedings.

First and *second.* "What is there injurious to health in watering streets with sea-water or putting salt on street railway tracks?"

Third. After admitting the great cold produced upon the horses' feet by the mixture of salt and snow, and the irritation to their "sore or tender hoofs," he asks, "What has it to do with the public health?"

Fourth. "How can the public health be injured by watering the streets with sea-water in summer (repetition of question two) or by running off into drains and cesspools in winter of salted ice-water slightly ferrated?" etc.

Although in a position to hear such complaints if they were made, I have never before heard that any one objected to the watering of streets in summer with *clean* sea-water or of running off the abominable salted slush from the streets in winter. Boards of health and others who have considered the matter prefer the salt water for streets in summer on account of being cheaper than fresh water, doing better service, and being a good antiseptic.

I don't know that any one claims any immediate connection between the sufferings of our dumb animals who draw us over the streets with sore and tender feet and the public health. I hope the allusion to the poor horse by Nesciens was not meant to be as *cold*-hearted as it seems.

The real question here is the salting of railroad tracks and its connection with the public health.

Whenever the railroad tracks are salted nearly the whole street becomes affected through the use of the snow plow at the intersection of streets and large crossings. Where the most travel is found the most salt is used, and the worst condition of things exists. The salt and snow or ice make a freezing-mixture in which no one can long stand or walk with ordinary protection without loss of comfort and danger to his health. It clings to the feet and cannot be avoided when leaving a car or crossing a street. When the temperature rises and thawing begins the streets are turned into ponds of salted slush too quickly to be cared for, and people have to go with wet and cold feet through the streets on account of salted car tracks. Do I need to add that cold and wet feet caused by the salt and snow mixture are prejudicial to the health and comfort of our citizens, or that most people will see the want of similarity between a "dip into the ocean itself for health's sake," followed by the well cared-for reaction, and walking about the streets with cold feet in a freezing-mixture of salt and snow?

I am compelled to take issue with "Nesciens" as to the innocence of salted snow in our streets, and claim that the health and comfort of our citizens are disturbed by it, and that our Boards of Health are looked to for protection against this evil by thousands of persons who have denounced it.

The courts have not been "besieged to stop such proceedings," but have been properly applied to when necessary in the enforcement of the health order. The "Boards of Health" have not found it difficult to furnish the necessary evidence to convict the violators of the salt order, and anticipate none in the future.

S. H. D.

Miscellany.

OBITUARIES. DR. THOMAS W. PERRY. DR. GEORGE C. LAWRENCE.

DR. THOMAS W. PERRY, a member of the Rhode Island Medical Society, and for many years a practitioner in Providence, died suddenly in this city, on the 5th instant, in the office of Dr. Bowditch, of heart disease. He was born in Hopkinton, R. I., was the son of a physician, with whom he began his medical studies, afterwards continuing them in the office of Dr. Bowen, of Connecticut, and in a school in New York. He entered practice at Wilkinsonville, now Putnam, Conn., but afterward removed to Central Falls, R. I., and subsequently to Providence, where he has had an extensive and successful practice. Dr. Perry faithfully served the country for nine months during the rebellion as surgeon of the Eleventh Regiment Rhode Island Volunteers. He was sixty years of age.

GEORGE CARLISLE LAWRENCE, M. D., a member oft he Massachusetts Medical Society, and one of the oldest and most prominent physicians of Berkshire County, died suddenly on the evening of the 6th inst., at North Adams, of typhoid fever, after an illness of a few days.

JOINT STANDING COMMITTEE ON PUBLIC HEALTH OF MASSACHUSETTS LEGISLATURE.

THE following are the names and occupations of the members of the Joint Standing Committee on Public Health of the Massachusetts Legislature: Messrs. Burden of Bristol, physician (Massachusetts Medical Society); Hodges, of Norfolk, banker, and Campbell, of Suffolk, coal-dealer, on the part of the Senate; Messrs. Bowker, of Boston, manufacturing chemist; Stowe, of Fall River, physician; Hastings, of Warren, physician (Massachusetts Medical Society); Murdock, of Leicester, manufacturer (but at one time a student of medicine); Burditt, of Clinton, apothecary; Hazen, of Shirley, farmer; Cutler, of Brimfield, life-insurance agent, and Peakes, of Georgetown, leather business, on the part of the House.

THE BEQUEST OF THE LATE DR. CALVIN ELLIS.

UNDER the will of the late Dr. Calvin Ellis we understand that Harvard University becomes residuary legatee of his property, which is quite considerable, under certain contingencies. The income is to be devoted to the support of scholarships and the payment of professors' salaries in the Medical School.

HYSTERICAL PSEUDO-PHTHISIS.

THE *Practitioner* (December, 1883) reproduces from *Centralblatt für Gynäcologie* (September 8th) an article by Dr. Fabre describing a condition simulating phthisis often found in young women suffering from chlorosis and hysteria. There is a cough, with expectoration, and even spitting of blood. Physical examination reveals dullness at the apex (usually on the right side), feeble respiration, and occasional râles. The author regards these symptoms as due to a vaso-motor disturbance exciting a pulmonary congestion. Other organs may also be subject to functional disturbances. Obstinate anorexia, gastric pain, occasionally diarrhœa, but more frequently constipation, are not seldom present. The pulse is weak and frequent, like that of fever, although the temperature may be normal. Sometimes, however, there is elevated temperature, but it is only transitory, and regular evening exacerbations are never observed. The expectoration is not purulent, but may be mixed with blood. While in true phthisis there is emaciation, in these cases the patients often increase in weight. Sweating, as a rule, is not met with.

The differential diagnosis is often difficult, and the author relates that cases have not infrequently occurred in which a diagnosis of pulmonary consumption was made, but the patient nevertheless recovered. The condition may exist without material improvement for months, or even years.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 5, 1884.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	576	199	14.62	16.70	1.22	5.57	1.39
Philadelphia	846,984	427	142	20.83	11.47	3.98	11.23	3.04
Brooklyn	566,689	257	103	16.38	13.65	—	6.63	1.95
Chicago	503,304	186	89	29.05	6.46	2.15	13.37	1.18
Boston	362,535	177	48	15.68	10.64	2.80	3.36	4.44
St. Louis	350,522	162	72	27.30	12.35	—	15.50	6.52
Baltimore	332,190	154	77	24.05	14.30	—	8.45	3.25
Cincinnati	255,708	103	26	10.67	18.43	4.85	2.91	.97
New Orleans	216,140	157	33	13.44	16.00	3.20	3.84	—
District of Columbia	177,638	115	46	17.30	19.55	1.70	.84	1.70
Pittsburg (1883)	175,000	66	26	18.24	9.12	7.60	9.12	—
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	59	29	15.21	10.14	1.69	3.38	—
Providence (1883)	116,755	47	12	17.04	19.17	4.36	6.49	—
New Haven (1883)	73,000	7	0	—	14.29	—	—	—
Charleston	49,999	30	11	13.33	3.33	3.33	6.66	—
Nashville	43,461	14	5	14.28	7.14	7.14	—	—
Lowell	59,485	33	12	21.21	12.12	6.06	6.06	3.03
Worcester	58,295	20	9	20.00	5.00	—	10.00	10.00
Cambridge	52,740	9	0	22.22	55.55	11.11	11.11	—
Fall River	49,006	25	12	12.00	16 00	—	4.00	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	2	0	—	—	—	—	—
Springfield	33,340	11	1	18.18	—	—	9.09	—
Salem	27,598	14	7	21.42	—	—	7.14	7.14
New Bedford	26,875	13	3	7.69	15.38	—	—	—
Somerville	24,985	7	2	14.28	14.28	—	—	—
Holyoke	21,851	8	5	25.00	25.00	—	25.00	—
Chelsea	21,785	8	2	—	25.00	—	—	—
Taunton	21,213	4	1	—	25.00	—	—	—
Gloucester	19,329	3	0	33.33	33.33	—	33.33	—
Haverhill	18,475	—	—	—	—	—	—	—
Newton	16,995	7	1	—	28.56	—	—	—
Brockton	13,608	1	0	—	—	—	—	—
Newburyport	13,537	4	2	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	4	3	75.00	—	—	75.00	—
Sixty-three Massachusetts towns	251,386	83	11	7.60	20.40	2.40	2.40	1.20

Deaths reported 2783 (no report from Buffalo): under five years of age, 989: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 496, lung diseases 547, consumption 388, diphtheria and croup 200, scarlet fever 67, typhoid fever 55, diarrhœal diseases 46, measles 44, erysipelas 19, malarial fever 19, whooping-cough 16, cerebro-spinal meningitis 13, puerperal fever 12, small-pox four, typhus fever one. From *diarrhœal diseases*, New York 12, New Orleans 10, Brooklyn and Baltimore four each, Boston five, Philadelphia and Chicago three each, Cincinnati, Providence, Nashville, New Bedford, and Shrewsbury one each. From *measles*, Baltimore 13, New York 11, District of Columbia 10, Brooklyn six, Philadelphia two, Milwaukee and Providence one each. From *erysipelas*, Chicago five, New York and Brooklyn three each, Philadelphia and Boston two each, New Orleans, Charleston, Springfield, and Ashland one each. From *malarial fevers*, New Orleans five, New York four, Chicago three, Brooklyn, St. Louis, and Baltimore two each, Philadelphia one. From *whooping-cough*, New York five, Brooklyn three, St. Louis and District of Columbia two each, Philadelphia, Chicago, Pittsburg, Salem, and Ashland one each. From *cerebro-spinal meningitis*, Chicago three, New York, Lowell, and Fall River two each, Philadelphia, Salem, Somerville, and Dedham one each. From *puerperal fever*, Chicogo three, Brooklyn, Boston, and St. Louis two each, Cincinnati, District of Columbia, and Providence one each. From *small-pox*, St. Louis two, Philadelphia and New Orleans one each. From *typhus fever*, Chicago one.

Six cases of small-pox were reported in St. Louis, Nashville one; scarlet fever 55, diphtheria 26, and typhoid fever eight in Boston; scarlet fever 29, and diphtheria nine in Milwaukee.

In the 83 cities and towns of Massachusetts, with an estimated population of 1,218,000 (estimated population of the State 1,922,530), the total death-rate for the week was 18.00 against 21.05 and 18.60 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending December 22d, the death-rate was 21.9. Deaths reported 3624: acute diseases of the respiratory organs (London) 391, scarlet fever 129, measles 126, whooping-cough 77, fever 73, diphtheria 30, diarrhœa 30, small-pox (Birmingham four, London and Sunderland two each) eight. The death-rates ranged from 15.0 in Bolton to 29.0 in Halifax; Bradford 16.6; Nottingham 17.3; Sunderland 21.1; London 21.2; Leeds 21.9; Birmingham 22.9; Sheffield 23.1; Liverpool 24.2; Manchester 26.3; Newcastle-on-Tyne 27.6. In Edinburgh 16.6; Dublin 26; Glasgow 36.1.

For the week ending December 15th, in 170 German cities and towns, with an estimated population of 8,655,232, the death-rate was 19.2. Deaths reported 4052; under five years of age, 1853; consumption 567, lung diseases 492, diphtheria and croup 293, diarrhœal diseases 114, scarlet fever 96, measles and rötheln 94, whooping-cough 61, typhoid fever 46, puerperal fever 18. The death-rates ranged from 13.4 in Würzburg to 39 in Liegnitz; Königsberg 30.8; Breslau 31.8; Munich 29.3; Dresden 26.6; Berlin 22.5; Leipzig 27.2; Hamburg 24.9; Cologne 23.8; Frankfort a. M. 18.9; Strasburg 21.

The meteorological record for the week ending January 5th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Dec.–Jan., 1883–4.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 30	30.174	27	33	23	73	88	88	83	SW	N	N	3	6	6	O	O	O	—	—
Mon., 31	30.238	28	30	26	94	86	98	93	N	N	N	5	10	6	O	O	S	—	—
Tues., 1	30.111	29	33	24	100	100	100	100	NW	N	N	7	9	6	W	O	W	—	—
Wed., 2	29.499	32	44	25	100	100	61	87	E	NE	W	22	8	18	R	R	O	—	—
Thurs., 3	29.708	24	31	20	61	54	70	62	W	W	W	15	16	18	C	C	O	—	—
Fri., 4	30.052	12	21	8	70	48	60	59	W	SW	W	12	24	11	C	F	C	—	—
Sat., 5	30.015	9	14	6	68	68	63	66	W	W	W	12	14	15	O	O	C	—	—
Mean, the Week.	29.971	23	29	19				79										41.35	1.84

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; W., sleet.

RESOLUTIONS ON THE DEATH OF THE LATE DR. S. P. DRESSER.

At a meeting of the Berkshire District Medical Society, held at Pittsfield, December 26, 1883, the following preamble and resolutions were unanimously passed: —

Whereas, Dr. Simeon P. Dresser, of Hinsdale, has been stricken down in the full meridian of life and in the midst of his usefulness, we his Fellows deplore his sad and sudden death, and our own painful sense of the bereavement we have sustained therefrom.

Resolved, That we recognize an irreparable loss to the Society to which he belonged and to the community in which he so usefully labored.

Resolved, That his social and genial nature endeared him as a companion to every one brought within his influence.

Resolved, That we will cherish his memory as a sound and able physician, and skillful surgeon.

Resolved, That we will transmit to the family of our deceased brother a copy of our proceedings and resolutions, together with our deep condolence upon the calamity which has overtaken them.

A. M. Smith,
F. K. Paddock,
William M. Mercer.

ACTION OF THE PROVIDENCE MEDICAL ASSOCIATION UPON THE DEATH OF DR. T. W. PERRY.

At a regular meeting, held January 7, 1884, the Vice-president, Dr. William J. Burge, occupied the chair, and appointed Drs. J. W. C. Ely, E. T. Caswell, and Charles O'Leary a committee to draft a minute relative to the death of Dr. T. W. Perry, which occurred, suddenly, of angina pectoris, at the office of Dr. Bowditch, Boston, on the 5th instant.

The committee submitted the following, which was unanimously adopted: —

"In the death of Dr. Thomas W. Perry the Society has lost a member of twenty years' standing, who had achieved an honorable position as a practitioner, and by the qualities of his heart, his cheerfulness, and his zeal, secured the affection of his large circle of patients. His professional brethren recognized in him one who was always ready to learn and to appreciate fully the attainments of others. Amid various trials and afflictions he bore himself with fortitude, and was prepared for the final change whenever it might come to him."

It was also voted that the above be entered upon the records of the Association. William R. White, M. D., *Secretary.*

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM DECEMBER 28, 1883, TO JANUARY 11, 1884.

Appel, Daniel M., captain and assistant surgeon, having relinquished the unexpired portion of leave of absence granted by S. O. 68, headquarters Division of the Atlantic, November 16, 1883, and reported for assignment, assigned to duty at Fort Porter, N. Y. Paragraph 2, S. O. 247, Department of the East, December 29, 1883.

Brown, P. R., captain and assistant surgeon. Assigned to duty at Fort Huachuca, A. T. Paragraph 9, S. O. 119, Department of Arizona, December 27, 1883.

Havard, Valery, captain and assistant surgeon. Assigned to duty in charge of office of medical director, Department of Texas, during the temporary absence of that officer. Paragraph 2, S. O. 164, Department of Texas, December 31, 1883.

Egan, P. R., first lieutenant and assistant surgeon. Upon reporting of relief to proceed without delay from Fort Huachuca, A. T., to Fort Apache, A. T., and report to the commanding officer for duty at that post. S. O. 119, Department of Arizona, December 27, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE TWO WEEKS ENDING JANUARY 12, 1884.

Hudson, A., medical inspector, from duty as assistant to the Bureau of Medicine and Surgery, on the 18th inst., to the U. S. S. Lancaster, as the relief of Medical Inspector N. L. Bates, who is to be detached and ordered home.

Russell, A. C. H., passed assistant surgeon. From the Navy Yard, Washington, to hold himself in readiness for sea service.

McMurtrie, D., surgeon. Ordered to the Naval Rendezvous, Philadelphia, Penn.

Price, A. F., surgeon. Detached from the Receiving Ship St. Louis on the 15th, and ordered to the U. S. S. Ossipee on the 22d.

Russell, A. C. H., passed assistant surgeon. Ordered to the U. S. S. Ossipee on the 22d.

Eckstein, H. C., passed assistant surgeon. Detached from the Naval Hospital, Philadelphia, and ordered to the Receiving Ship St. Louis.

Willis, Howard, passed assistant surgeon. From the Naval Rendezvous, Philadelphia, and ordered to the Naval Hospital, Philadelphia.

Books and Pamphlets Received. — Contributions of the Old Residents' Historical Association, Lowell, Mass., organized December 21, 1868. Vol. II. No. 4. Published by the Association. Containing Reminiscences of the Early Physicians of Lowell and Vicinity. By D. N. Patterson, M. D. Also Members of the Massachusetts Medical Society in Lowell from 1822 to 1883. By John O. Green.

Random Notes and Observations of a Trip through the Great Northwest, including a Few Words about the Yellowstone National Park. By Dr. Edmund C. Wendt. (Reprint.)

Bacteria. By Dr. Antoine Magnin, Laureate of the Faculty of Medicine of Paris, etc., and George M. Sternberg, F. R. M. S., Major and Surgeon, U. S. A., etc. New York: William Wood & Co. 1884.

Cholera. A Disease of the Nervous System. By John Chapman, M. D., M. R. C. P., M. R. C. S. London: J. and A. Churchill, 1883.

Third Annual Report of the State Board of Health of New York. Albany. 1883.

Medical Thoughts of Shakspere. Compiled by B. Rush Field, M. D., Easton, Pa. 1884.

Original Articles.

NEPHRECTOMY FOR THE REMOVAL OF CANCEROUS OR SARCOMATOUS TUMORS OF THE KIDNEY.

BY JOHN HOMANS, M. D,
Surgeon Massachusetts General Hospital.

In the table of cases given below will be found only those where an operation was undertaken to remove a *sarcomatous* or *cancerous* kidney, or where the operation being undertaken on a different diagnosis eventuated in a nephrectomy for sarcoma or carcinoma. I have purposely excluded all cases of removal of the kidney for cystic disease, for floating kidney, for suppuration of the kidney filled with calcareous masses, or for any purpose other than that of removing a kidney affected with one of the two kinds of tumor mentioned above. At my request Dr. Howard Lombard has looked over the literature of the subject, and has found twenty-five cases of the kind mentioned above. If we add to these my own case, to be described later, we have twenty-six cases in the accompanying table.

Dr. Lombard finds upwards of 130 reported cases of nephrectomy, and out of this number the operation has been done twenty-five times (with mine twenty-six times) for malignant disease, namely, for sarcoma twelve times, for carcinoma six times, for encephaloid four times, for adenoma once, and for doubtful tumors three times. In these twenty-six cases there have been eight recoveries, seventeen deaths, and one patient was under treatment at the time the case was reported. The causes of death were as follows: primary hæmorrhage, two; collapse, two; peritonitis, five; septic peritonitis, two; shock, two; pulmonary embolism, septicæmia, return of disease, and cause unknown, one each.

The incision was made in the lumbar region in seven cases, of which four recovered, two died, and one was under treatment when reported. In nineteen cases the incision was ventral, and fifteen died. The operation we have found reported fourteen times in Germany, six times in England, five times in the United States, and once in France.

My own case, in which the fatal result is to be attributed more or less to want of skill, occurred in a man, twenty-nine years old, single, a sailor by occupation. He dated his abdominal trouble from the time he lifted a heavy stone, two years or more before.

History when first seen. He discovered the tumor fifteen months ago, in the left hypochondrium. He has been growing thin, and has not worked any since the pain in his back began, two years ago, at which time he first noticed blood in his urine; this has appeared from time to time irregularly; sometimes his urethra has been plugged with clots so that he has drawn them out in long masses, and once as the plugs of coagulum could not be drawn out he was catheterized. He has more pain when his urine begins to be bloody. The pain in his back is what prevents him from working; when he jumps, or stumbles, or stubs his foot his back aches. He sleeps fairly well; his appetite is variable; his strength is failing. The tumor is a hard, flattened, oval mass, extending from the splenic region to the iliac region on the left side. It is about four and one half by nine inches in its diameters, and feels at first as if it were an hypertrophied spleen. At the same time it projects downwards into the anatomical site of the left kidney as well as upwards under the ribs. It is moved freely during respiration, and falls over towards the right side a little when the patient turns on his right side. It is uncertain whether it is within the peritonæum or whether it has pushed the peritonæum before it. About one third of the tumor lies under the ribs in the left hypochondriac and thoracic region. Dr. E. G. Cutler examined the blood, and found no increase in the number of white corpuscles, and no more albumen in the bloody urine than the blood would account for; no pus and no diminution in the amount of urea; he did find, however, blood casts from the tubules, from the ureter, and, perhaps, from the urethra. I found no stone in the bladder to account for the hæmorrhage.

I reasoned somewhat in this way: If the tumor is an enlarged spleen it causes hæmorrhage by pressure on the renal vessels, or else the renal hæmorrhage is like the nose-bleed that accompanies an enlargement of the spleen. If the hæmorrhage were caused by a calculus in the kidney there would be pus in the urine, and the urine would decompose. The tumor fills the left lumbar region, and *seems* to have grown from the lumbar rather than from the hypochondriac region. I was inclined to think the tumor one of the kidney, and very probably malignant. The man had come from a distance to have the tumor removed, and his decision was unchanged when the nature and possible result of the operation was explained to him. After delaying several weeks that the case might be thoroughly considered, and after consultations with competent advisers, an operation was decided upon, and was done at St. Margaret's Home on November 24, 1883.

Operation one hour's duration; performed antiseptically under a spray of carbolic acid. An incision about five inches long was made through the linea semilunaris. After the peritonæum was opened it was seen that the descending colon had been pushed forward, and that an incision about half an inch long had been made in one wall. A director had been used, and the abdomen had been opened as carefully as usual. Probably it was owing to the thinness and great flattening of the colon squeezed between the tumor and the anterior abdominal wall that the wound was made. This cut was sewn up with a continuous suture of carbolized silk, and the operation was proceeded with. The incision was extended downwards near to the anterior-superior spine of the ilium and upwards through the cartilage of a rib. Another incision, about three and a half inches long, was made backwards at a right angle to the first incision. The tumor could now be seen gliding upwards and downwards beneath the peritonæum as the respiratory movements took place. The posterior wall of the peritonæum was now cut through, and an attempt made to peel out the lower extremity of the tumor, and raise it from its bed. This was accomplished with some slight hæmorrhage from the peritonæum near the hilus of the kidney. The upper end of the tumor was now sought for, and pulled up very much as one would at an autopsy. The strain on the renal vein at this time was very great. When the tumor had been raised up at both ends the fold of peritonæum enveloping it was pushed back more or less, and the ureter and renal vessels were clamped in a large Spencer Wells's clamp. The pedicle was then tied with carbolized silk, and the clamp removed while the ligature was being tightened.

Operator and Original Record	Sex and Age	Diagnosis or Aim of Operation.	Evil dates Back.	Date of Operation.	Seat of Incision.	Form of Dressing.	Treatment of Pedicle.	Symptoms after Operation.	Result, Immediate and Eventual.	Hæmorrhage at or after Operation.	Condition of Organ Removed.	Remarks.
1 Walcott (America) Med. and Surg. Reporter, Phil., 1861, vol. vii.	M 35	Diag., cyst of liver.	Six years.	1861, June 4.	Ventral.	—	—	—	Death fifteen days after, from exhaustion of suppuration.	—	Encephaloid of right kidney. Weight, two and a half pounds.	—
2 Peaslee (New York), Ovarian Tumors.	F —	Diag., ovarian growth.	—	1868, April.	Median Abdominal	—	—	Free evacuation of urine.	Death fifty hours after of peritonitis.	—	Solid renal tumor.	—
3. Langenbeck (Germany), Berlin Klin. Wochenschr., No. 24, 1877.	F 32	Diag., sarcoma of lumbar muscles or of kidney.	Eighteen months.	1875, December 7.	Lumbar.	Antiseptic.	Ligature difficult; slipped off.	None bad. No fever.	Recovery. Left hospital January, 1876.	Slight when ligature slipped.	Doubtful. A hollow organ.	There is some doubt as to nature of diseased mass, specimen having been thrown away by inadvertence of servant.
4 Kocher (Bern), Deutsch. Zeitschr. f. Chir., Bd. ix., 1878.	F 55	Sarcoma of a freely movable kidney.	Eighteen months.	1876, April 20.	Ventral, high.	Antiseptic failed.	Not reached.	Only thing remarkable was cystitis second day.	Death third day, from peritonitis.	None noted.	Sarcoma. Extensive.	Operation abandoned, the growth spreading too far into transverse mesocolon to be separable. Abdominal incision stitched up.
5 C. Hueter bei Schüller (Greifswald), Deutsch. Zeitschr. f. Chir., Bd. ix., p. 572.	F 4	Diag. splenic or ovarian growth.	One year.	1876, July 4.	Linea alba.	Strictly antiseptic.	Not reached.	—	Death during operation from hæmorrhage from renal vessels.	Furious at.	Right kidney atrophied, with attached paranephritic sarcoma.	Tumor weighed nearly five pounds. Twenty two cm. by fourteen by 11.6. Commenced at hilus and spread into kidney.
6 Jessop (Leeds), London Lancet, 1877, vol. i.	M 2½	Renal encephaloid.	One year.	1877, January 7.	Lumbar.	Not antiseptic.	Lig.; whip cord.	None bad. No vomiting. Good flow of urine.	Recovery. Child up and running about soon after.	—	—	Eight months later recurrence was evidently taking place, probably in lumbar glands. Child died a few weeks later at its home. No autopsy.
7 Kocher (Bern), Deutsch. Zeitschr. f. Chir., Bd. ix., 1878.	M 2½	Renal new growth.	2½ years.	1877, Sept. 27.	Ventral.	Antiseptic.	Lig.; double catgut.	No uræmia; no vomiting; free flow of urine soon after.	Death third day, of septic peritonitis.	Considerable during. None from pedicle.	Adeno-sarcoma. Three pounds, fifteen by sixteen by ten cm.	—
8 Byford (America), Trans. Amer. Gynæcological Society, 1880, p. 71.	F 50	Encephaloid of right kidney.	Eighteen months.	1878, March 14.	Linea alba, 7 inches.	Strictly Listerian.	Lig. in three parts, with silk cut short.	None of note.	Recovery rapid and complete.	None.	Four and a half pounds. Encephaloid throughout.	Patient last seen in July, 1880, in perfect health.
9 Martin (Berlin), Berlin Klin. Wochenschr., 1879, No. 22.	F 53	Sarcoma of kidney.	Two months.	1878, December 9.	Ventral.	Strictly antiseptic.	Ligature; nine silk.	—	Recovery complete. Out of bed eighth day; went home seventeenth.	None.	Malignant new growth. Weight twenty-eight ounces. Microscope showed to be sarcoma.	Operation lasted 45 minutes. Rendered particularly difficult by presence of large, engorged veins running over the tumor.
10 Czerny (Heidelberg), Centralblatt f. Chirurgie, No. 45, 1879.	M 50	Malignant tumor of kidney.	Two years.	1879, January 19.	Ventral.	—	Not reached.	Death ten hours after, of shock.	Hæmorrhage profuse at operation; from renal artery.	Soft, spongy mass left in situ. Medullary sarcoma.	—	Having broken into soft mass of tumor during operation, profuse bleeding set in from renal artery. Aorta then ligatured.
11 Lossen (Heidelberg), Deutsch. Zeitschr. f. Chir., Bd. xiii., Heft 3, 4, 1880.	F 37 years. Six mos. advance in 9th pregnancy.	Diag., tumor of right ovary. No true urinary symptoms.	One year.	1879, August 11.	Linea alba.	Antiseptic carbolic spray.	Ligature of ureter first, later pedicle, with No. 2 silk, not by transfixion.	Shock from loss of blood and from carbolic intoxication. Abortion twelve hours after operation. Endometritis sixth day.	Recovery perfect. Returned home September 25th. Amount of urine rose to normal in nine days. At first was one half normal quantity.	Very severe at, from pedicle on slipping of ligature when kidney was cut away.	Quite healthy angio-sarcoma, five to six times size of kidney. Grew from surface of latter.	Most remarkable case. The only bad symptoms were clearly due to endometritis and carbolic intoxication. Still reports herself well in June, 1881.

12. Bardenhauer (Cologne). Die Drainirung der Peritoneal-hohle, Stuttgart, 1881, s. 257.	F. 22	Diag., perinephritic abscess, following renal calculus or tumor.	Since June, 1879.	1879, Nov. 23.	Lumbar.	—	Ligature en masse.	Profound collapse. Considerable fever.	Death December 3d, presumably from sepsis, which existed before operation.	Profuse from cavity of abscess.	Spindle-cell sarcoma, size of hen's egg.	—
13. Barker (London). Trans. Medico-Chir. Society, vol. lxiii., 1880.	F. 21	Encephaloid of right kidney.	Eight mos.	1879, Dec. 23.	Linea alba.	Strictly Listerian. Antiseptic.	Transfixed and tied twice, vessels separately after. Silk cut short.	No shock, but vomiting continued to last. Senses clear throughout.	Death forty-five hours later, from pulmonary thrombosis.	None during or after Operation practically bloodless.	Two thirds of organ converted into a mass of encephaloid. Weight 30½ ounces; 7 by 4½ by 4¾ inches.	Whole operation passed off without difficulty.
14. Czerny (Heidelberg). Archiv. f. Clin. Chir., Bd. xxv., Heft 4, s. 858.	M. 23 Phthisis.	Diag., hydronephrosis of left kidney. Tapped in 1880 in front of axillary line.	Probably congenital. Painful. Three years. Had burst three times.	1880, March 9. Lasted three hours.	From old fistula in front of axillary line, parallel to Poupart's ligament. Later prolonged up to twelfth rib.	Lister throughout, with drainage tubes.	Ureter tied; also artery and vein; later, twelve other vessels.	Death half an hour after, from shock, chill, and carbolic intoxication.	—	Hardly any after.	Hydronephrotic, and full of masses of large round-cell sarcoma.	Post mortem revealed glandular infiltration, tubercular deposits in liver, spleen, kidney and lungs. Old pleuritis and pericarditis.
15. Czerny (Heidelberg). Deut. med. Wochenschrift, 1881.	F. 11 mos.	Tumor of left kidney.	Six weeks.	1880, August 2.	Abdominal median.	Antiseptic.	Six silk ligatures.	Considerable vomiting and diarrhœa.	Death three days after, of septic peritonitis.	Slight.	Adenoma larger than the head.	From danger of carbolic poisoning carbol. acid had to be used very sparingly. Child quite weak bef. op.
16. Lücke (Germany). Deut. Zeitschr., Bd. xv., Heft 5 and 6, s. 1881.	M 60	Sarcoma of kidney (right).	—	1880, August 6	Abdominal.	Antiseptic.	Double silk ligatures.	—	Death ninth day, of peritonitis.	Extreme venous from renal vein. Vena cava also ruptured.	Carcinoma, 21 by 11.5 by 9 cm.	—
17. Bardenhauer (Cologne). Harris' Table in American Journal Medical Science, 1882.	M. 26	—	—	1881.	Lumbar.	—	—	—	Recovery?	—	Sarcoma of kidney.	—
18. Czerny (Heidelberg). Deutsch. Med. Wochenschrift, 1881.	M. 51	Tumor of left kidney.	More than one year.	1881, April 23.	Lumbar (transverse).	Antiseptic.	Ten silk ligatures.	Because of vomiting from use of carbolic, a dressing of thymol was applied on third day.	Recovery without fever. Moderate suppuration.	Moderate at.	Angio-sarcoma, size of head, involving inferior end of left kidney.	—
19. Czerny (Heidelberg) Not yet published. [Vide Table in Trans Internat. Med. Congress, London, 1881, vol. ii., p. 260]	M. 40	Sarcoma of left kidney, with hæmorrhage.	Six months.	1881, July 25.	Lumbar (transverse).	Antiseptic.	Ligature en masse passed several times.	Urine clears up. Fever moderate. No uræmia.	Under treatment August 9, 1881.	Considerable at, from rupture of capsule and tumor.	Sarcoma of lower half of left kidney, size of child's head.	For several months there had been "gravel" in the urine. Tumor filled all of left lumbar reg. Besides hæmorrhage there had been insufferable pain.
20. Whitehead (England). British Med. Jour., February, 1881, page 741.	M. 46	Malignant tumor of kidney.	Six months.	1881, Sept. 5.	Linea alba.	Antiseptic.	Silk ligatures.	Localized peritonitis day after operation.	Death on fourth day, suddenly. From unknown cause.	Considerable.	Weight 1 pound 4 ounces. Six by four inches. Nature of growth not reported.	Application of lig. very difficult because of extreme shortness of pedicle.
21. Hicquet (Liège). Bull. Acad. Med. Belgique, 1882.	F. 6	Sarcoma of left kidney.	—	1881, Sept. 10.	Abdominal.	—	—	—	Recovery complete in two weeks.	—	Sarcoma.	—
22. J. E. Adams (England) London Lancet, vol. ii., 1882, p. 943.	M. 39	Tumor of right kidney.	Hæmaturia two years.	1882, March 10.	Lumbar.	—	Ligature en masse, with whip cord.	Wound healed in a few weeks Hæmaturia ceased at	Death forty-four days after operation, with effusion into both pleural cavities. Plugging of left renal vein. Numerous secondary de-	—	Carcinoma. Organ twice normal size.	

Operator and Original Record.	Sex and Age.	Diagnosis or Aim of Operation.	Symptoms date back.	Date of Operation.	Seat of Incision.	Form of Dressing.	Treatment of Pedicle.	Symptoms after Operation.	Result, Immediate and Eventual.	Hæmorrhage at or after Operation.	Condition of Organ Removed.	Remarks.
								once, but patient gained no strength.	posits in lumbar glands and on ribs.			
23 [illegible]	F. [illegible]	Tumor of left kidney.	Three months.	1882, September 2.	Linea alba.	Antiseptic spray.	Carbolized silk ligatures.	—	Death from collapse fifteen hours after operation.	About one ounce during. None after.	Carcinoma. Interior contained several cysts. Weight 16½ ounces.	Death may have been due to commencing septicæmia, or to peritonitis, or to antiseptic (carbolic spray) dressing.
24 Sir Spencer Wells, [illegible] and London Lancet, January [illegible], page [illegible]	M. [illegible]	Cancer of right kidney.	—	1882, December.	Ventral.	—	—	—	Death in five days.	—	Soft cancer, six by four inches.	—
25 S. W. [illegible] Philadelphia Med. News, June [illegible]	[illegible]	[illegible]	Three months.	1883, April 20.	Linea alba.	Antiseptic spray.	Transfixed. Double ligature with carbolized silk.	—	Death sixty-five hours after operation, from peritonitis complicated by suppression of urine.	Furious at, from renal artery.	Carcinoma. Weight eighteen ounces. Large circumference 15½, small 10¼ inches.	Operation lasted fifty-five minutes.
26 John Homans, [illegible] Boston Med. and Surg. Journal, January 24, 1884.	M. [illegible]	Renal tumor.	Two years.	1883, Nov. 24.	Linea semilunaris.	Antiseptic spray.	Transfixed. Tied with Tait's knot carbolized silk.	Suppression of urine. Patient very quiet and calm, almost dull.	Death fifty-one hours after operation. Acute general peritonitis.	None.	Carcinoma of the left kidney. Three and a half pounds.	At the autopsy there was found acute general peritonitis. Fatty degeneration of kidneys. Fatty infiltration of liver, with cloudy swelling, œdema, and hypostatic congestion of lungs, and wound of intestine.

The substance of the kidney was then cut through on a level with the pelvis. Warm sponges were put in the place formerly occupied by the tumor, and the rest of the peritoneal cavity was examined for clots. A large India-rubber drainage tube was passed out through the loin, an incision having been made for the purpose. The anterior and lateral incisions were then sewed up after the abdominal cavity had been thoroughly cleaned, and the wounds were dressed antiseptically. An enema of a drachm of laudanum and an ounce of brandy was given, and the patient was removed to his bed with a good strong pulse.

During the next twenty-four hours his temperature was about 100° F. *Only four ounces* of urine were secreted. He had no vomiting until ten A. M. of the day following the operation. During the last twenty-seven hours of his life fifteen drachms of urine were drawn off, so that during the fifty-one hours that he lived after the operation he passed but five ounces seven drachms of urine. He sank away, and died rather suddenly and quietly without having suffered much. He vomited more or less, and was very quiet, in fact rather dull. The urine was dark-colored, thick, and intensely acid. If the suppression of the urine was due to carbolic acid the temperature ought to have been below normal rather than above. It would have been wiser, however, to have used some other reagent or else to have omitted the spray altogether.

The following is Dr. Whitney's account of the autopsy: —

Autopsy twenty-four hours after death.

Rigor mortis present.

Body warm. A fifteen to twenty centimetres long wound in the abdominal wall, to the left of median line, closed by an interrupted suture.

An opening in the left lumbar region, from which a drainage pipe projected.

Head not opened.

Pericardium contained about thirty cubic centimetres of serous fluid.

Right lung bound to chest wall by moderately firm old adhesions. Left lung free. Lungs did not fully collapse upon removal from the chest. Upon section a thin fluid mixed with air issued from the dark-red surface.

Heart normal in size. Muscular substance markedly decomposed.

The coils of the intestine were joined by soft, purulent, flaky masses, and the surface was covered by a thin layer of purulent lymph. A little purulent and bloody fluid was in the pelvis.

Just below the splenic flexure of the colon was an opening into the bowel, which had been drawn together by a continuous suture.

In the place of the left kidney was a ragged opening through the peritonæum, which, as well as the deep muscles, was infiltrated with blood. A number of thrombosed veins were found.

No enlarged glands were noticed in the mesentery or neighborhood.

The right kidney was about normal in size. The superficial veins injected. Upon section it was found to be whitish, opaque, and marked by an occasional yellow line. Microscopic examination showed the presence of fat in many of the tubules.

The liver was opaque. The periphery of the acini yellow, the centres red. Microscope showed moderate fatty infiltration with a granular degeneration of cells.

The other organs presented no unusual appearances.

Diagnosis. Acute general peritonitis. Fatty degeneration of kidney. Fatty infiltration of liver with cloudy swelling. Œdema and hypostatic congestion of lungs. Wound of intestine.

A section through the tumor showed a coarsely reticulated structure of alternating fibrous bands, between which were opaque, yellowish, friable masses.

The microscopic examination showed that these last were composed of large epithelial cells, arranged in columns, and lying in small alveolar spaces. No true kidney tissue was found.

Diagnosis. Cancer of kidney.

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CASES OF MELANCHOLIA.[1]

BY GEORGE T. TUTTLE, M. D.

I AT first intended this paper to be a report of a case of melancholia with delusions, false sight, and false hearing that recovered while under the opium treatment, but its scope has been somewhat enlarged, and it is my purpose to briefly report or allude to several cases of melancholia where the medical treatment was opium, or a mixture of cannabis Indica and bromide of potassium or sodium.

It is well known that the presence of false sight and hearing for any length of time in a case of melancholia, indeed in any form of mental disease, warrants an unfavorable prognosis. The case I shall first report was of this character, and the chance of recovery was thought to be small.

E. C. H. was admitted to the McLean Asylum May 7, 1882; a man thirty-eight years of age; married; a merchant. No insanity in the family. He had usually been well except for occasional attacks of facial neuralgia that occurred at irregular intervals, of a few days or weeks, and lasted from half a day to two days. He was always of a nervous temperament, worried over little things. For a while he had been in charge of a branch house in another city, and had worked very hard; it is not possible to give any other as the exciting cause of his illness.

About the first of January (four months before admission) he began to appear nervous and irritable, and was unable to sleep well. He soon showed less capacity for business; then he had the idea that he had lost his place in the firm, and that his wife and children would suffer.

About the first of March he went to his home in an adjoining town, as he was totally unfit for work. He had grown worse. From worrying about business affairs he had taken another step and thought he had committed the unpardonable sin. Two weeks before admission he bought laudanum with the intention of suicide. On the morning of admission he was found with a rope and stone attached going towards a cistern, evidently intending to drown himself. Because of these attempts at suicide he was brought to the asylum. He was by no means demented, though the physician's certificate, under which he was committed, read, "A species of dementia, fatuity."

A physical examination revealed nothing abnormal. He showed much agitation and loss of self control, walking the floor, wringing his hands, and muttering. He answered questions readily, but repeated his answers several times as though in great distress and scarcely realizing what he was doing. He was given cannabis Indica, in the form of the tincture, one grain, and potassium bromide twenty grains, three times a day.

This agitation continued for several days, attended with loss of sleep, but he soon appeared in a way able to listen to reason, and it was almost possible to convince him that his ideas were wrong. On the 15th (eight days after admission) his wife, whom he left at home sick, and of whose recovery he had no hope, made him a call. This was of great benefit.

Under the cannabis and bromide, with plenty of food, rest, fresh air, and what diversion could be afforded, he improved rapidly, and began to read and take an interest in affairs. By the 23d of June he appeared so well that he was on that date allowed to spend the day at home, with a favorable result. The cannabis Indica and bromide had been gradually reduced till by this time he was taking only one fourth grain of the former and five grains of the latter.

At a subsequent visit, however, about the 6th or 7th of July, he became disturbed, and was not so well after returning to the asylum. Three days later he became much agitated, trembling because of fear; was afraid of those about him. The cannabis and bromide was resumed in full doses (one grain cannabis, twenty grains bromide).

At this time he revealed the delusion that there were various articles in the papers referring to him, and that people talked about him. This did not appear to have been false hearing. He had simply overheard the conversation of his associates and made what they said apply to himself, just as he did what he read in the papers.

About this time he did have unmistakable false hearing and illusions of sight.

He heard his father-in-law talk to him in the night, and the capitals of several Corinthian pillars which, on another building, he could see from his window, appeared to him to be grinning faces. When fully under the influence of the cannabis and bromide he became quite calm, though his depression was considerable and attended with the usual delusions of great wickedness and terrible punishment. He often said that while he was perfectly certain this was so, it was a wonder to him that he could go in the garden, smoke his cigar, and talk composedly with people. During the summer many things foretold his approaching doom: the reflection of the setting sun from the windows of the city was to him ominous; the locomotive bells tolled instead of ringing as they used to do; even the flowers in the garden reviled him.

In the fall he grew worse. He frequently heard the voice of his wife, which appeared to come from the sky, and often saw in his path a skull and crossbones which foretold his fate. He used to try to point this out to others, but no stretch of the imagination could detect any resemblance, for he usually saw some figure on the carpet or spot on the gravel walk.

As he did not appear to be gaining, and the cannabis and bromide merely kept him from a state of extreme agitation, and more especially as he began to complain that his gait was unsteady and that he had some difficulty in directing the movements of his hands, it was gradually changed during the latter part of November to deodorized tincture of opium, of which he took twenty to twenty-five minims three times a day during December and January.

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[1] Read before the Boston Society for Medical Observation, December 3, 1883.

There was, however, no improvement in his mental condition. False sight and hearing continued; shadows on the curtains were to him living faces; the paper in his room had been selected with special reference to him, and the design represented many knives, which were a constant threat of death; and he at last had the idea that he was to be taken to Mount Auburn and buried alive or left in a tomb to starve.

He grew worse also in his physical condition; his appetite failed, and there was marked loss of flesh and strength, but it was decided notwithstanding to push the treatment more vigorously, and the 1st of February the deodorized tincture was changed to sulphate of morphia, and the dose rapidly increased from five eighths to three fourths of a grain, which he took from February to September, as it was enough to completely control his restlessness.

Under the larger doses of morphia his appetite improved and he slept better, without the moderate dose of chloral and bromide which he had sometimes taken, and the attacks of facial neuralgia became much less frequent.

He gradually dropped his ideas of wickedness and torture; there was no evidence of false hearing, and by the early summer he had begun to read the papers and books.

June 23d he went home for the day. After making several visits of a day, he stayed over one night; then a longer time. During these visits he appeared very happy, playing with his children, meeting his friends in a natural way, and took sufficient interest in his business and other affairs to occupy his attention. On the 19th of September he went away on a visit, not to return unless necessary. He had by this time given up all idea of having done wrong, and was only anxious to get back to his business and family.

He has since been seen and heard from several times, and the reports have always been favorable. He was discharged recovered after twenty months' illness.

Another case closely resembling this in its essential features was that of a woman (L. H.) forty-nine years of age, who was admitted July 22, 1882. Father and mother both committed suicide. She was one of nine children, none of whom except herself had been insane. Had had two previous attacks of melancholia, the first in 1853, the second in 1869. Present attack of six weeks' duration caused by anxiety and loss of sleep incident to the care of a sick relative.

The growth of her delusions was in this wise: Exhausted by watching, and over anxious, she at first feared she had not done her duty; then thought she *had* not; then that she was a sinner; then that the deaths in the family were a judgment upon her; and finally, that she was a murderess. She was suicidal.

In a general way the treatment till December was occasional doses of sedative medicines at night, and special attention to diet and the general conditions of health. But she grew worse; was apparently in the depths of despair; constantly moving about, talking, and showing great restlessness and agitation, which at times amounted almost to incoherence.

In a month from the time of admission she had the most marked false hearing. People made various accusations against her; she could hear vulgar talk and laughter and remarks against her character. In another month (by the middle of September) she was still worse; thought she was an animal, and that repairs in process on an adjoining building were to construct her a pen. Appetite was pretty good, but she thought she ought not to eat because of her crimes. In consequence of this she would beg, cry, and struggle in a distressing and noisy way when the nurses attempted to give her food.

December 1st she was given deodorized tincture of opium, ten minims three times a day regularly, and by the 14th it had been increased to twenty minims. At this time she was in a more comfortable state of mind, sleeping well without sedatives at night, eating without trouble, and could occupy herself a part of the time with needle-work or some household duty.

During the latter part of January she was not as well for a time, but after an increase of the opium, February 1st, to thirty minims, she regained her balance, and continued to improve till the latter part of March, when, for a week or two, she was much more anxious and restless; but this gradually passed off, and by the 28th of June she was allowed to go home on trial, after a hospital residence of eleven months, and seven months after the beginning of the opium treatment. She now seems to be well.

Another case of the apparently successful use of opium was that of a man (H. W.) sixty-one years of age, a merchant, who was admitted January 15, 1883. First attack of a few weeks' duration. Exciting cause, failure in business. His mother and sister had been insane. He was of a nervous temperament, but usually well.

After his failure he appeared much depressed in mind, and soon restless, going without apparent object from place to place, showing a want of self-control by his conversation as well as actions, and, as he was found to be carrying a revolver and a razor, his friends thought it safer for him to come to the asylum, though he had made no attempt at suicide.

For a few days after entrance his restlessness and agitation were considerable. He would walk the floor with his hands to his head, saying, "Oh, dear! what have I done? what have I done?" While taking deodorized tincture of opium in the moderate dose of twenty minims three times a day, he regained his self-control, though his depression was not then the less. With careful attention to his general health he rapidly improved, and March 31st he went home in a very comfortable condition, after a hospital residence of two and one half months. As subsequent reports were favorable he was discharged, recovered.

The opium treatment has been given in six other cases of melancholia, to which I will briefly allude.

A man (D. W. F.), fifty-three years of age, had been depressed in mind for six months, and for two months had had delusions about his business affairs; that his family was coming to want, and, as they would freeze or starve, had better die at once. Was suicidal; no false sight or hearing.

For nine months he took ten to twenty minims of the deodorized tincture three times a day. Under the latter dose he became calmer, slept better, ate better, and gained in flesh and strength. He is now at home and well enough to be making plans for engaging in business.

A man (R. S. M.), sixty years of age, had been suffering from melancholia for six months previous to admission. His intelligence was good, but he lacked will-power, and after he finally came to a decision on any question worried for fear he had made a mistake. He could not sit and read or talk, but walked the floor till tired enough to lie down, and when partially rested began his walk again. Slept poorly. He took twenty minims deodorized tincture three times a day for five months, and was then nearly as restless as at the beginning of the treatment, and his mental condition was not much improved. I must in fairness say, however, that he had gained a few pounds in weight, and that the opium at least did him no harm, and he held the slight improvement after stopping the treatment.

Another man (J. B. J.), fifty-two years of age, with delusions, false sight and hearing, a case of nine months' duration, in which no sort of treatment could have been applied with much hope of success, was given in a mild way meconate of morphia (one eighth to one fourth of a grain three times a day), for two months, during which time he steadily grew worse. The man is now no better, after an illness of three years.

A woman (T.), fifty-six years of age, second attack, of seven weeks' duration, was in great distress of mind, fearful of coming destruction, in constant motion, moaning and crying, at times beating her head against the wall and trying to choke herself with her hands. No evidence of false sight or hearing. She was given one fourth of a grain of meconate of morphia at bedtime for a month, and one sixth to one fourth of a grain three times a day for six weeks, but did not improve. A criticism applicable to this and the preceding case is that the dose was not large enough nor long enough continued.

Two women are now under treatment. Both are cases that one might expect to benefit with opium, as they show great agitation and distress of mind, walking the floor, crying and wringing their hands; insomnia and anorexia. One is now taking one grain of morphia sulphate three times a day, and the treatment has been pursued between two and three months, the dose having been gradually increased to the present amount. There is as yet little improvement.

The other case is complicated with false hearing and possibly sight. The treatment has been pursued nearly two months. She is now taking one and one quarter grains of morphia sulphate three times a day, and is no better.

Not considering the two cases now under treatment, of the seven cases reported three recovered; one was much improved; one was improved in a slight degree, and two grew worse. (In these two cases the treatment was not satisfactory, the dose was too small.)

It will be remembered that in the case first mentioned the treatment at the beginning was a mixture of cannabis Indica and bromide of potash, in the proportion of one grain of the cannabis to twenty grains of the bromide, as recommended by Dr. Clouston in his essay on Opium, Potassium Bromide, and Cannabis Indica.[1] It has been quite largely used at McLean Asylum, more particularly and with greater success in cases of maniacal excitement; but it has also been tried in a number of cases of melancholia, in several with benefit, and in one with marked success. This was the case of a man (W. F.), thirty-nine years of age, an architect, who was admitted January 28, 1882. A former attack of melancholia in 1864 lasted one year. Present attack, of six months' duration, was apparently caused by the death of his wife. He had the usual ideas of a man suffering from melancholia, and was suicidal. He showed considerable restlessness and agitation, not extreme, to be sure, but he could not confine his attention to anything, and walked about aimlessly.

He was given three fourths of a grain of cannabis and fifteen grains of bromide three times a day (A. M., P. M., and before sleeping), which was increased July 4th to one grain cannabis and twenty grains bromide. He became more composed, and could take his part in a conversation to the amusement and instruction of others, for he was a very well-informed man, but would not admit that his depression of mind was less. By July 21st he was busy with his pencil and brush. With the usual care in regulating his daily life, he continued to do well, gaining in flesh and spirits, and the medicine was gradually reduced during September and October till he took one fourth grain cannabis and five grains bromide. He gradually grew worse; his old restlessness and depression returned in some degree; he looked haggard and was evidently losing flesh. November 4th the cannabis was increased to three fourths of a grain and the bromide to fifteen grains three times a day. He soon appeared better, and on the 18th it was reduced to one half grain cannabis and ten grains bromide.

From this time his progress was steady, and he left the asylum January 27, 1883, after a hospital residence of seven months. He was discharged recovered.

Another case was a woman (A. M.), fifty-five years of age. Of four sisters who had been insane one was at the time of admission an inmate of the McLean Asylum; one sister and a brother had committed suicide. She was inclined to talk much of religion, her wickedness, and the certainty of a terrible punishment. She had delusions, such as that the nerves of her head were dead, broken, and dried up; that her feet and bowels were burning; that she was dying, and others of a like distressing nature. She was determined to commit suicide, and while undressing would often secrete a stocking, a garter, or a towel in the bed, and would shortly be found with it about her neck. Was often fed with the tube. She would be fed for several days or weeks, and then would eat for awhile, and again require feeding. She was very restless and constantly asking questions, frequently repeating the same one, more, apparently, from distress of mind than because of lack of comprehension. Her favorite remark was, "I 've done wrong." It appeared to be a hopeless case so far as recovery was concerned, but for her comfort, November 1, 1880, the treatment by cannabis Indica and bromide of potassium was begun, and for four and a half months she took from one to one and a half grains of cannabis and twenty to thirty grains of bromide twice daily, as it appeared in a measure to quiet her.

During the month of December it was for a time omitted. She became more excited and deluded. Perhaps it could not fairly be claimed that her appetite improved under this treatment, but it is a fact that while taking the cannabis and bromide she was not once fed with the tube. She became so much more quiet that she was moved to a better ward. She was still much depressed, and both during this time and on many occasions afterwards attempted suicide. So far as recovery was concerned the use of cannabis and bromide was a failure. She was afterwards given opium in a mild way, the dose was too small to do any good, and she was finally transferred to a State Asylum, not improved.

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[1] Brit. and For. Medico-Chir. Rev., Oct., 1870, and Jan., 1871.

Not to weary your patience, I will simply say that of seven other cases treated with cannabis and bromide, one woman in a state of great agitation, constant distress of mind, and extreme suicidal impulse, took from three fourths grain to one grain cannabis and fifteen to twenty grains bromide three times a day for three months with marked benefit. It was then thought best, from her appearance, to omit it for a while, and opium in moderate doses was substituted. This did not succeed. There was loss of appetite, in fact pretty constant nausea, with, of course, loss of flesh, and a change for the worse in mental condition. Cannabis and bromide were afterward resumed with the former good effect, and are still taken.

Another case, still an inmate of the asylum, thought she had committed the unpardonable sin; was fearful of future punishment, greatly agitated, and made foolish attempts at suicide. For four months she took one and one half grains cannabis and thirty grains bromide three times a day, and later one and one fourth grains cannabis and twenty-five grains bromide three times a day for two months, apparently with great benefit. Of two other women, one was discharged recovered, but not while taking the cannabis and bromide, nor because of it; and the other is not improved after having taken for two months one to one and one fourth grains cannabis and twenty to twenty-five grains bromide. One man left the asylum at the end of a month not improved, but this was not a fair trial either in time or dose. In the case of another man it was omitted after four months' trial, and opium substituted, with good results. A third man took it with doubtful benefit for four months.

Not considering the case still under treatment, of the above eight cases one recovered; the cannabis and bromide was of marked benefit in two cases; of doubtful benefit in two; and of no advantage in three (one not having been a fair trial).

The action of this combination seemed to have been mainly sedative, and the effect was to quiet restlessness and give general treatment a fair chance; indeed, if the patient merely becomes calm it is in itself a long step towards recovery. It is perhaps worthy of remark that though the cannabis and bromide were continued in many cases for long periods of time no depressing effects were observable. An increased appetite was noticed in some of the cases, while in others it would be difficult to say the appetite failed, for it could not well be less.

The indications for reducing the dose are symptoms rather of bromism. This occurred in several cases. A woman after taking one and one fourth grains cannabis and twenty-five grains bromide three times a day for six weeks became partially helpless, and had paralysis of the soft palate. From this she recovered in a week or ten days after stopping the medicine. This was the most marked instance, and, except for some slighter occurrences such as this, no bad effect was noticed. After the dose is reduced or omitted it takes several days to get over the effect, as might be expected, and it is as well a matter of a few days to get under its influence.

An objection to the tincture is that it is a bad looking and bad tasting dose, and I prefer a pill of the extract, which has been used to some extent. A solution of bromide containing considerable glycerine has been used, as this will for a day or two prevent a precipitation of the cannabis, which will occur if the simple aqueous solution and tincture are given in one dose.

From a comparison of results in the two series of cases the balance is much in favor of opium, still the cannabis and bromide will do good in some cases, and may sometimes be used when opium cannot. It should therefore not be discarded as a form of medical treatment in melancholia.

Dr. Clouston's conclusion was that "fewer cases of simple melancholia were benefited by the bromide alone or along with Indian hemp than any other form of insanity. Some were made worse by them, but in one case of this disease, when there was great excitement and hallucination of hearing and suspected organic disease of the brain, the combination gave immediate and complete relief of all the symptoms for four months." This conclusion appears to have been based on the observation of five cases.

Opium *may* have some other action, but its main effect appeared to be sedative.

If there were no diminution in the restlessness and agitation of the patient I should doubt any great advantage from its use, and this leads me to say that while it is not possible to predict that a given case will be benefited, in a general way it may be said that the most favorable results are obtained in cases of restless melancholia. In some there is apparent intolerance of the drug; the appetite fails, the patient loses ground, and the treatment must be abandoned. It should, however, be borne in mind that a loss in appetite is not always an indication for stopping its use. The modern idea of the opium treatment of melancholia is somewhat like that in regard to its use in peritonitis as compared with the older method. In treating a given case the dose should be increased till the patient becomes calm, or dangerous symptoms appear. The agitation of a case of melancholia is an entirely different affair from the excitement of mania, in which the use of opium is not advised, and there is, so far as I can see, no danger, with careful watching, in gradually increasing the dose to almost any limit.

Many of the cases reported were severe, and the chances of recovery small; in such more vigorous treatment is warranted than in the ordinary cases of simple melancholia that do well with attention to the general conditions of health and little or no medication. I have seen a modification of the "rest treatment" used with success in several cases of this character. In conclusion, I would remark that it is often extremely difficult to say whether or not a given remedy has been beneficial, and much more so to ascribe to it a cure.

RECENT PROGRESS IN FORENSIC MEDICINE.

BY F. W. DRAPER, M. D.

CREMATION AND CRIME.

BROUARDEL, professor of legal medicine in the Medical Faculty of Paris, in a report made to the Council of Public Health, and adopted by that body in August last, makes the following among other observations concerning the relation of crime to the practice of cremation in times of epidemic invasion.[1] He declares his belief that societies and individuals who seek to promote this method of disposing of dead bodies have not appreciated fully the medico-legal difficulties in their way. Cases of acute poisoning, he says, are of two kinds. One class includes the accidental cases in which it matters little whether the body is buried or burned. Illustrations of the other class present themselves under totally different conditions. One must be living in intimacy with a person to be able without ready detection to mix poison with his food. After the poison has been swallowed the one who has given it is often the nurse of his victim, sometimes the only witness of his sufferings. Frequently many days elapse after the death before rumor calls attention to the case as one of suspicion, and days, weeks, sometimes months and years intervene before the inquest is held. If cremation has effected the destruction of the body of the victim no trace remains permitting the authorities to confirm the guilt of one suspected, or, what is of equal consequence, to demonstrate the innocence of one falsely accused.

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[1] Annales d'Hygiène publique et de Médecine légale, October, 1883, page 315.

If, as those who favor cremation propose, an autopsy is invariably made before the destruction of the body is permitted, a great difficulty will still be encountered. The chemical detection of poisons often requires a month or two months of analysis. How shall we harmonize these complicated and laborious researches with frequent cremation? Then, too, if the expert finds in the dead body an alkaloid or a mineral poison, such as arsenic or mercury, inquiry must be made of the family to ascertain if the deceased person in the last months of his life had not taken as medicine one or another of these poisons.

It does not appear that hygiene finds any advantages from the cremation of dead bodies in times of epidemic invasion. The speedy equipment of proper apparatus for the combustion of several hundred bodies daily is almost an insurmountable difficulty when it is recalled that the best appliances now known cannot reduce an adult body to ashes in less than four hours. On the other hand it is not demonstrated that a cadaver dead from cholera, for example, can become an agent for the spread of the disease. Whether such a body be destroyed by fire or slowly by decomposition in the earth the result appears to be the same. It is impossible to invoke any danger that comes from the burial of cholera victims as a reason for the necessity of adopting the cremation of their bodies.

All writers on toxicology point out the similarity in the symptoms of cholera and of certain forms of poisoning. For example we may recall two of the agents most frequently employed with criminal intent, arsenic and corrosive sublimate, not to mention any of the alkaloids occasionally used in like manner. Dr. Laveran says: "In certain forms of poisoning and at the beginning of epidemics one cannot exercise too much caution in diagnosis." In the East Indies, according to Morehead, criminal poisoning is frequent during epidemics of cholera.

Brouardel sums up his objections to cremation as follows: —

The handling of the bodies subjected to cremation is such as to expose those engaged in the work to greater danger of infection than would be the case in burial.

The interests of justice and those, equally great, of persons unjustly accused of having committed crime, would be seriously compromised by the adoption of cremation.

If cremation is permitted only after an autopsy and an analysis of the viscera it would be necessary before adopting such a scheme to establish a great number of autopsy rooms, and to educate a numerous corps of experts. It is only when these various questions have been seriously considered and properly solved that cremation could be permitted without detriment.

ON DEATH BY COLD.

Dieberg[1] has formulated some valuable conclusions on this subject as the result of his observations on the bodies of thirty-one persons who died by exposure to cold. He found in all these cases that the heart in all its cavities was distended with blood of a fluid consistency and deep color, with an occasional soft clot. He determined the relative fullness of the heart by weight, and shows that although many of the victims of frost may be supposed to have been intoxicated when they became chilled alcohol was not the cause of the death, because in cases of fatal alcoholism alone, without the intervention of cold, he found the weight of the blood contained in the heart to be nearly four times less than in the others.

In explanation of the cause or manner of death in these instances the author states that under the effect of cold the tissues and the vessels undergo a contraction which is in proportion to the temperature depression; that the more superficial and thus the more exposed the vessels are the greater also will be their contraction; that according as the exposure to the cold is prolonged the contraction will progress from the periphery to the centre; that the heart will be able to send only a limited amount of blood forward into the vessels, the latter being unable to receive the normal supply; that the lungs continuing their functions still further supplies of blood are forced in upon the heart, and finally the arrest of that organ is effected, and death by syncope results.

This theory is in accord with facts observed by persons who have survived exposure to a very low temperature. In the report of his voyage to the North Pole Wrangel relates that when the thermometer on one day registered —53° C. every one suffered from headache, tinnitus aurium, subjective optic symptoms, and especially an extremely violent sense of weight and discomfort, indications apparently of circulatory disturbances.

Dieberg believes that death by cold is really due to syncope rather than, as Lesser and Hofmann have held, to asphyxia. In asphyxia one finds at the autopsy dark fluid blood, engorgement of the large veins and the right side of the heart, hyperæmia of the lungs and other organs, punctate hæmorrhages in the serous and mucous membranes. But in death by cold the blood is not always or wholly fluid; it contains clots, especially in the heart. Moreover, its color, instead of being very dark as in asphyxia, is of a brighter hue. Distention of the large veins is not observed, and in the heart the blood is equally distributed in the cavities, and is not found in relatively increased amount in the right side.

The author summarizes his conclusions thus: If, he writes, on making an autopsy upon a frozen cadaver one finds no appreciable lesions to account for the death, but discovers the heart engorged with blood in all its parts, he may declare that the individual was exposed to cold while still living, and that the cold was the cause of the death. If, on the other hand, the heart is empty of blood the examiner may conclude that the person was already dead when exposed to the cold, and that another cause of death must be sought for.

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[1] Vierteljahrsch. f. gerichtl. Med. u. offentl. San., xxxviii., page 1

PUNCTURED WOUNDS.

Professor Hofmann, of Vienna, states in a recent article[1] that many errors have grown out of the notion which is widely entertained, by physicians as well as by the laity, that one can readily recognize, from the shape of a punctured wound, the kind of weapon which produced it. There is only one class of pointed instruments, those namely with a double edge, which makes wounds whose outlines exactly reproduce those of the weapon. The shape of such wounds is like that of a cross section of the blade, two arcs of a circle meeting at an acute angle. But double-edged blades are not the only ones which produce wounds of this shape; they could be made also by thrusts with a knife having a single cutting edge, or with an instrument conical in shape or many sided. Dupuytren and Malgaigne long ago established the fact that conical weapons make punctured wounds which are not round but linear, and they added the observation that the direction of these wounds was different according to the various parts of the body. In 1861, Langer elaborated these views and showed that the skin has a special "cleavage" for each region. In making deep punctures in various parts of the cadaver, he was able to mark out zones or areas more or less extensive wherein identity of appearances, due to the anatomical structure of the skin, was manifested.

With regard to ordinary knives, it is generally thought that they make wounds whose shape is that of a cone with the base larger or smaller according to the thickness of the blade. Observation shows that this is not true, but that oftener the wound terminates in two tapering ends just as if it had been made by a double-edged weapon.

Wounds made with blades with several faces usually have a stellate form, and the number of rays corresponds with the angles upon the weapon. When the little triangular flaps of skin outlined by the faces of the weapon have been forcibly driven inwards by the thrust, we may have a wound whose shape reproduces that of the blade.

With weapons which have a great number of sides and angles, the angles necessarily becoming more obtuse according to their number, we may have linear wounds like those made with conical blades; but there may often be seen little secondary rents, corresponding to the angles of the weapon, branching from the primary opening.

The foregoing rules are subject to some exceptions. Thus, when a conical weapon wounds a part where different systems of cleavage in the skin converge, the resulting lesion may be triangular. Wounds made with a knife may likewise show secondary cuts when the weapon is turned in withdrawing it. When the knife has penetrated a fold in the skin, the part, if put upon the stretch, will show an opening of zigzag shape.

The dimensions of punctured wounds may supply some indications for identifying the weapon used. But here again experience often contradicts theory. Thus with a conical weapon the wound generally has a length greater than the diameter of the weapon at the point where it was arrested. This is explained by the elasticity of the skin; but as this quality is limited, it may show itself, under the action of a thick conical instrument, in secondary rents, and then the principal wound is shorter than the diameter of the weapon. When one thrusts a very sharp knife into a cadaver, if care be used in entering and withdrawing the blade, a wound results whose length is equal to the width of the instrument at the point where it was arrested in the skin. But almost always the length of the wound exceeds the width of the blade because the cut is enlarged by the lateral movements made involuntarily in the thrust or the withdrawal, so that a very narrow blade may make large wounds and when these are superficial one might readily classify them as incised. It is plain from this that the manner of holding the knife with reference to the cutting edge has great influence on the resulting lesion.

Sometimes, on the other hand, the wound is smaller than the weapon which produced it. This is due to the retraction of the skin, which spreads the edges of the cut and thus approximates its extremities a little. This retraction is more or less marked according to the looseness of the skin's attachment to the subjacent tissues; and it is further modified by the direction in which the thrust was received, whether in a perpendicular or a parallel direction with reference to the line of cleavage in the dermal layers; it is thus that on the extremities wounds perpendicular to the long axis of the limb always gape more than others and hence appear shorter. This affords a practical hint; in taking the dimensions of such wounds it is well to bring the edges of the cut together into a rectilinear shape and then to measure the length only.

Knives whose cutting edge is dull may make punctured wounds much smaller than their own diameter. The same thing results with a cutting instrument sharp at the point and blunt in the rest of its length; in such a case, once the point has penetrated, the thicker part of the instrument simply stretches the skin, which by virtue of its elasticity returns to its previous condition, as far as may be, as soon as the weapon is withdrawn. When a blade of this kind is slowly pushed through the skin, a funnel-shaped depression is seen around the instrument at the point where it penetrates; upon reversing the direction in process of withdrawal, the skin forms a cone around the blade. A bayonet in this way makes a wound which may be a centimetre shorter than the blade's diameter.

If the weapon is very dull, it acts like a wedge and makes a wound whose direction is wholly subordinate to the anatomical structure of the skin; if, for example, one thrusts a dull bayonet into a limb perpendicularly to its axis, the resulting wound has a direction parallel with that axis. In these cases the wound is generally smaller than the weapon, always depending in this regard on the elasticity of the skin. But the aspect of the wound, if it shows secondary rents at its edges, proves that the skin has been stretched, and it thus furnishes important evidence of the nature of the weapon. In making on the same region of the body several punctures with a blunt bayonet, each time in a different direction, one sees that all these wounds are parallel, one with the others, and with the predominant direction of the fibres in the skin; but the direction of the little secondary rents at the edges of the puncture indicates that in which the weapon entered.

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[1] Annales d'Hygiène publique et de Médecine légale, June, 1883, page 491.

MEDICAL EXPERT TESTIMONY.

It is to be regretted that in this important department of forensic medicine there is so little progress to report. The medical expert continues in his equivocal and unsatisfactory relations to the courts, and his testimony is of the familiar pattern in its character, methods, and results. In this State a spasmodic effort was made in the last Legislature to correct the admitted evils and abuses of the prevailing practice. A hearing was had before the Judiciary Committee, and the usual arguments in favor of reform were presented by doctors and lawyers deeply interested in the subject. A bill designed to meet the requirements of the case was formulated by the committee, but the measure perished speedily and ignominiously upon its presentation for legislative action, the opponents of the contemplated change being wholly drawn from the profession whose members are always ready to disparage expert testimony, but are equally ready to purchase some of it when it will serve their needs in the presence of a jury.

The Medico-Legal Society of New York has lately taken its turn in discussing the subject, and has devoted much energy in diagnosticating the disorder which afflicts expert testimony and in suggesting a line of treatment. The discussion was introduced to the attention of the Society by Dr. O. W. Wight, of Detroit, who besides being a physician is also a practicing attorney. In a valuable paper[1] he answers the question, "What is expert testimony and who are experts?" Expert testimony, he writes, just so far forth as it contains the special knowledge of the witness and is pertinent to the issue is relevant, material, and may be essential to the ends of justice; but just so far as it is opinion, personal view or theory, it is irrelevant, immaterial, and may be mischievous. Opinionated expert testimony is repugnant to justice, contrary to law, and alike intolerable to exact science and true art. The presence on the witness stand of one who thinks he knows but who don't know is a judicial misdemeanor; when, therefore, a judge admits a quack expert to testify in his court, for his own enlightenment and that of his jury, he makes himself responsible for the public scandal. Judges forget that in animadverting upon the character of expert witnesses admitted to testify in their courts they are criticising their own negligence. The habit of allowing parties in litigation to select experts beforehand for their ascertained favorable opinions, and to use them as partisan witnesses, is a desecration of the temple of justice.

The author draws a faithful sketch of the partisan expert as he appears in court, under the hands of an "all-sufficient, self-sufficient, in-sufficient" member of the bar, crammed for the occasion; the picture is realistic but unpleasant. Yet Dr. Wight is "hopeful for the future." The expert, he thinks, should be called in by the court, be under the court's considerate protection, and be compensated adequately by the public as other officers of the court are compensated. In no case should the interested parties to a suit be allowed to employ experts; and in turn experts should be prohibited under severe penalties from receiving any fees from litigants. It would be well if medical societies, organized on a sound basis, should designate those who are especially learned and skilled in particular departments of medicine and surgery as proper experts in those departments, and from time to time should furnish a list of such to the courts in their locality. Laws needed to carry out a plan of this kind ought to be speedily enacted.

In a paper reviewing the foregoing article,[2] Judge Delano C. Calvin, of New York, takes exception to Dr. Wight's definition of an expert, and declares that something more is required of the witness than the simple statement of scientific facts, and that the rule regarding the admissibility of opinions should not be modified. He approves, however, of Dr. Wight's plan of selecting experts, as designed to secure competent men, free from temptation to partisanship and prejudice. To the objection that such a scheme would invade the rightful prerogatives of litigants, Judge Calvin replies that all parties would stand alike, and that expert testimony has for its essential purpose the information and education of the court and jury in matters material to the right administration of justice.

The Medico-Legal Society before which these papers were read referred the subject to a committee composed of physicians and barristers; and the report of this committee, while agreeing in general with the views submitted by Dr. Wight, recommends a somewhat novel remedy for the evil. It suggests that "a body of medical experts be chosen by the judges of the Court of Appeals; that these experts be selected from a list of surgeons and physicians, to be recommended by the medical profession in some manner to be determined hereafter; that each physician or surgeon so recommended must have had at least ten years' practice as such, exclusive of hospital service, and that he must have spent at least five years in the active practice and discharge of duties pertaining to the specialty in which he is presented as having expert knowledge; that to these medical experts so chosen be referred all questions of medical jurisprudence arising in the courts; that counsel have a right to submit in writing to these experts any questions pertaining to the matters before them; that these experts report thereon to the court, and give in writing both their answers to and the questions submitted; that a compensation by salary or fee be fixed by the law for their services; that in either case the compensation should be liberal, and such as would amply repay any physician or surgeon for any loss of practice he might sustain or for the time spent in such service; that, as far as practicable, the above body of experts embrace and relate to every branch of medical jurisprudence."

Such are the latest views concerning expert testimony, and its deplorable need of reformatory treatment. Meanwhile, the established rules of law do not help the situation. What these rules are at the present time may be gathered from an instructive book just published, whose author has compiled from all sources the authoritative decisions of the courts of this country concerning expert and opinion evidence.[3] Some of these rules of law, so far as they apply to medical experts, are as follows: —

"The law does not recognize to the exclusion of others any particular school of medicine, or class of practitioners.

"To give an opinion on medical questions, one may be qualified by study without practice or by practice without study. Nor is it absolutely necessary that he should be a physician or have studied for one.

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[1] The Medico-Legal Journal, September, 1883, page 140.

[2] The Medico-Legal Journal, September, 1883, page 200.

[3] The Law of Expert and Opinion Evidence reduced to Rules. By John D. Lawson. St. Louis, 1883.

"The opinion of a medical man is competent as to matters which he has not made a specialty in his study or practice.

"A medical man is not disqualified to give an opinion because he is not a graduate of a college and does not possess a license to practice; or is not at the time in practice; or because a case exactly like the one in question has never been seen or read of by him before.

"A medical man is an expert on the value of medical services, but not as to the measure of damages.

"The jury are not bound by the opinions of medical experts.

"Books of science and art are not admissible in evidence to prove the opinions contained therein; but books of exact science are admissible. An expert may testify to an opinion of his own derived from books; and when a witness has referred to a book as an authority for an opinion, the book is admissible to test his knowledge or to contradict him.

"A witness testifying to matters of opinion may be impeached by proof that upon a former occasion he had expressed a different opinion.

"The qualifications of persons offering themselves as experts may be tested by the opinions of others in the same calling.

"The qualification of a witness to testify as an expert is a question for the trial court, whose decision is not generally reviewable on appeal.

"The opinion of a witness as to his own qualifications is irrelevant.

"One not an expert may give an opinion, founded upon observation, that a certain person is sane or insane."

Such are some of the dogmas which are based on decisions of the highest courts in the various States of this country. Illustrative cases fully adjudicated, of which a great number are cited by Mr. Lawson, appear on every page of his book, and relieve it of the dryness which is said to characterize the literature of the law. The following quotation from a decision by Judge Temple, of the Supreme Court of California, will be an appropriate conclusion to this section of the Report: "Expert witnesses ought to be selected by the court, and should be impartial as well as learned and skillful. A contrary practice, however, is now, probably, too well established to allow the more salutary rule to be enforced; but it must be painfully evident to every practitioner that these witnesses are generally but adroit advocates of the theory upon which the party calling them relies, rather than impartial experts upon whose superior judgment and learning the jury can safely rely. Even men of the highest character and integrity are apt to be prejudiced in favor of the party by whom they are employed; and, as a matter of course, no expert is called until the party calling him is assured that his opinion will be favorable. Such evidence should be received with great caution by the jury, and never allowed, except upon subjects which require unusual scientific attainments or peculiar skill."[1]

— The two latest baronetcies conferred on medical men in England were bestowed on Sir Joseph Lister and Sir William Bowman. The latter is an honorary member of the Massachusetts Medical Society, having been made so in 1881.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

DECEMBER 3, 1883.

DR. GEORGE T. TUTTLE read a paper on

CASES OF MELANCHOLIA,

which is printed in full on page 77.

DR. WEBBER said he saw these cases generally in the early stages. His experience with opium had been favorable, but he had not used it in many cases. He generally preferred valerianate of zinc and hyoscyamus, in one case he had added bromide of potassium. The prevailing tendency is to give chloral and bromide of potassium, but they may do harm when long continued. A combination of bromide of potassium and hyoscyamus often seems to be of service in melancholia.

In answer to a question as to the formation of an opium habit, the reader said that the patients do not know what they are taking, and the dose is usually reduced to a very small quantity before they leave the hospital. He had not known any bad effects from the drug.

DR. STEDMAN spoke of a case of melancholia lasting three months. The patient was twenty years old, and the attack had been caused by over study. Chloral and bromide of potassium in large doses had been tried without benefit. Opium given three times a day and a generous diet proved to be the best thing.

DR. FISHER said that he used narcotics less than twenty years ago, when opium was the standard treatment. In many cases the relief is very great at first, but often they seem to be injured by the morphia, and may sink into a condition of dementia. In one case where no sleep could be obtained without morphia suicide had followed; in another case the opium habit was formed. It is always necessary to keep the patient under hospital control until the morphia is discontinued. Sometimes a solution of quinine may be substituted for it, the same quantity of liquid being taken at each dose. He thought that often more harm might result from omitting than from using the morphia, and he was inclined to think that since the treatment with chloral and bromide had been in vogue the reaction against opium might have gone too far.

DR. COWLES said that the cases cited by the reader included all the cases of agitated melancholia that had been seen at the hospital for the past four years. The main reliance has been a general supporting treatment. The authorities disagree on the advisability of using opium. Many German and French writers advise it, other French and English authorities condemn the use of sedatives. In agitated cases that go on badly after five or six months, it is well to use morphia or other sedatives vigorously. In some cases where cannabis and bromide are used early, and the insomnia is controlled, the patient is better able to get the benefit of the general treatment.

DR. FOLSOM said that there was still some difference of opinion in regard to the opium treatment of melancholia. From his experience he is inclined to think that opium has but little effect on the disease, but for a sedative to relieve the symptoms it is better than anything else. Many cases get well in two or three months if no harmful treatment is used. Business men often work off an attack by giving up their occupation for one or two months, or by diminishing their amount of work; others, where the attack is more severe with specific delusions, may get well in from half a year to two years; but here the opium cannot be used continuously without doing harm. In epileptics opium is hurtful when used continuously, but may be safely given for periods of a few days. Many cases of melancholia that he sees have been taking bromides, bromidia, etc. The first step is to omit these, give ol. morrhuæ, malt, open air exercise, and many hours in bed; the amount of exercise must be adapted to each individual case, and must not be overdone, as too much is as bad as too little; sleep may also be encouraged by taking food during the night. In exceptional cases, where the delusions are severe and distressing, less harm will often result from opium than from allowing the patient to go without it. At Danvers he has seen a number of cases treated without opium with good results; it is not unusual to have two cases in eight recover. He mentioned the case of a young lady who had severe melancholia, with the delusion that she and all the family were to be killed by persons waiting outside the house. She had been taking bromide and chloral. These were discontinued, and Vichy, malt, and out-of-door exercise were prescribed. At the end of four months she was well. No sedatives were used, and the recovery seemed more complete and rapid than it might have been without these remedies. In answer to Dr. Bowditch, he said that he had known cases where the opium habit was acquired, but they were less frequent now than formerly.

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[1] Ibid., page 243

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PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

Thursday evening, December 27, 1883. The President, Dr. Tyson, in the chair.

FRACTURE OF THE BASE OF THE SKULL.

Exhibited by Dr. Guy Hinsdale.

J. H. W., aged fifty, fell on the ice December 8, 1882, striking upon the stone pavement. The blow was received on the posterior and left side of the skull, and the skin was not broken. He was shortly afterward admitted to the Episcopal Hospital, and was totally unconscious. Blood was found flowing from his mouth and left ear, and his nose contained clots. His pupils afforded no evidence of his condition, because of an iridectomy which had been performed on both eyes some years previous. He talked incoherently; breathing was labored and at times stertorous. Paralysis of the left leg was noted.

Blood continued to issue from the left ear, and on the second day the discharge became thin, and continued serous until his death, which occurred on the eleventh day. The urine was examined several times, and found to contain sugar in moderate amount, but no albumen. Urine was passed freely. The patient never regained consciousness; he became more stupid, and paralysis of the left leg remained.

At the autopsy a superficial clot was found over the brain beneath the seat of injury. A very large clot was found over the right frontal region beneath the membranes, and filling the sulci between the convolutions. This was the result of the counter-stroke, the force having been first received at a point diametrically opposite, and fully accounts for the left-sided paralysis. The fracture was slightly over five inches in length. It extended from a point in the left occipito-parietal suture one and a half inches behind the temporal bone, and traversed the suture, passing through the petrous portion of the temporal bone, the auditory canal, close to the inner side of the foramen ovale towards the foramen rotundum, where it terminated.

NECROSIS OF THE TEMPORAL BONE AND BRAIN ABSCESS.

Exhibited by Dr. Guy Hinsdale.

This specimen was removed from the body of M. P., aged forty-six, who died in the Episcopal Hospital September 21, 1883, after long-standing aural disease.

In early childhood she had scarlet fever; this was followed by aural catarrh, and the discharge from the ear continued until her death. She stated that when twenty-two years of age a polypus could be seen in her ear. Fifteen years ago this was removed; again masses were removed thirteen years, two years, and one year, ago.

In May, 1883, four months before her death, the patient consulted Dr. Burnett, who has very kindly furnished me with notes of that date. The patient presented at that time a most wretched appearance. Extreme weakness, pallor, and emaciation betrayed the intense suffering of this unfortunate woman. Paralysis of the right side of the face had occurred during the previous winter without the supervention of additional ear symptoms. At the time of examination she presented great sensitiveness of the auriculo-temporal nerve, and complained of intense pain over the right temporal bone. To control this pain she was accustomed to use morphia suppositories. An examination of the ear revealed a mass of granulations filling the entire lumen of the auditory canal, half an inch from the entrance. Late in May a large polypoid mass was extracted; bare bone was then discovered on the posterior portion of the canal, the channel narrowed and blocked with granulations. About two fluid ounces of blood escaped after removing this mass.

When I saw the woman at the hospital in September she was in a very low state, and evidently near her end. Her mind was seriously affected, conversation was impossible, and she groaned with the pain, which large doses of morphia would not altogether control. There was a moderate but constant purulent discharge from the ear and from a sinus which was found above the meatus. The whole temporal region was boggy. The probe passed in freely over an inch, and loose particles of dead bone could be everywhere felt. The disease had long been beyond the reach of any remedy, and there was nothing to be done but relieve pain and await her death.

The specimen removed embraces portions of the right temporal, parietal, and occipital bones. Almost all the temporal bone has been destroyed. Only the mastoid process and the upper border of the squamous portion remain. An area of bone one and a half by two inches has entirely disappeared. Adjacent to this region, and lying next the middle fossa of the skull, was a brain abscess, the walls of which were greatly thickened. On opening this cavity about an ounce of thick yellowish pus was found. A probe easily reached this cavity through the auditory canal and the sinus above it, and many loose fragments of bone were found at the outlet. The styloid process was found loose, but held in position by the various ligaments that arose from it. The inflammatory process, in which the meninges had of course shared, was not acute; the brain substance beyond the abscess walls had no unusual appearances, and the left cerebral lobe with its membranes were normal.

Dr. C. H. Burnett thanked the Society and Dr. Hinsdale for the opportunity of seeing this very interesting specimen, and of making a few remarks upon the case. The great destruction of bone tissue is remarkable and unusual in extent, being three inches in length and one and a half to two inches in breadth. The necrosis seemed to have originated in the tympanic region rather than in the mastoid, and hence belongs to the class of cases second in frequency, the most frequent being those fatal cases where the bone disease originates in and extends from the mastoid cavity. The case when seen by Dr. Burnett, in the spring of 1883, presented very grave symptoms, and the patient was extremely weak, so much so that Dr. Burnett was surprised that she lived until September. The occurrence of extensive granulations in the external auditory canal constituted a very unfavorable feature, as they acted like a dam, preventing the escape of the products of inflammation and held them back in the tympanic cavity and mastoid cells, forcing them to break an escape through more important and vital tissues. The case furnishes another example of the evil of neglect of purulent disease of the ear. Dr. Burnett inquired whether there were symptoms of destruction or implication of any of the nerves passing through the cavernous sinus, as would be shown by alteration in parts supplied by the oculo-motor, the pathetic, and ophthalmic nerves.

Dr. Hinsdale replied that no eye symptoms had ever been detected.

CASE OF PHTHISIS WITH EMPYEMA.

Presented by **Dr. H. M. Fisher.**

The patient, J. C., aged twenty-one, was admitted to the Episcopal Hospital March 17, 1883. The following notes of the case were taken by Dr. George M. Boyd, the resident physician. Patient states that he has had a slight cough for one year, but was not much annoyed with it until about one month ago, when he was seized with severe pain in the left chest, accompanied by chilly sensations and difficulty of breathing. Upon admission he presents all the symptoms of left pleural effusion, absent vocal fremitus, tubular breathing, and bronchophony in the neighborhood of the spinal column on the left side. His chest was tapped on the morning of March 21st, and three pints of a semi-purulent fluid were evacuated. The operation was followed by great improvement in the patient's symptoms. Three weeks later he left the hospital, contrary to advice. He was readmitted April 20th, and stated that, soon after leaving the hospital, the pain in the side returned, followed by dyspnœa. April 23d paracentesis thoracis was performed by Dr. Henry, and fifty-six ounces of purulent fluid were drawn off, and the operation again afforded great relief. A violent fit of coughing followed the withdrawal of the canula. The heart's apex beat was found, before the operation, to be immediately below the right nipple; after the operation it was found to have shifted one inch to the left of its previous position. May 5th Dr. Forbes operated at Dr. Henry's request, making two openings into the left pleural cavity, one at fifth interspace, the other at the fourth and to the right of the first. Ten ounces of purulent fluid were withdrawn by means of the aspirator, and a soft rubber catheter was passed in at one of the openings and out at the other. The pleural sac was then ordered to be washed out daily with a solution of corrosive sublimate, one grain to the ounce.

During the summer the patient's general condition seemed for a time to improve; his appetite, however, continued obstinately bad, and he had constipation alternating with diarrhœa. In October it was noted that he was losing flesh and strength rapidly, and that there was much œdema of the feet and legs. During this month diarrhœa became a constant symptom, and death occurred November 22d.

Post-mortem Examination (ten hours after death). The body is extremely emaciated. The left lung is contracted to about one fourth of its normal size, and contains in its upper lobe some cheesy masses with areas of catarrhal pneumonic infiltration. The left pleural cavity contains about five ounces of ichorous pus. The parietal layer of the left pleura is so tightly adherent to the chest wall that it is impossible to detach it without dissection. The pulmonary layer is also tightly adherent to the contracted left lung, the lobes of which are firmly matted together by adhesions. The right lung also presents numerous cheesy foci with large areas of catarrhal pneumonic infiltration. The heart is rather small, and its tissue is pale, but its valves appear normal. The liver weighs six pounds six and one half ounces, its tissue is pale, and it has a *markedly waxy appearance.* The spleen is much enlarged, its tissue *firm, and of a dusky-red hue.* Numerous *yellowish white nodules* are also seen in it, the largest of which is perhaps of the size of a small pin's head. The kidneys are rather large, their capsule is non-adherent, and their tissue rather paler than normal. Numerous *minute whitish nodules* are also found to be scattered through the tissue of both kidneys. These appear rather more numerous and larger in the cortical portions, but are also found in the medullary portions. From some of the larger nodules a whitish puriform substance can be squeezed out with the blade of the knife. With the naked eye the exact nature of the above-mentioned infiltrations of the spleen and kidneys is difficult to determine. Nothing abnormal was noticed in the intestinal tract, except in the ileum, where an area of intense congestion was noticed about one yard from the ileo-cæcal valve, but no ulceration was anywhere detected.

My view of the sequence of pathological events in this case is the following: First, catarrhal pneumonia with the production of cheesy foci; secondly, scrofulous inflammation of the pleura with attendant exudation, which from the start was probably more or less purulent; and thirdly, the infiltration of the *liver, spleen,* and possibly also the *kidneys* with amyloid matter.

The exact nature of the yellowish white nodules in the spleen and kidneys being yet undetermined, I cannot yet assign to them a positive place in the chain of scrofulous processes, but from the absence of any microscopic evidence of embolic infarctions, or of any appearance of infarction in the one microscopic section of the kidney I had the opportunity of examining (kindly made for me by Dr. Henry), I should conclude that these were also cheesy foci, and their production may perhaps have nearly coincided in point of time with the production of the cheesy foci in the lungs above alluded to.

Dr. Shakespeare said that specimen was a good instance of miliary tuberculosis. The small collection in the spleen might be tuberculous, he thought, and should have been examined for tubercle bacilli. He adverted to the successful employment of very weak solutions of corrosive sublimate in washing out suppurating serous cavities.

ATHEROMA, DILATATION, AND ANEURISM OF THE AORTA; ATHEROMA OF SOME OF ITS BRANCHES; DEATH FROM RUPTURE OF THE ANEURISM INTO THE LEFT PLEURAL CAVITY; CONGENITAL DEFORMITY OF THE STOMACH; MALPOSITION OF THE TRANSVERSE COLON AND RIGHT KIDNEY; IRREGULAR SHAPE OF THE KIDNEY; ANOMALOUS ORIGIN OF THE RENAL ARTERIES AND OF THE URETERS.

By J. H. Musser, M. D.

This remarkable series of specimens illustrates how serious a disease can be in progress within the body without any manifestations. The patient had been under the care of Dr. Ludlow in the Presbyterian Hospital, complaining of, and being treated for, nasal catarrh. He complained, also, of a slight bronchitis, but, it not being very decided, the nasal trouble alone was treated. A white man, aged sixty-three, well nourished, of temperate habits, and by occupation a wheelwright. He was under observation ten weeks. No previous illness. He slept well the night before his death until five A. M. He then told the night nurse he was very cold. Being covered, he went to sleep apparently; an hour afterwards he was found dead. The writer made the autopsy about twelve hours after death.

Inspection. Rigor mortis well marked; body well nourished; no scars or bruises; no ecchymoses; abdomen moderately distended; in the right lower quarter a decided swelling was noticed, almost filling that area and resonant on percussion.

Section. Abdominal cavity first examined. The above-described swelling was due to the cæcum and transverse colon. The ascending colon extended about half way the usual distance and then turned at a sharp acute angle into the transverse colon. The latter descended parallel to the former into the right iliac fossa, and from thence diagonally upwards across the abdomen to the usual place of junction with the descending colon. The omentum contained a considerable amount of fat. The right lobe of the liver could not be seen until removal of the ribs, when it was found two inches above their margin and to be only two and one half inches in length in the nipple line. In the median line this same perpendicular length was three and one half inches. More of the left lobe was visible than the right. Along the edge of the left lobe, from the median line, four and one half inches in length, extended the *stomach.* It appeared to be small in size. When removed it was found to be divided by a constriction five inches from the fundus; from this constriction to the pylorus the length was four and one half inches. The first or cardiac end was much smaller than normal, the walls and mucous membranes healthy. The second portion was a mere tube with thick walls. The thickening was due to the hypertrophy of the longitudinal muscular layers, and to the folds that the mucous membrane was thrown into. These folds were very marked, longitudinal, and, on their crests, congested. The peritonæum was opaque and thickened. The *liver* was smaller than usual also. The capsule was thickened and opaque along the edges of the right lobe; on examining surface there were cicatrices and a firm adhesion at one point to the diaphragm. On section the tissue was firm on pressure, and congested. Commencing cirrhosis noted on microscopical examination. The gall-bladder projected one inch below the liver margin in the nipple line.

The left *kidney* was found in its normal position. It was much enlarged, five inches long, two thick. The pelvis was filled with fat, the substance pale, hard on pressure, with a contracted cortical portion. The capsule tore off easily. The right kidney was found in the pelvis at the right sacro-iliac articulation. It was small in size, irregular in shape, parallel to the sacrum. The portion dipping downwards tapered to a point, being one half inch in width; the upper portion was two inches wide. The pelvis of the kidney was filled with fat. Towards the small end of the kidney the hilus divided, one part extending upwards one inch along one side of the organ, the other the same length on the other side; or it might be said, a portion of the kidney dipped into the pelvis, separating it for an inch. The renal artery arose from the normal origin of the middle sacral. One inch from the point of origin it divided, one branch, one inch long, entered one lateral hilus, if it may be so termed, the other divided two and one half inches from the main trunk, one subdivision entering the remaining lateral hilus, the other running across the floor of the pelvis to the normal end of the kidney. The ureter arose in three branches — two from the upper end, one from one of the smaller pelves.

Thoracic cavity. Left pleural cavity almost filled with blood, the lung floating on the fluid. The lateral surface was adherent to the aneurism. In its removal the collapsed sac was seen on the left side of the vertebral column. The heart and aorta were removed entire. Heart enlarged, left side especially; measurements of left ventricle: round base, one and one eighth inches thick, in the middle, seven eighths inch thick, at apex, one half inch thick; mitral valves a little thickened; aortic healthy. Atheromatous processes were present in the aorta from its beginning to the cœliac axis, and extended into the latter vessel and also the innominate and carotid arteries. One calcareous plate was found in the cœliac axis. From its origin to the middle of the transverse aorta the vessel was dilated, and the characteristic fatty changes of the proliferated cells of the intima, lemon-yellow colored, smooth, soft elevations, were marked. Opposite the trachea the calibre of the aorta diminished to almost normal size, and here the sclerotic changes were most marked as well as around the mouths of the vessels. At the junction of the transverse and descending aorta the lumen was again closed. Here the aneurism originated. It was five and one half inches long, and, where distended, twelve inches in circumference. It was of the true variety, but from it sprung four false aneurisms, varying in size from a filbert to a small egg. Organized clots covered the surface of portions of the wall. Rupture of the sac took place behind and in pleural adhesions, and leaked into the cavity, finding its way through the adhesions. The vertebræ were not eroded, and although the sac was in contact with the left bronchus there were no evidences of decided pressure upon it, while the relations to nerves, other vessels, and the œsophagus were such that the usual pressure symptoms could not arise.

It is thus seen that by physical examination alone this aneurism could not have been detected. There were absolutely no subjective symptoms, and the autopsy reveals the reasons of this.

HOUR-GLASS CONTRACTION OF STOMACH. CONGENITAL.

Presented by J. H. MUSSER, M. D.

The patient, an adult, from whom I removed this stomach, died of organic heart disease. Constant vomiting occurred a few months before death, but as a consequence of the general condition of the patient, and not on account of the gastric change. I call the appearance congenital because of the absence in the clinical history of any occurrence throughout life to have caused it, and of the want of evidence on post-mortem inspection. The contraction took place in the centre, and was transverse. The peritonæum and submucous connective tissue was thickened at this point. Anterior to the constriction the muscular coating was hypertrophied. The mucous membrane was thrown into folds by the constriction.

LUNG FROM A CASE OF PLEURO-PNEUMONIA COMPLICATED WITH DELIRIUM TREMENS.

Presented by J. H. MUSSER, M. D.

I present this specimen to-night on account of its perfection. It is the lower lobe of the right lung in the stage of red hepatization, as indicated by the appearance, weight, etc. Almost the entire pleural surface, including the diaphragmatic, is covered with recent lymph, the layer averaging one half inch in thickness. The tongue of the lung dipping into the space between the diaphragm and the thoracic wall is not solidified entirely. Here the lymph is abundant, and the contiguous portion of the lung hepatized, as if the inflammatory process extended from the pleura. This peripheral hepatized portion is but one fourth inch wide. The inner and succeeding portion is not solidified.

The patient died eighteen hours after admission to the hospital, from heart-clot. When admitted there were evidences of its formation, and in addition he had the delirium tremens. The pneumonia was distinctly recognized. There were no signs of simple or diaphragmatic pleurisy. At the autopsy on removing the sternum, the extreme distention of the right heart, was remarked, especially the auricle. On opening the heart, hypertrophied from other causes, the right side was found filled with blood, and an enormous ante-mortem clot entwined around the leaflet of the tricuspid valve and extending through the auricle into the pulmonary vessels. A similar clot was found in the left heart. The kidneys were congested, and commencing cirrhosis appeared manifest.

The history of the case antecedent to the admission to the hospital is as follows: The patient had been on a "spree" for two weeks, and five days before admission had had a severe chill followed by the symptoms of pneumonia. Two days after the chill the mania developed, and on the day of admission he had been found wandering about the streets by a crony, who brought him to the hospital. He was forty-one years old, a boss machinist, single, of intemperate habits.

CARCINOMA OF THE UTERUS; FATTY KIDNEYS AND EMPYEMA.

By W. A. EDWARDS, M. D.

The specimens which I show you to-night were taken from the body of A. E. this morning. I have not, as yet, had the opportunity of examining them microscopically. The patient was visited but once before her death by Dr. J. S. Watt, for whom I made the post-mortem examination. The history of the patient is of course imperfect; in fact, little if any could be obtained; the symptom of which she complained the most was an ill-smelling, irritating discharge from the vulva, so our attention was first directed to the womb, which presents a scirrhus carcinoma of the external and internal os and of the cervical canal. The mucous membrane of the organ is softened and very rugous, looking not unlike a mammillated stomach. A microscopic section will probably show cellular infiltration. The uterus is enlarged; our subject was a multipara, aged forty-five, nine children and two miscarriages. A cyst was seen in the right parovarium, its contents was pure serum. The ovaries presented areas of calcareous degeneration; other pelvic viscera normal. The kidneys are small, and appear to have undergone some amyloid change; the right one was a rib higher than its normal position.

Heart muscle has undergone some fatty degeneration as has also the aorta; valves almost normal, ante-mortem clots in each ventricle, that in the right is of unusual size. Pericardium contained the usual straw-colored effusion.

Lungs: Left normal. Right, the pulmonary and costal pleura were in many places adherent by thick, well organized lymph, which beautifully illustrates the rationale of friction râles, their sudden appearance, short duration, and equally sudden disappearance. About a pint of purulent effusion was collected in the base of right chest. The diaphragmatic pleura was tightly adherent to the pulmonary, requiring some tearing in order to separate. The lobes of this lung are bound down by recent lymph. Scattered throughout the mesentery were to be seen areas of calcareous degeneration, about the size of almonds.

Recent Literature.

Wiesen as a Health Resort. WISE. London: Baillière, Tindall & Cox. 1883. 68 pages.

This little book is an evidence of the growth in favor of high altitude in the treatment of early phthisis. Davos and St. Moritz have become fashionable, and consequently expensive, but consumption and the desire to be rid of it are not confined to the rich. Wiesen, moreover, seems to have some special advantages in situation apart from its cheapness. It is eleven miles from Davos, and about three hundred feet lower, but lies on a hill-side, about one thousand feet above the river, while Davos is in the valley, and but little above the river level; while equally protected from cold winds by mountains, Wiesen is, therefore, dryer than Davos. Full details are given as to the best means of reaching these Alpine sanitaria, at the same time that the visitor is advised as to clothing and informed as regards accommodation, food, resources for passing the time, physicians' fees, and the like. At the end of the book unusually full meteorological tables are inserted, doubling its thickness if not its value. A special table shows the cases of death since 1834, and from this we learn that if any inhabitant of Wiesen ever died of consumption he brought no discredit to his native place by dying there. The writer evidently wishes to be fair, and we can recommend his book as containing useful information alike to those who think of seeking health for themselves in the Alps in winter, and those who send others in the search thither. F. C. S.

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THE HEATING OF DOMICILES.

The problem of how best to heat our dwellings is (be it said without a quibble) a burning question. Many plans have been suggested, some of which have erred by premising that methods which have been found sanitary and available in England, for instance, would be equally feasible in our country. This has been the mistake of those who have advocated the open fire-place, or its congener, the open grate, as a sole means of heating. In England and in many Continental countries these methods have proved sufficient. But any one who has tried to warm a New England house by means of the time-honored and æsthetic hearth and andirons has discovered that he has burned up a small fortune, but has not succeeded in making his house thoroughly comfortable. The fire-place, excellent ventilator as it is, and useful adjuvant to other calorifacient agents, cannot be depended upon to entirely *heat* a house in this climate. Only twelve per cent. of the heat value of fuel thus burned is rendered into the room, the remainder passing up the chimney. Even were one to burn an open fire in every room, which is hardly practicable, there would be many draughts felt in cold weather at the further portions of the apartments, for air must be drawn in from without to supply the constantly ascending current, and it is known that a considerable transmission of air takes place through stone, brick, and plastered walls. So that in freezing weather the occupant of a house thus heated would be subjected to constant risk of colds from draughts as well as from too low a general temperature.

At the opposite extreme from the open fire, as an economist of fuel, stands the close stove, which gives out into the room seven eighths of the heat which the fuel produces, and loses an amount only equal to the small proportion which the open fire-place saves. Yet while it warms it admits no fresh air to the room, and takes but little foul air out. It is now generally admitted that heating and ventilation should be combined, and that that system is best which introduces an abundance of pure, warmed air into the living apartments, and removes the exhausted air. Another objection to stoves is the increased care and expense of maintaining a separate fire in each room. Preference is therefore given to some general system which warms all rooms from one common centre either within or outside the house.

The two rival methods are the furnace and steam heat.

In the February number of the *North American Review* we find a discussion between representatives of these two opposite methods. Dr. A. N. Bell, known to some of our readers as the editor of the *Sanitarian*, presents the claims of the furnace as, on the whole, the best system of heating the average moderate-sized dwelling. It is noticeable, however, that his requirements for the furnace are by no means fulfilled by most specimens of that article found in the market.

He lays emphasis on (1) a chimney draught stronger than that in the hot-air pipes so that all gaseous emanations which may be caused by crevices in the joints or a cast-iron pot which becomes overheated may be drawn off through the chimney.

(2.) The draught should be all from below the grate, with no dampers in smoke-pipe or chimney.

(3.) The fire-pot should be lined with fire-brick, and while entirely within the furnace, yet separate from it so that the fresh air to be warmed cannot come in contact with the fuel chamber.

(4.) The cold air should always be taken from out-of-doors, and the shaft should be turned up on the outside several feet from the ground, covered with iron netting and a cotton dust-strainer, and the diaphragm for controlling the ingress of air be placed at this point rather than in the cellar.

(5.) The inlet shaft should be at its smallest part, of an area amounting to one sixth of a square foot for every pound of coal estimated to be burned hourly in cold weather; and the collective area of the hot-air pipes should not be more than one sixth greater than that of the cold-air inlet. This last precaution is to prevent one hot-air pipe from drawing its supply of air from another, an accident which is not uncommon when the cold-air box is not large enough.

(6.) The heating surface should be large. As a rule there should be ten square feet of heating surface to every pound of coal consumed per hour in active combustion. The grate area should be one fiftieth of the heating surface.

Prof. W. P. Trowbridge, who is an advocate of steam heating, makes strictures on the furnace system, some of which are forestalled by the precautions that Dr. Bell inculcates. His principal argument is that the furnace heats the air to a temperature of from 250° F. to 400° F., and that by mixture with cold air it is brought down to 150° F. or 200° F. at the time it enters the rooms. Of course it requires further admixture with cool air, for which reliance is put upon accidental leakage from doors and windows. These highly heated currents of air have a great capacity for absorbing moisture from all sources. It is just at this point that the great and vital objection to most furnaces lies. Air that has once been heated to 300° F. or 400° F. is not fit to breathe. The device of setting water to evaporate in the heating chamber is, in our opinion, comparatively useless. Such air when admitted to a room has a peculiarly dry and irritating character. It warps doors and other wood-work, shrinks the joints of furniture, withers plants, and dries up the mucous membranes of the occupants. It certainly seems not unreasonable to attribute a considerable proportion of the nasal catarrhs, ophthalmias, and winter colds of the community to such causes instead of laying them all to the account of "our wretched climate." A few years ago the theory was advanced that this depraved state of the air in furnace-heated rooms was due to the use of cast iron in contact with the flame, and accordingly wrought-iron furnaces came into the market. Dr. Bell evidently shares the prejudice in favor of brick-lined pots, but the radiating surface above the flame must be of iron, and, if we remember right, Professor Remsen concluded, as the result of some experiments conducted on this point, that the purity of air exposed to superheated metal was no greater in the case of wrought than of cast iron. At all events the practical point to be guarded against in furnaces is the *overheating* of the air, and this we understand to be the object of most of Dr. Bell's directions.

There are two methods of steam-heating, the direct and the indirect. In the former the steam is led from the boiler to a coil of pipes in the room to be heated, called a radiator. From this augmented surface the heat is diffused into the room. The principle involved in this method is not materially different from that of stove heat. Both warm by radiation from a hot surface without bringing in any fresh air. One important difference (if it were a question of preference between steam radiator and stove) is that the pipes are never heated by the steam to a temperature higher than from 210° F. to 310° F., while a stove may become heated in extreme cases as high as 950° F. The element of ventilation can be added, though imperfectly, to direct steam radiation, at some sacrifice of heat, by placing the radiators near windows, and letting in out-door air under the sills to be heated and then diffused over the room. By the second or indirect method the steam is conducted from the boiler to a close chamber, which is directly under the tier of rooms to be heated. Here the pipe makes a coil, and to it is admitted fresh air in large quantities from out of doors. This air is warmed to a less degree than by any other method, say to 70° F. or 100° F., and is then delivered directly to the rooms in large quantities by pipes and registers. The comparatively low temperature of the current is economically in part counterbalanced by the increased amount of heated air thrown into the room, and by the fact that the pipes ascend almost directly, and do not lose heat, as in the furnace, by being carried horizontally, as each stack of pipes is supplied from its own radiating chamber directly underneath it.

In conclusion it may be said that wherever the boiler can (as a precautionary measure) be placed outside the building to be heated; wherever the building is so large as to require more than one furnace, if the furnace were used; wherever the heat must be transmitted to a considerable distance horizontally from its source; or wherever a number of apartments can be heated from one common centre, the indirect steam system is to be preferred. But that for the average dweller in a detached house of moderate size this system, as at present arranged, cannot be expected to become popular on account of the increased original expense of the "plant," the slightly greater intelligence necessary to understand, and skill to operate it, the liability to condensation of steam when the fire runs low, and the "pounding" which is caused when the newly-formed steam drives the water in the pipes, and which occasionally produces explosions or leaks. Finally, that in most cases where the expense of the steam system cannot be incurred, a sufficiently safe method of heating is by the furnace, care being taken to introduce a large quantity of pure out-door air to the furnace chamber, and thence into the rooms, and to see that this air is not allowed to come in contact with over-heated metal; moreover that the open fire-place is a most useful addendum to the furnace system by affording a means of escape for vitiated air, and thus maintaining a constant current through the apartment.

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IS THERE A NON-CONTAGIOUS ERYSIPELAS?

THE contagiousness of erysipelas would seem to be established clinically beyond a doubt. Striking instances in abundance are narrated in our text-books of the spread of the disease in families and hospital wards which it is unnecessary to repeat. The presence of micro-organisms in erysipelatous tissues has been abundantly established, and Dr. Fehleisen, of Berlin, has recently published the results of experiments undertaken to determine whether a species of bacteria peculiar to erysipelas is regularly demonstrable, and if this is so to inquire whether this micro-organism stands in an ætiological relation to the disease. A micrococcus, identical with one figured by Koch, was found in each one of eleven cases examined. To demonstrate that this was a specific organism and not merely accidental, attempts were made to cultivate it outside the body. After numerous failures the micrococcus was at length successfully cultivated upon Koch's meat-peptone-gelatine, and fourteen generations were produced. Though somewhat similar organisms are found in the pus of wounds and in pyæmia the mode of growth of the micrococcus of erysipelas was found to be characteristic. Experiments were first made upon rabbits to test the question whether, when inoculated, it would produce genuine erysipelas. Nine were inoculated on the tip of the ear with the cultivated micro-organisms, and in eight a typical erysipelas was produced. Inoculations of the cultivated bacteria were also made upon the human subject. An accidental attack of erysipelas has proved beneficial in such diseases as cutaneous tumors, lupus, and carcinoma, and in six cases of this sort the experiment was deemed justifiable. In each of these cases the characteristic symptoms were developed after an incubation of from fifteen to sixty hours, and it was felt that no room for doubt remained that inoculation with Fehleisen's cultivated micrococci had for its result the production of a genuine erysipelas; the specific nature of the contagium and the contagiousness of the disease would seem to be established.

Thus scientific research seems to enforce clinical observation in regard to the highly contagious character of the disease. But there is another set of opinions, based on clinical study, diametrically opposed to the opinions referred to.

Mr. T. Holmes, in a letter to the *Lancet* in May last, wrote: "It has always seemed to me that erysipelas, though no doubt under some circumstances contagious, is very feebly so, and that when it spreads in a hospital it does so in consequence either of carelessness in nursing or of impurities in the wards far more frequently than from contagion. In fact I have never myself seen a case in which I could trace contagion."

Dr. Goodridge, Physician to the Bath Royal United Hospital, writes in the *Practitioner* of December, that after a pretty long experience in a provincial hospital, where cases of erysipelas have always been admitted into the ordinary medical wards, he has never known the disease spread from bed to bed.

Billroth speaks of the disease as propagated by a contagium which is considerably less infectious than that of measles or scarlet fever.

In view of these opposing beliefs Dr. Goodridge is led to ask whether there are not two distinct forms of disease classed under one head, as from superficial resemblances, which may be very close, diseased conditions are apt to be confounded together which yet are fundamentally distinct. His personal experience strengthens this view. He has been the victim of three attacks of erysipelas of the head and face. Of these the first and third were distinctly infective. In the second case, which followed exposure to the sun, there was no constitutional disturbance. The case presented all the usual naked-eye features of erysipelas but without the tendency to spread, and resolving without delay, was clearly an instance of simple, non-infective inflammation, a simple dermatitis. He is led to the conclusion that in cases of facial erysipelas as they ordinarily present themselves in practice, whatever secondary varieties may exist, there are primarily two distinct forms to be dealt with, namely, the infective and the non-infective forms, or as the distinction, it will be seen, may otherwise be expressed, true genuine erysipelas and spurious or pseudo-erysipelas. "Without venturing to indicate in what ratio these two forms stand to one another as to frequency of occurrence, I am quite sure that I have again and again seen and treated cases of the latter — cases in which the local affection has followed exposure to heat or cold or other injurious influences, and the fever and general disturbance have been comparatively insignificant." Mr. Jonathan Hutchinson, in his paper On Certain Diseases Allied to Erysipelas clearly recognizes their existence when he says: "These forms of erysipelas which are due to local irritation are, I think, almost always mild. It is when the disease is due to contagion that it assumes its greatest severity."

The question is not a new one. It must have suggested itself to many. In 1871 Maurice Reynaud suggested that septic principles differing one from the other might possess the common property of producing the local and general accidents of erysipelas. Such an idea would explain so easily "how all cases of erysipelas are far from possessing the same degree of gravity, how some are contagious although others are not." It would seem that in time the researches in the line followed by Fehleisen would solve the question.

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MEDICAL NOTES.

— We have reason to believe that a man, sometimes pretending to be deaf and dumb, is falsely representing himself to be an agent for the JOURNAL, in common with other medical periodicals, in the States of Indiana and Michigan. We have at present no *traveling* agent in those States.

— "At one end (of the salon), in huge electric letters, I saw the words, 'Welcome, restored old patients;' at the other end, 'Dr. Pierce, the Hotel Founder;' in the centre of one long side, 'Golden Medical Discovery;' and along the ceiling, also in electric letters, 'Purgative Pellets.' . . .

"'And now,' said the Queen of Health, 'let me present you to my prime minister.' Timed with her gesture to the right, I turned my eyes, and there saw, in evening costume, a robust gentleman, of medium stature, who was in physique the very ideal type of American manhood. He seemed the very embodiment of healthful, vigorous vitality, and on his full, lofty brow I saw great indications of comprehensive mental power, sweet benevolence, unvarying courtesy, tender sympathy, and business sagacity. . . .

"I saw two venerable, sweet-faced men of Grecian features approaching the Queen of Health, holding in their hands two wreaths of evergreen — the veritable laurel from the Athenian groves. She stepped from her throne, as complaisant monarchs do, and raised them to her dais. Another bugle for silence, and she spoke: 'My guests, before we sup, an interesting ceremony remains. He on my right is Hippocrates from the Spirit Land. He on my left is Æsculapius. They come to crown our Dr. Pierce with the great laurels of his noble profession — they the great Past Grand Masters of the Healing Art, who best know who is conqueror of disease.' In a moment Dr. Pierce was about bending his knee in respectful obeisance to these ancient professors, when a gesture from both arrested him, as with dainty but dignified motions they placed upon his head the laurel leaves, each saying in a unison of musical monotone, 'Thou art our legitimate successor,' while a burst of orchestral acclaim and a chorus of thanksgiving huzzas from the guests arose. Immediately above this royal and supernaturally looking tableau I saw in pillars of rosy light these great words, the motto of the crowned Dr. Pierce, and which reveals the secret of his almost divine success, 'The Blood is the Life.'"

The above we publish as a specimen chapter. The remainder will be found only in the advertising columns of — well, we are ashamed to say, of a *Review*, which for over a half a century has occupied a foremost place in American literature. The rhapsody is ascribed to an American girl abroad, but the suggestion occurs that she wrote it when about half way on her passage thither.

— On February 1, 1884, the New York Post-Graduate Medical School, at which, since its foundation, 140 students have availed themselves of the vast amount of clinical material placed at their disposal, will take possession of more commodious accommodations located in East Twentieth Street. This change is the more advantageous as the building to be occupied is of such proportions as to admit of increased attendance on the part of both students and patients.

— The *Medical Times and Gazette* comes to us in its first issue for 1884 in an enlarged and much improved form. Its table of contents indicates a high order of excellence, and in general this periodical is evidently to become, if it is not so now, one of the most useful of the English medical publications.

— We learn that Secretary of State Frelinghuysen, having determined to establish in Egypt a system of inspection and disinfection of rags destined for the United States, has communicated this intention to the Boston Board of Health and asked its views as to the propriety of such a course, and also suggestions as to the best method of purifying rags. The Board has replied, heartily approving the plan, and suggesting Dr. George M. Sternberg, Surgeon, U. S. A., as an authority on disinfectants.

— The *International Review of Medical and Surgical Technics*, the official organ of the American Association of the Red Cross, a new quarterly journal edited by Dr. Joseph H. Warren, has reached us in its initial number. Its aim is to present a description of the principal instruments and appliances described in American and foreign journals.

— Dr. John Taylor Gilman, of Portland, Me., is dead at the age of seventy-eight. He was a prime mover in the establishment of the Maine General Hospital, and was president of the Maine Medical Society in 1864.

NEW YORK.

— Up to the 18th of January the contributions to the Hospital Saturday and Sunday fund had reached the sum of $37,712.08. This is nearly $8000 more than the entire amount contributed last year, and it is probable that a considerable sum yet remains to be reported.

— Dr. Henry A. Du Bois, who died on the 13th of January at his residence in New Haven, was formerly well known in New York, where he was born, and where he spent a considerable portion of his life. He was graduated at the College of Physicians and Surgeons in 1830, and after spending some time as an interne at the New York Hospital went to Europe, where he remained for three years studying under the most distinguished masters of medical science in London, Paris, and Edinburgh. On his return, in the latter part of 1834, he at once took a high position among the physicians of the city, and became especially prominent during the scarlet fever epidemic of 1838, when he won an honorable notoriety by taking a firm stand against the severe antiphlogistic treatment which was then in vogue. He recognized the disease as a self-limited affection, which it was impossible to cut short by any heroic measures that might be adopted, and devoted himself to supporting the system with quinine and a highly nutritious diet until the fever had run its course.

— A tobacco merchant of New York died at his home in that city on the 13th of January, of yellow fever. He had been in the habit of often making business trips to Cuba, and during the month of December spent eighteen days in Havana. He reached New York January 7th, and the next day he was attacked with yellow fever. A favorable issue was anticipated, however, until the morning of the day he died, when he was seized with uræmic convulsions. The autopsy, at which Prof. E. E. Janeway, Dr. J. B. Taylor, Chief of the Fourth Sanitary Division, and several other physicians were present, confirmed the diagnosis of yellow fever.

PHILADELPHIA.

— Two new associations are in process of gestation at present. During the present month a Committee on Permanent Organization of the Philadelphia Neurological Association will report in favor of forming a society for the study of neurological science in all its departments. The officers of the insane hospitals in this neighborhood will form a part of the membership.

A society for the study and advancement of Forensic Medicine will also be formed during the next few weeks. A number of prominent names both in law and medicine has been secured; and the association will be instituted under very favorable auspices.

Correspondence.

SALT ON STREET RAILWAYS; ITS MEDICO-LEGAL ASPECTS.

Mr. Editor, — Having been asked some time ago by the presidents of some of the Boston horse-railway companies to make investigations as to the hygienic effect of sprinkling salt on tracks covered with snow or ice, I feel impelled, now that the subject has been brought before the medical public, to present the position of these corporations, whose servants, by the anomalous action of the Boston Board of Health, are now being subjected to petty prosecution, with risk of imprisonment when detected, in performing an act against which there is a total absence of trustworthy authority or facts establishing any prejudicial effects either upon the health of the public or of animals. The position thus taken by this sanitary body not only exposes it to unfavorable criticism from physicians, but tends to weaken confidence in its judgment on the part of those in whose favor it is supposed to act, namely, the fair-minded public. Johnson somewhere says, when discoursing upon physicians, that when people see a man absurd in what they understand, it is not unnatural or unreasonable that they should be distrustful of him in what they do not understand.

This comparatively trivial subject is not beyond the comprehension of the laity, who will not long suffer unnecessary interference with whatever contributes to its convenience; nor should the protests of a minority, who may suffer from wet feet inadequately protected, nor even of those whose heavy teams are liable to become stuck upon the bare tracks, be allowed to hamper the efforts of the railway companies, who spare no expense in the work of clearing tracks and removing snow from the streets, and who should not be liable to official annoyance on grounds not fully established.

When so much undisputed sanitary reform demands their attention, local boards should surely confine their attacks to nuisances plainly, unquestionably, and substantially injurious to the public health; and should not allow themselves to enact, in opposition to the highest authorities, an arbitrary ordinance against a merely hypothetical evil; but such an ordinance having been thus passed, it follows that under this pseudo-sanitary code the Board of Health, as is naïvely said by a correspondent (in the Journal of the 17th inst.), "have not found it difficult to furnish the necessary evidence to convict the violators of the salt order." It is possible that his confidence in equal success in the future may prove unfounded, should the railway authorities deem it advisable to carry the question to a higher tribunal for decision on its merits. That such an appeal has not hitherto been made is solely in order to avoid a conflict with a Board which has in the main decided wisely and for the public good.

There is nothing new to advance on this subject, which has been thoroughly and frequently investigated both in this country and in England. The indisputable facts are, that the weight of trustworthy evidence is overwhelmingly in favor of this use of salt under proper restrictions, *as a sanitary measure.* The writer who (in the Journal of January 17th) says that he had supposed "that the mingling of salt and snow produced an intensely cold and corrosive mixture, which not only must be directly injurious and uncomfortable to the feet of horses," etc., furnishes a fair instance of the dogmatic and unsupported assertions which have given rise to the erroneous impressions by which the Board of Health seems to be influenced.

Salt under no circumstances is capable of producing a *corrosive* effect upon animal textures, nor can it be absorbed by the unbroken skin, and it is only slightly irritant to the mucous membrane or to abraded surfaces. Were the reverse true, the first to suffer from this fact would be the horse-railway companies, whose horses are constantly exposed in full force to whatever danger might exist; but, on the other hand, at their annual meeting, held in Chicago, October, 1883, the combined testimony, based on extensive personal observations, affirmed that no evil effects whatsoever have been detected in consequence of the distribution on the tracks of salt, which, on the contrary, from its astringent, cleansing effects, constitutes, in the form of salt baths, one of the best applications for the relief of "scratches" and other inflammatory affections to which horses' feet are liable.

And yet it must be admitted that this practice is open to abuse, as was shown by a somewhat unfortunate experiment tried in this city some years ago in the use of refuse salt which had served in packing hides or fish. The result was, that after the salt was washed away there remained a putrefying animal substance, offensive to sight and smell, and capable of producing mischief when brought in contact with an open crevice or wound in a horse's hoof. An obvious nuisance was herein promptly recognized, and the assurance given that the offense would not be repeated. Another and a frequent source of trouble is due to the failure on the part of the city authorities to keep clear the crossings, gutters, and entrances to the sewers, thus causing an unnecessary accumulation of water, which may form pools of considerable extent along the tracks; but for this delinquency the railway companies should in no way be held responsible, having, as in the past month, urgently protested against it, and done all in their power to remedy it. When, however, an opportunity is afforded for the mixture of salt and snow to run off, it disappears more rapidly than pure melting snow, thus flushing the sewers with a saline disinfectant which has been recommended in England as an efficient sanitary measure in case of epidemics.

The snow and ice having accumulated in large quantities, it is inevitable that there shall follow a season of slush and standing water, which may *per se* affect injuriously men and animals forced to wade through it; and it would seem almost superfluous to suggest from a hygienic stand-point that a process which curtails this disagreeable period is a beneficial one. Moreover, in the weak solution formed by the combination of snow or ice with salt in the proportion commonly found on or near the tracks, the result of experiments has shown a reduction in temperature of from 1° F. to 5° F. only; and this depression is but temporary, continuing merely while the snow is actually melting.

Again, as a matter of fact, it cannot be gainsaid that it is indispensable to public safety that salt mixed with gravel in sufficient quantity to dissolve the thin film of ice which forms recurrently on the steel rails be used to prevent the slipping of the car at such times, the force of the brakes being insufficient to control it on a downward grade when the wheels no longer revolve. Without this precaution, in itself a violation of the present ordinance, the cars may not be safely run for a single day over tracks thus coated; and through its neglect severe accidents have already occurred, for which the companies have been held liable. The *London Sanitary Record* goes so far as to advise the distribution of a moderate admixture of rough salt with water from ordinary watering-carts over all main thoroughfares covered with ice and snow, in order to facilitate traveling and lessen damage and suffering to horses; maintaining that the conducting power of the earth and the absorption of heat from neighboring objects prevents such a solution when not confined within an inclosed space from materially lowering the temperature of the surrounding atmosphere. This view is fully sustained by Prof. R. E. Rogers, M. D., of Philadelphia, who experimentally demonstrated that at an elevation of three feet above the ground the atmosphere is not rendered perceptibly colder by the use of salt.

Much more literature on this subject might be quoted in favor of the railway officials, who feel that their position is still further strengthened by the support of the best sanitary authorities in this vicinity (outside the City Board); but space permits only the following from an editorial in the *London Sanitary Record:* "We have always supported this proceeding (salting the roads in winter), the alleged scientific medical reasons against it being mere superficial, half-informed twaddle. . . . To salt the snow and dissolve it, and then sweep it down the drains, is the only natural and economical way of dealing with it."

Arthur H. Nichols, M. D.

Roxbury, *January* 21, 1884.

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"SALTED TRACKS."

Mr. Editor, — It is a satisfaction to have it from highest authority that "Boards of Health and others who have considered the matter prefer the salt water for streets in summer on account of being cheaper than fresh water, doing better service, and being a good antiseptic." We had so argued long ago. Now that it is settled there need be no further discussion or doubt on that point, and the practice may continue without let or hindrance.

It is also satisfactory to have it from the same authority that "the salt and snow or ice make a freezing-mixture in which no one can long stand or walk with ordinary protection without loss of comfort or danger to his health." This, then, is the whole of it, — to "long stand or walk" on "salted car tracks?" But why do it? Why not take to the sidewalks, which are presumably freed from snow and ice, or otherwise protected? No one is obliged to stand or to walk long *in the street* on salted or clean car tracks. Avoid so doing; and, according to S. H. D., inferentially, health is not compromised.

At last Boards of Health "prefer the salt water for streets." Possibly (stranger things have happened) it may not be long before objections may cease to "salted tracks" on the score of public health; when, under efficient city government, crossings may be properly cleared, and "ponds of salted slush" quickly cared for, while those long standing, at the risk of health or comfort, in such unsafe places are gently told to "move on."

The foregoing is all that is fairly deducible from the varied comments on our previous question, which remains as yet unanswered. Really, the case appears much weaker than anticipated. The premises adduced do not warrant the conclusions, and juries which convict on such "evidence" must be swayed by prejudice or misapprehension. On the point raised the writer finds himself still uninformed and as much as ever

Nescients.

Boston, *January* 19*th*.

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AN EXTEMPORIZED ICE BAG.

Mr. Editor, — Having occasion a few days ago to make use of an ice-bag, and nothing of the sort being obtainable, the wits of the family were set to work to find a substitute. The result of these cogitations was the suggestion of an expedient which, though ridiculously simple, is so thoroughly practical that I make no apology for asking you to mention it in the Journal. The credit of the suggestion is due a young lady in the family, who brought me a rubber gossamer cloak and asked if I could not use the hood. This was immediately filled with snow, and did as good service as if it had been made for the purpose.

Very truly yours, R. A. Kingman, M. D.

Boston, *January* 18, 1884.

Miscellany.

MORTALITY STATISTICS OF PROVIDENCE, R. I., FOR THE YEAR 1883.

From the report of deaths during the year 1883 by the City Registrar of Providence we take the following figures: Two thousand three hundred and twenty-eight (2328) persons died in Providence during the year 1883. This number was eighty-six more than in the previous year, or an increase of 3.83 per cent. The increase of population in the same period was 4.39 per cent. The 2328 deaths in 1883 represent an annual rate of mortality of 19.50 in each 1000 of the 119,405 inhabitants of the city. The rate in 1882 was 19.60 in each 1000.

Ages. There were 666 decedents under five years of age in 1883, or 28.60 per cent. of all. The number and percentage of decedents under five years of age in each of the last four years have been as follows: —

	1883.	1882.	1881.	1880.
Number under five years of age .	666	678	727	731
Percentage	28.60	30.24	33.89	35.14

The number and percentage have been growing less in each of the last four years.

Between twenty and fifty years of age there were 698 decedents in 1883 and 718 in 1882; between fifty and seventy years there were 429 in 1883 and 351 in 1882; and of seventy years and over there were 330, or 14.17 per cent., in 1883, and 286, or 12.75 per cent. in 1882.

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PUBLIC PROSECUTORS AND PRIVATE PERSECUTORS.

Our English brethren are, with reason, considerably stirred up over some recent suits which have been brought against two surgeons, Messrs. Bower and Keates, by the father of a child on whom tracheotomy had been performed by the defendants in diphtheria to avert impending asphyxia. At a meeting held at the residence of Sir Wm. Jenner Dr. Moxon detailed the circumstances as follows: —

"It appeared that two suits had been brought against the unfortunate gentlemen; one a civil action, brought by the father of the child to recover damages from Messrs. Bower and Keates because he had been instructed by them, after the operation of tracheotomy had been performed, to suck the tube, which had become obstructed, and thereby to save the life of his own child. The father subsequently had some slight throat affection, which, it was thought, was probably of a diphtheritic nature, though it was certainly not severe diphtheria; and it was to recover damages for this that he brought the action. The first trial terminated by the disagreement of the jury. A new action had been commenced, and this part of the matter was therefore *sub judice*, and could not be discussed at present. After the failure of the civil action, although it had been given in evidence in the course of the trial that the parents had no complaint to make concerning the treatment of the child, and, indeed, were completely satisfied therewith, the mother proceeded to swear an allegation at the Lambeth Police Court, stating that the treatment of the child had been improper, and charging its medical attendants with manslaughter. This charge was taken up by the Public Prosecutor, who conducted the action on behalf of the Crown. It might appear scarcely credible that this high public functionary felt justified in undertaking the criminal prosecution of these gentlemen for the manslaughter of their patient without one atom of medical evidence before him in support of the charge. The result of the examination of the defendants before the magistrate was the dismissal of the charge immediately after the cross-examination of the medical witness summoned on behalf of the prosecution, — the magistrate remarking that this was a case of 'persecution,' not prosecution."

The especial point of complaint made by the profession was that the Public Prosecutor should have lent the authority of his position to the complainants without having investigated the validity of the grounds on which the action was based. A resolution was offered at this meeting by Sir James Paget, and seconded by Dr. Wilson Fox, "That the Council of the Royal College of Physicians and the Council of the Royal College of Surgeons be requested to consider the propriety of representing to the Secretary of State for the Home Department that it is very desirable that there should be some arrangement by which the Public Prosecutor may obtain the assistance of skilled advisers when he is solicited to institute prosecutions of medical practitioners."

Subscriptions to defray the heavy legal expenses of the defendants were made to the amount of £200 at the meeting, and it was proposed that the amount of individual subscription be limited, so that the whole profession might have an opportunity to express their sympathy with the defendants in a persecution to which any medical man was liable to fall a victim. We learn that these contributions have been very liberal, already amounting to more than the legal expenses of the accused.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 12, 1884.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	597	204	15.20	16.86	6.68	4.24	2.17
Philadelphia	846,984	393	142	16.51	10.92	3.05	7.40	4.32
Brooklyn	566,689	274	92	17.64	18.00	.72	6.44	1.80
Chicago	503,304	200	93	26.00	15.50	7.50	8.00	5.00
Boston	362,535	175	59	19.95	19.34	1.14	10.26	2.28
St. Louis	350,522	174	72	22.96	21.28	1.12	14.00	2.80
Baltimore	332,190	190	75	23.44	10.07	1.06	7.42	1.56
Cincinnati	255,708	115	37	12.18	19.14	3.48	5.22	—
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	93	34	21.80	9.72	3.24	2.16	2.16
Pittsburg (1883)	175,000	61	16	8.20	26.24	—	4.92	3.28
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	53	29	22.68	11.34	—	7.56	7.56
Providence (1883)	116,755	55	10	12.74	14.56	7.68	1.82	1.82
New Haven (1883)	73,000	18	3	27.77	—	5.55	16.66	—
Charleston	49,999	—	—	—	—	—	—	—
Nashville	43,461	25	6	16.00	12.00	4.00	8.00	—
Lowell	59,485	26	7	19.25	3.85	—	11.55	—
Worcester	58,295	18	5	22.22	5.55	5.55	5.55	5.55
Cambridge	52,740	9	0	44.44	11.11	22.22	—	11.11
Fall River	49,006	20	6	4.00	28.00	—	4.00	—
Lawrence	39,178	15	6	6.66	—	—	—	6.66
Lynn	38,284	18	2	5.55	11.11	—	5.55	—
Springfield	33,340	10	2	10.00	10.00	—	—	—
Salem	27,598	10	1	10.00	20.00	—	—	—
New Bedford	26,875	7	1	—	14.28	—	—	—
Somerville	24,985	7	0	—	14.28	—	—	—
Holyoke	21,851	—	—	—	—	—	—	—
Chelsea	21,785	4	1	25.00	25.00	—	—	—
Taunton	21,213	5	2	—	—	—	—	—
Gloucester	19,329	4	2	—	—	—	—	—
Haverhill	18,475	5	2	—	20.00	—	—	—
Newton	16,995	5	0	40.00	40.00	20.00	—	20 00
Brockton	13,608	4	3	—	—	—	—	—
Newburyport	13,537	6	0	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	3	1	—	—	—	—	—
Seventy-one Massachusetts towns	281,805	94	28	13.84	—	1.06	6.39	3.19

Deaths reported 2693 (no reports from New Orleans, Buffalo, and Charleston): under five years of age, 950: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 472, lung diseases 434, consumption 380, diphtheria and croup 179, scarlet fever 73, typhoid fever 57, diarrhœal diseases 39, measles 48, malarial fever 26, whooping-cough 18, cerebro-spinal meningitis 17, erysipelas 16, puerperal fever 13, small-pox one. From *measles*, Baltimore 15, Brooklyn 12, District of Columbia 11, New York seven, Philadelphia three. From *diarrhœal diseases*, New York 13, Brooklyn nine, Boston six, Baltimore three, Chicago two, Cincinnati, District of Columbia, Milwaukee, Nashville, Cambridge, and Springfield one each. From *malarial fever*, New York nine, Baltimore five, St. Louis three, Brooklyn two, Chicago and Cincinnati one each. From *whooping-cough*, New York and Baltimore five each, Chicago and St. Louis two each, Brooklyn, Boston, Salem, and Chelsea one each. From *cerebro-spinal meningitis*, New York six, Philadelphia three, Chicago and Boston two each, District of Columbia, Milwaukee, Lowell, and Worcester one each. From *erysipelas*, New York five, St. Louis three, Chicago two, Boston, Baltimore, Providence, Lowell, Merrimac, and Wrentham one each. From *puerperal fever*, New York three, Chicago, Cincinnati, and Milwaukee two each, Boston, St. Louis, New Haven, and Weymouth one each. From *small-pox*, Philadelphia one.

Thirteen cases of small-pox were reported in St. Louis, Cincinnati one; scarlet fever 50, diphtheria 36, typhoid fever five, and measles one in Boston; scarlet fever 12, and diphtheria in Milwaukee.

In 90 cities and towns of Massachusetts, with an estimated population of 1,284,384 (estimated population of the State 1,922,530), the total death-rate for the week was 17.41 against 18.00 and 21.05 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending December 29th, the death-rate was 20.6. Deaths reported 3397: acute diseases of the respiratory organs (London) 355, measles 109, scarlet fever 104, whooping-cough 80, fever 55, diarrhœa 23, small-pox (Birmingham and Liverpool four each, London two, Sunderland one) 11. The death-rates ranged from 15.5 in Bradford to 25.8 in Newcastle-on-Tyne; Bristol 17.2; Plymouth 17.4; Birmingham 18.4; London 19.8; Sheffield 20.7; Nottingham 21.7; Birkenhead 22.4; Leeds 23.2; Liverpool 24.9; Blackburn 25; Manchester 25.4. In Edinburgh 19.5; Glasgow 24.3; Dublin 27.5.

For the week ending December 22d, in 155 German cities and towns, with an estimated population of 8,091,113, the death-rate was 23. Deaths reported 3577; under five years of age, 1120; consumption 511, lung diseases 377, diphtheria and croup 273, whooping-cough 67, scarlet fever 60, typhoid fever 55, measles and rötheln 54, puerperal fever 31, small-pox (Danzig one) one, typhus fever (Breslau one) one. The death-rates ranged from 12 in Karlsruhe to 38 in Königsberg; Breslau 28.2; Munich 28.2; Dresden 26.5; Berlin 20.9; Hamburg 21.8; Cologne 24.5 Frankfort a. M. 17.8.

For the week ending December 29th, in the Swiss towns, there were 26 deaths from consumption, lung diseases 24, diarrhœal diseases 16, diphtheria and croup eight, scarlet fever six, whooping cough two, erysipelas two, small-pox (Basle two) two, typhoid fever one. The death-rates were, at Geneva 13.3; Zurich 16; Basle 19.3; Berne 29.4.

The meteorological record for the week ending January 12th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Jan., 1884.	Daily Mean.	Daily Mean	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 6	30.076	8	15	0	68	47	67	61	W	W	W	11	12	14	C	C	C	—	—
Mon., 7	30.555	13	21	4	63	40	61	55	W	NW	NW	7	12	7	C	C	F	—	—
Tues., 8	30.422	24	35	7	70	73	94	79	NW	NE	SE	4	12	25	C	O	O	—	—
Wed., 9	29.348	39	52	30	100	71	57	76	SE	SW	W	36	22	21	R	O	O	—	—
Thurs., 10	29.911	29	34	25	64	50	69	61	W	W	SW	18	22	9	C	C	O	—	—
Fri., 11	29.884	36	42	29	91	89	68	83	SW	SW	W	12	12	12	C	R	C	—	—
Sat., 12	29.989	17	33	13	74	84	67	75	NW	NW	NW	12	13	10	C	S	O	—	—
Mean, the Week.	30.026	24	33	15				70										35.35	2.28

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; W., sleet.

APPOINTMENTS. — Dr. William E. Boardman has been elected Visiting Physician of the Boston Lying-In Hospital in place of Dr. A. D. Sinclair, who has resigned, and been elected one of the Consulting Physicians.

Dr. C. M. Green has been elected Assistant Physician.

Dr. Philip C. Knapp, Jr., M. D., has been appointed interne at the Boston Lunatic Hospital for a period of six months.

BOOKS AND PAMPHLETS RECEIVED. — Elements of Physiology. By Henry Power, M. B. Lond., F. R. C. S., etc., etc. Illustrated with Forty-seven Engravings. Philadelphia: Henry C. Lea's Son & Co. 1884.

Lister's System of Aseptic Wound-Treatment versus its Modifications. By B. A. Watson, A. M., M. D., Surgeon to the Jersey City Charity and St. Francis Hospitals, Jersey City, New Jersey. Extracted from the Transactions of the American Surgical Association, Vol. I., 1884.

On Sterility in Woman. Being the Gulstonian Lectures delivered in the Royal College of Physicians in February, 1883. By J. Matthews Duncan, M. D., LL. D., etc., etc. Philadelphia: P. Blakiston, Son & Co. 1884.

The Diagnosis of Diseases of the Spinal Cord. By W. R. Gowers, M. D., F. R. C. P., etc. Third Edition. Philadelphia: P. Blakiston, Son & Co. 1884.

The New York Post-Graduate Medical School, 213 and 215 East Twenty-Third Street, New York. Sessions of 1883–1884.

Quarantine. By Walter Wyman, A. M., M. D., Surgeon U. S. Marine Hospital Service. Read before the Maryland Sanitary Convention.

Die epidemische Verbreitung des Scharlachfiebers in Norwegen. Von Dr. Axel Johannessen. Kristiania. 1884.

Introductory Address delivered before the Medical Class of Dartmouth College, August 1, 1883. By Louis Elsberg, A. M., M. D., Professor of Laryngology.

Quarterly Compendium of Medical Science. A Synopsis of the American and Foreign Literature of Medicine, Surgery, and Collateral Sciences. Edited by D. G. Brinton, M. D., and Joseph Edwards, M. D., Bound volume. 1883. Philadelphia: Medical Publication Office.

Woman's Work in the Field of Medicine. College of Midwifery of the City of New York.

Fourteenth Annual Report of the Manhattan Eye and Ear Hospital, New York, October 15, 1882, to October 15, 1883.

The Australasian Medical Directory and Handbook. Edited and compiled by Ludwig Bruck. First Year of Publication. Sidney. 1883.

Fat and Blood. An Essay on the Treatment of Certain Forms of Neurasthenia and Hysteria. By S. Weir Mitchell, M. D. Third Edition, Revised with Additions. Philadelphia: J. B. Lippincott & Co. 1884.

Hysteria. A Study in Psychology. By James Hendrie Lloyd, A. M., M. D., Instructor in Electro-Therapeutics, University of Pennsylvania. (Reprint.) 1883.

Some Recent Progress in Diseases of the Nervous System. By Talbot Jones, M. D., St. Paul, Minn. (Reprint.)

Original Articles.

TWO CASES OF INJURY TO THE BACK.[1]

BY CHARLES F. FOLSOM, M. D.,

Physician to Out-Patients with Diseases of the Nervous System, Boston City Hospital.

Among the cases in my note-books I find quite a considerable number where injuries, especially falls, producing quite severe blows upon the back alone, upon the head, or upon the back and head together, have been the apparent cause of grave symptoms, involving the mind or the general nervous system, or both. I find that the gravity of the resulting disease does not depend upon the severity of the primary injury, nor upon the intensity of the pain and other indications of mischief immediately following. The character of the disorder, whether spinal, cerebral, or general, has not in these cases depended upon the locality of the original disturbance, whether of the head or of the back. Of two cases of delusional mental disease, one, which resulted in recovery, was, I think, the direct outcome of a fall in a skating-rink, whereby the back of the head received a sharp blow not causing even momentary unconsciousness. The second was slowly developed through slight mental confusion, irritability, hardly distinguishable change of character, suspicion, jealousy, and fear of personal injury into delusional mental disease, remaining now, in the fifth year, an incurable insanity, which originated in a succession of violent blows to the back, but no injury to the head, from falling down stairs.

A large number of cases of epilepsy and a few cases of general paralysis of the insane were thought to have been the direct consequence of blows or other injuries, for the most part of the head, but to a less extent of the back. Chorea, too, and the group of symptoms classed under the head of spinal irritation, neurasthenia, and now and then hebephrenia, had their origin associated with the same immediate cause.

I learn from the notes that in the majority of cases in the individuals in whom concussion (not using the word in its technical sense) of the brain or spinal cord, or both, in my judgment, produced symptoms which would be commonly called mental or nervous, there was a hereditary predisposition to the neuroses or psychoneuroses, or that there was a developed instability of the nervous organization; but that fact does not by any means universally hold true. There is a vast preponderance of females over males, but the most difficult case to care for, and the longest to get well under what I thought to be judicious treatment from the beginning, was in a strong, able-bodied, intelligent man, who had been vigorous enough to frustrate an attempt to garotte him, but who, in the process, fell backwards, striking his head, neck, and shoulders on not very hard ground. This man had the greatest variety of manifestations of general disorder which I have ever seen classed under the heads of hysteria, railway spine, etc., and he was two years in regaining sufficient health to go to work, although he had the stimulus of the necessities of his wife and children to make him do so, and although any possible litigation upon the subject was so early decided that there was every inducement to him to recover. His cure has seemed a thorough one for now over a year. I have been long convinced that many of these patients were suffering quite as much from disease affecting the brain as from anything which could with propriety be named hysterical, or spinal, or nervous, and many of them wholly from such disease.

The cases which I shall report to-night are two, in which quite similar injuries, producing nearly identical primary indications, resulted in widely different pathological conditions calling for directly opposite methods of treatment.

Miss ——, sixteen years old, a bright, very large, robust looking girl, brought up in a country town, came to me with her sister, giving the following history: She belonged to a family in which there were several members considered nervous, but in which no case of the neuroses or psychoses had appeared. She had never had any severe illness, and had always been healthy and strong until three months previous to consulting me, when she fell very heavily, striking her back on a level with the upper lumbar vertebra. She became somewhat dizzy, but not strikingly so, although feeling weaker than usual for a few days. The pain was disagreeable, and increased by moving about much, so that she was compelled to keep quiet for several weeks. After that time she was told that she had spinal disease, and her parents were informed that she must be treated as an invalid the rest of her life, the tenderness and pain at the seat of the injury still persisting. She was told that she must lie down much of the time, but that she might come to Boston to attend school, provided she did not walk or stand or study very much. I ascertained that the lungs, heart, and kidneys were free from evidence of disease. The patient began to menstruate in her fourteenth year, and the function had gone on without any indication for interference. The appetite was moderate. Digestion was well performed, barring an habitual constipation, which was readily overcome by careful regulation of food and habits. There were absolutely no indications of disordered function, except the pain and tenderness already referred to, a sense of weariness, and backache for the greater part of the day, a slight loss of flesh, and a progressively increasing loss of strength. The patient's sister had been directed not to allow her to sit long, to dance at all, to walk more than a very little, or to take part in the usual gymnastic exercises of the school. In fact, she was in the process of being trained to become an invalid of the neurasthenic type.

After the usual examination I felt satisfied that there was no real injury to the spine or brain, that there had been only a bruise, and that the treatment called for was not unlike that found most successful in a sprained ankle, when the acute symptoms had gone by. The sister was directed to follow out a course of treatment of which this is the outline: —

A dash of cold water the whole length of the spine, followed directly by a sponge bath every morning. General massage once a week, and rubbing of the muscles of the back, shoulders, and abdomen every evening. To begin gymnastics with a view to strengthening and giving tone to the muscles supporting the weight of her heavy body at the end of a week, and in two weeks to take up dancing, at first very moderately. She was to practice at the piano, of which she was fond, a half hour each day, with a full support to her back, and she was to lie down for half an hour fifteen minutes after her back began to ache, but never to continue work with an aching back.

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[1] Read before the Boston Society for Medical Improvement, January 14, 1884.

The sister was directed to inform me as to the progress of the treatment, the inmates of the house were recommended to look upon the young girl as in no way an invalid, and the patient was told not to come and see me again for a month, thereby getting additional assurance from my statement that there was no serious trouble with her. In a little over three months she has become quite well, she walks, dances, and seems quite like the other girls in the school.

The second case belongs to a class much more difficult to deal with.

Miss ——, aged twenty-six, an intelligent, healthy-looking, high-school taught Irish American, with a comfortable home in one of the suburbs, where she kept house for her father and sister. She did not know of any mental or nervous disorder or any so-called nervousness in any of the branches of her family. She has been told that at the age of six or seven years she had pleurisy, and when fourteen slow fever. Otherwise she has been quite well and strong, and the picture of physical health. She began to menstruate at the age of fourteen, and has from the beginning suffered from intense dysmenorrhœa. During the previous winter she had been up late and early, and her sisters thought that she had been overworking. She was not herself conscious of any weariness or feeling of effort. Her mind had been quite at rest. She had no anxiety, and had not lost flesh, and she was quite contented with her lot in life. She seemed to me exceptionally fortunate as regards the complicated circumstances combining to affect her general health. Last February she fell, striking her sacrum on the ice. The pain and discomfort from the blow were not great, so that she walked home and did not find it necessary to in any way diminish the labor of her daily life. For three weeks there was decided tenderness when lying on her back, and only slight pain at other times, which then disappeared. She noticed, however, that her daily work wearied her, and so she had walked out less than usual. Four weeks after the accident, in trying to walk a distance to which she had formerly been accustomed, she remarked a dull ache through the right thigh with decided weakness, and finally difficulty in walking. This symptom remained without abatement until August, when attempting to walk, the weakness of the leg rather increasing than diminishing, so that she then went to the sea-shore for a fortnight without benefit. Upon her return the leg began to ache in its whole length if used, so that she walked about only a little, and sat sewing much of the time. Then the arm began to ache and to feel weak. There was also about the same time a steady uncomfortable feeling in the head, always disagreeable, never severe.

She came to the out-patient department of the City Hospital September 19th, asking for the room for the treatment of nervous diseases. She was well formed, healthy looking. Her father had taken her to the horse-cars, and she found great difficulty in getting from Washington Street to the hospital, a distance of, perhaps, three hundred yards. The heart, lungs, and kidneys were ascertained to be healthy; the appetite was fair; bowels constipated; and there had been a slow but progressing loss of flesh, in all amounting to about five pounds. She slept poorly. There was a constant feeling as if the brain had been bruised, which was not much increased by mental effort, but any work requiring thought or planning produced a sense of general fatigue over the whole body. The emotional state was much exalted. The patient could not sit long in the waiting-room without excessive fatigue and great increase in the pain affecting the extremities. She thought her mind was weakened, as she could not bear things at home with her customary equanimity. I could not find anything abnormal from an examination of the head, ears, or eyes. The ophthalmoscope was not used. The patient complained of a great ache, rather than pain, throughout the right arm and leg, and in the right side of the chest. The whole fore-arm sometimes felt as if encased in ice. A severe pain appeared at different times in different spots of the upper arm and thigh, and there was a feeling of numbness at the seat of the injury, sometimes very troublesome, oftener hardly noticeable. Between the shoulders, over a space ten inches in diameter, quite nearly symmetrical, and involving both sides, was an area of burning-heat sensation, varying in intensity under conditions for which I could not find any approach to a law. Sensation was slightly impaired pretty much throughout the right side, but there was at no time any marked anæsthesia. The arm could scarcely be used in any of the ordinary duties of life, and the leg was exhausted after quite moderate efforts. There had been a sense of muscular spasm without any visible movement as observed by the patient in both legs, much less in the left, but also in the right arm.

In such a case as this healthy occupation and diversion for the mind are of the first importance, so that isolation and the rest cure were not to be thought of. A feeling of introspection and self-consciousness was particularly to be avoided, so that a hospital was distinctly contra-indicated on account of the danger of establishing a chronic invalidism. I saw no reason for removal from home except for convenience of treatment, and that could not be afforded, and yet the home was not a favorable place for the care of a sick person. I doubted whether massage would be of use, and my experience of other similar cases led me to question whether it might not do harm. At all events it was not procurable.

She was directed to walk only as much as was necessary to get to the hospital three times a week, her father driving her to the horse-cars; to use the arm only a couple of minutes at a time, at long intervals, and then for no fine movements. She was not to read or do anything involving mental effort except in a general way to direct her sister about the management of the house. She was to be taken out of herself as much as possible. From week to week she was allowed to gradually increase the amount of physical and mental work as she found she could bear it, and I soon ascertained that she was better those days when she came to the hospital than when she remained quietly at home. The faradic brush was used over the arm of a strength just beyond what could be comfortably borne for a month. At the end of a month's time all the most disagreeable symptoms in the arm had disappeared, and in a month more it was quite well except that it had still to be used carefully. The leg remained stationary, or, if anything, getting worse for a month, while the arm was improving, so that the patient was directed to apply the faradic brush to the whole length of the leg, since which time improvement has begun. With malt, cod-liver oil, and hypophosphite of lime four times a day the general condition improved, there was a slight but continuous gain in flesh, the sleeplessness disappeared, and in a month and a half the uncomfortable feeling about the head had gone, to return only for a short time at considerable intervals. I dare say that the daily cold affusions to the back helped to improve the general condition, and had something to do with the rapid subsidence of the dyspnœa, panting breath, sensation of constriction about the chest, tightness about the heart, and paræsthesias. As soon as the head began to feel well iron was given, at first in very small doses, and later the acid phosphates and arsenic. The constipation has been regulated by diet and mild laxatives.

At the present time the mental state has returned to the normal. The arm is quite well but not fully strong, the head does not cause any trouble or uneasiness, the abnormal sensations have gone except the pain in the thigh, although that has improved, and the strength of the leg is constantly mending. I confidently expect a full cure within three to six months. But the element of time seems to me extremely important in these cases, and I think that careful treatment should be insisted upon for at least six months after apparent recovery, to enable the system to entirely regain its tone.

I know of no way in which the physician can form an opinion as to the extent of the damage done by injuries to the back and head except by reserving his prognosis for quite a time in order to see which set of symptoms appears. There probably will be a difference of opinion among equally qualified men with large opportunities for observation, as to the extent to which rest should form an important part of the immediate treatment of even seemingly trivial accidents causing a physical shock to the brain or the spine. Doubtless evil results happen less often than others. But serious trouble comes not seldom, and incurable, almost life-long, suffering is not uncommon in cases where there will always be at least a doubt whether sufficient care in the beginning might not have averted a tragedy. Whether in the first of these two cases the severe pain necessitated the rest which saved the young girl from the development of more serious disorder, and whether, in the second, the mildness of the initial symptoms encouraged the activity which prevented a speedy cure are questions of interest to the physician, and of importance to the patient. My own experience leads me to treat all similar cases with great caution from the beginning.

THE USE OF TOBACCO BY BOYS.[1]

BY EDWARD O. OTIS, M. D. (HARV.)

One might deem an apology almost necessary for adverting again to the trite subject of the use of tobacco, a subject which has been discussed almost from time immemorial, and of which so much true and false has been said. Still it is a fact that tobacco-using among boys is common, and, further, most medical men, I think, will admit that the use of tobacco by boys, either moderately or immoderately, is injurious. So long, then, as this is the state of things it may not be amiss to raise one's voice from time to time against the abuse. Although not much that is new upon the matter may be presented, every agitation against an evil does something towards eradicating it.

I propose to leave out entirely any discussion of the effects of tobacco, injurious or otherwise, upon adults, and refer only to its use by boys.

My attention was especially directed to this subject while in practice at Exeter, N. H., where I met with many of the students of the Phillips Exeter Academy, and noted the effect of tobacco upon them. I became still more interested by reading — through the kindness of the late principal, Dr. A. C. Perkins — a large number of letters sent by parents, teachers, and others in response to a circular letter of the principal asking their opinion regarding the use of tobacco by boys in the school. To the circular and letters I shall refer later on.

As to the exact percentage of boys who use tobacco there do not seem to be any very accurate statistics. At the academy above referred to I should say that at least one half of the students used it. The statement was made some time ago, I believe in a secular paper, that seventy-five per cent. of school-boys over twelve or thirteen years old smoke cigarettes. I am inclined to believe that this is too high. At the Boston Latin School, of those in the upper classes from fourteen to eighteen years of age, the head master stated last year that probably about half used tobacco to some extent. The principal of another school stated that since his connection with it the number of smokers had nearly doubled. This is enough to show that the evil prevails extensively, and gives good reason for serious apprehension.

Whatever injurious effects the excessive and constant use of the drug may have upon adults, these are more marked and intensified in the case of the youthful user of tobacco; and, moreover, the youth are more inclined to its use to excess, for theirs is an age of immoderation. For example, a young student, from fifteen to seventeen years of age, I should think, told me he was smoking about a bunch of cigarettes a day, and although promised a trip to Europe if he would abandon the habit, said he did not think he could do it even for that prize. It is a time of rapid change, physically and mentally, with them; there is a constant development going on, and although I am not aware that any careful series of observations have been made, still I am sure that the general observation of all is to the effect that tobacco interferes with and retards the proper symmetrical development both of mind and body. Of course there are exceptionally robust and strong boys who, although they use tobacco, mature into sturdy men with good minds, but it is in spite of the tobacco. The especial deleterious effects of tobacco upon the young are pretty well known from all the discussion and much exaggeration that has been rife about them. I will briefly mention some of them.

There is the so-called "tobacco heart," an irregular, irritable heart. Dr. Gihon, in his report on the United States Naval Academy, says, "The annual examination of cadets reveals a large number of irritable hearts among the boys who had no such trouble when they entered the school." This was before tobacco was prohibited at that institution.

Another effect is defective muscular coördination, as shown in the tremulousness of the hand in manipulating a pencil or pen, and inability to draw a perfectly straight line. The professor of drawing at the Naval Academy said that he could invariably recognize a user of tobacco from this inability. I myself observed the same thing in the case of a young man who smoked continually.

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[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, December 12, 1883.

Besides impeding mental growth it is an obstacle to mental application and effort. It is said to produce progressive deterioration of the intellect, and to impair its integrity. At the instance of Napoleon III. a commission was appointed to examine the young men in the government training schools of France as to the effect of tobacco upon them. The students were divided into two classes, the smokers and non-smokers. The former were found so inferior, physically, mentally, and morally, that the use of tobacco was prohibited in all the schools under governmental supervision. In the École Polytechnique it was found that the non-smokers took the highest rank in every grade, and that the smokers continually lost grade.

The principal of a boy's school near Boston stated that the habit of smoking was more prevalent in the lower classes than in the upper, the reason being that the smokers were usually the poorest scholars, and were gradually weeded out as the class advanced in the school. In one of the letters above referred to the writer says: "If a successful salesman to whom I was paying a high salary should begin the use of tobacco, I should feel that about fifteen per cent. of his vitality or ability was taken from his usefulness, and hence should be taken from his salary."

It is said to impair the memory. In another one of these letters, the writer somewhat graphically relates the effect of tobacco upon his memory, as follows: "I commenced the use of tobacco when thirteen years old, both smoking and chewing. I went to school but could not study, had no ambition at all to learn anything, and it was almost as well not to learn, since I could hardly remember anything from one school to the next. . . . The most lasting injury is the fact that tobacco ruined my memory, which does not come back to me, although I have not used tobacco for fifteen years." Another writer says that there is a young man in his factory twenty-one years old, powerfully built, and weighing one hundred and eighty pounds, brought up on a farm, who uses tobacco. Years ago he noticed a loss of memory, and a diminution of vitality generally.

It is a well-known fact that tobacco may cause defective vision. Dr. Gihon in the report above referred to says: "I have myself several times rejected candidates for admission into the academy on account of defective vision, who confessed to the premature use of tobacco, one of those from the age of seven." I have noticed that the mechanical irritation of the smoke, especially from cigarettes, which bring it so near the eyes, will produce and keep up catarrhal trouble. I have a suspicion that tobacco used as the boy is emerging from boyhood into manhood causes an undue irritation and excitability of the sexual system, prompting to abuse and excesses.

Then there is the irritation of the mucous membrane of the mouth and throat, impairment of digestion, sometimes, an habitual sense of uneasiness, palpitation, hypochondriasis.

With regard to cigarette smoking by boys, I will refer to two paragraphs from an editorial on the use of tobacco in the *Boston Medical and Surgical Journal* for November 23, 1882: "The number of young men who smoke cigarettes is almost startling. It is not only students but even school-boys in their teens who vigorously and openly indulge in this dangerous habit." And again: "The dangers, then, which are incident to cigarette smoking are, first, the early age at which it is taken up; second, the liability to excess; and third, the bad custom of inhaling the smoke. These are dangers superadded to those attendant on the ordinary use of tobacco, and should be carefully considered by all medical men."

Dr. Witter, of Grand Rapids, Wis., in a paper in the Report of the State Board of Health of Wisconsin for 1881, among the conclusions which he deduces from a large number of letters written on the subject by physicians of the State, says: "That beginning the use of tobacco in early life cannot be too strongly condemned as producing most pernicious effects upon the constitution of the young, and as impairing greatly, if not wholly destroying, the chances of success as students and scholars."

The evil effects, then, of tobacco upon boys which can be said to have been fairly proved by observation, are: —

First. An interference with and impairment of the general development, physically and mentally. Probably it does this by retarding progressive cell change, and impairing nutrition. In an adult the development is attained, consequently he can smoke with impunity so far as this effect is concerned, when the boy only does it with injury.

Second. The tobacco heart. This likewise happens to the adult, but is, I should think, more likely to happen to the youth, and with graver result, because his is such an unstable age physically. For this same reason the other injurious effects are more liable to be intensified in the youth.

Third. Defective muscular coördination. I have but little proof to show that this condition is more than temporary, continuing only while the tobacco is used.

Fourth. It reduces the intellectual power of the boy. It does this either by opposing mental application and effort, or else by producing deterioration of the intellect, probably both to a greater or less extent.

Fifth. It impairs the memory. What proof I have adduced seems to show that this is a permanent injury.

Sixth. It may cause defective vision, and also irritation, more or less chronic, to the external parts of the eye.

Seventh. It may unduly excite the sexual system and lead on to excesses. I have no positive proof of this, but my observation among boys rather points to it.

Eighth. Irritation of the mucous membranes of the mouth and throat, more especially in case of cigarette smoking.

Ninth. It may impair digestion, and produce other derangements, such as habitual uneasiness, hypochondriasis, and so on.

One cannot reason as to the effect of tobacco upon boys from its effect or lack of effect upon the mature man. The conditions are different. It would be quite as reasonable to say that, because to a sick man a certain drug is administered with good effect, the same drug may be administered to a well man with no evil effect.

If what I have said is true or approximately true, it would seem eminently wise to do what we can to keep tobacco from boys. It is a pity to allow them unwittingly to do that which may prevent their highest development physically, mentally, and morally. It is the physician's duty to expose the danger and warn parents and teachers. The latter must use their influence and authority both by persuasion and restriction. In schools, after the case has been fairly presented to the boys, I believe absolute prohibition should be enforced with all the rigor of the school authorities. I know of no greater aid to effectually bringing about this result than a good gymnasium with a competent medical director.

I am fully aware with our large freedom how many difficulties there are in the way of prohibition, but still I believe it would lead to better results than any other method, and reduce the evil to a minimum.

You cannot reason with boys, as a rule, on the matter. If you present to them all the future evils which may accrue to them from its use, that their chances of future success are so much lessened, that they may be laying up for themselves ill health, shattered nerves, and an impaired mind, they may assent to it all, and then the next moment forget it, so little do they regard the future.

What was done at the military and naval academies when the evil was appreciated, the following notes to the principal of the Phillips Exeter Academy will show:—

I. U. S. Naval Academy, Annapolis, Md.,
May 20, 1882.

Sir,—I beg to acknowledge the receipt of your letter of the 18th inst., and in reply to inform you that the use of tobacco in every form is prohibited to students of this institution.

Very respectfully, ———, Supt.

II. Headquarters U. S. Military Academy,
West Point, N. Y., *May* 18, 1882.

Sir,—The officers in immediate charge of the cadets were unanimously of the opinion that the use of tobacco worked great injury, and the Academic Board was practically a unit in favor of its prohibition.

Very respectfully, your obedient servant,
———, Adjutant.

The president of one of our colleges says: "We have required our students to abstain from the use of tobacco since the founding of the college, now almost fifty years. My impression is that we would sooner lose half of our students than dispense with the rule. We never have any objection to the rule from pupils or their parents. All believe in it, but every year we part with one or more who cannot overcome the habit. We do not treat the use as an immorality, but as a disqualification for membership. We give them an honorable dismission that they may go elsewhere."

In conclusion, it may be of interest to read the circular before referred to, and give the result of the answers, a few of which I will read as giving the opinion, and often the experience of intelligent men on the subject, though most of them not medical men:—

Phillips Exeter Academy,
Exeter, N. H., *May* 15, 1882.

Dear ———,—The effect of tobacco upon boys has of late claimed the attention of many persons interested in the welfare of schools in England, France, Germany, and America. It has been the subject of discussion in our own Faculty. So far as we can learn, it is the unanimous testimony of physicians that the use of it by boys and young men is bad for mind and body. For this reason it has already been prohibited in the U. S. Naval Academy at Annapolis, and more recently in the U. S. Military Academy at West Point. In the report of the Surgeon General of the U. S. Navy for 1879 there is a careful scientific discussion of this matter by Dr. A. L. Gihon, Medical Director at Annapolis. Brief extracts from this report are sent herewith, to which your attention is respectfully called.

We should be glad to have you write to us and state what your own preference is as to the use of tobacco by boys in whom you are most interested, and also whether you would regard a rule prohibiting it entirely in this school as reasonable and practicable.

If any effort is made to suppress by school authority a practice that is working so much mischief with boys, and which yet is to many boys so attractive, we feel that the coöperation and support of parents is first of all to be sought.

You will observe that the question of the use of tobacco by adults is not touched; the inquiry relates simply to boys.

If you will give us your views upon this matter you will much oblige us and assist us in determining just the right measures to be taken with boys who are committed to our care.

Yours very respectfully, ———, Principal.

In response to this circular one hundred and sixty letters were received from parents, teachers, and others interested in the subject. Of these one hundred and sixty, all were unqualifiedly opposed to the use of tobacco by boys.

One hundred and twenty-four were in favor of prohibiting its use entirely in the school.

Ten were in favor of prohibition, if such a rule could be enforced.

Eighteen expressed no definite opinion regarding prohibition.

Eight thought a rule prohibiting it was not practicable.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

December 12, 1883. The meeting was called to order at eight o'clock by Dr. R. T. Edes, chairman.

The first paper of the evening was read by Dr. E. O. Otis, entitled

THE USE OF TOBACCO AMONG BOYS.[1]

Dr. H. I. Bowditch, in opening the discussion, said that it is high time that some measures were adopted to stop or at least to restrain the use of tobacco. For thirty years he has continually found a certain number of patients who have presented the symptoms of grave functional disturbance of the heart, for which no cause could be found excepting tobacco. There is no organic cardiac lesion, but it is a nervous weakness. This condition was very commonly observed during the late war. Nearly all the soldiers smoked, and many gradually acquired what was appropriately named the "tobacco heart." The reason why this condition prevailed so extensively at the time mentioned is no doubt found in the fact that tobacco enables men to endure hunger, cold, hardship, and privation better than they could without its aid. The active, exposed muscular life of the army enabled the soldiers to withstand the injurious effects of this substance better than would be the case in a sedentary occupation, or where one lives as a recluse. A moderate use of tobacco may unquestionably be continued for a long time, and probably indefinitely, without harm. There are few people in adult life who would derive any injury from three cigars daily; but the danger comes from the fact that the number is increased to ten or fifteen, and sometimes even to twenty-five in a day. Nearly all boys now smoke cigarettes to an inordinate extent, and it is painful to look forward to their future condition.

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[1] See page 99 of this number of the Journal.

In habitués of tobacco we frequently find errors of digestion, sometimes of most refractory character, though many persons commence to smoke from the supposition that the digestion is benefited by the use of tobacco. There is no question upon the fact that mental disease may be induced by the poisonous action of nicotine; and many smokers who are not insane have been rendered exceedingly nervous and irritable by the prolonged use of tobacco, and immediately give unmistakable evidences of absolute derangement if the customary indulgence is for any reason withdrawn. The duty of physicians would seem to be to endeavor to restrain the use of tobacco to an amount which shall not be injurious; for no attempt to stop its employment would probably be successful. Above all we should seek to restrict its use among students and youths generally. Punishment, such as expulsion or suspension from school, should be attached to disobedience, and all proper means should be employed to protect our scholars from its influence. The medical profession should take a decided position upon this important subject. Not only tobacco but all stimulants should be restrained to a limit within which they can do no harm. Tea and coffee should doubtless be included in the category of agents capable of harm. When in Paris in 1854 Dr. Bowditch found the favorite *café noir* to be such a nervous stimulant that he was able to work all night without the least feeling of fatigue. On returning to America, however, he found himself unable to follow his professional duties with his accustomed energy, but felt a great sense of lassitude and depression. He now reduced the use of coffee to once a day; but after three or four months he found himself subject to attacks of palpitation and cardiac pain, which recurred with considerable regularity. Dr. Jackson examined the heart, but could detect no organic lesion, and advised abstinence from coffee, upon which all symptoms at once disappeared. After a time the use of coffee was again commenced; whereupon the previous disturbances of the heart were soon reproduced. The harmful agent was again abandoned for fifteen years, when being once more in Europe, coffee was resumed in small quantity, but within a short time the old symptoms all recurred in a more intense form. Since that time no coffee has been taken, and no further trouble has been experienced The human system seems never to fully recover, after once being thoroughly saturated with any of these substances. The same is true of alcohol.

Dr. George B. Shattuck thought it a too common habit, in speaking of these matters, to make the *abuse* and the *use* of a substance synonymous. It is also common to form general conclusions in regard to the effects of stimulants and narcotics from personal and individual experience, and to apply to our neighbors the rules we find necessary for ourselves. It is possible to be indiscreet and to commit excesses with beefsteak as with tobacco, and the individual should decide what ***his*** system requires. The subject of discussion before the Society, however, the speaker suggested, was the use of tobacco by *boys*; and in regard to this he felt sure that the members present would cordially agree with the paper of the reader, Dr. Otis, and with its conclusions that the use of tobacco by the immature, even in moderate quantities, is injurious and undesirable.

Dr. Harlow observed that if tobacco retards development during the years of growth, it must continue to be a harmful substance even after the body has reached its full growth, and would work injury at any time of life. If it irritates the heart in a boy, it will do so to some extent in a man. President Quincy was accustomed to advise students against the use of tobacco or stimulants while engaged in their collegiate course.

Dr. Marcy stated that when a surgeon in the army he had observed occasions when tobacco was a godsend to the soldiers in aiding them to endure hardship and privation and cold and hunger. There are some organisms to which it may be of questionable benefit, but it is a serious injury to any growing person. There is no doubt that a popular vote would be largely against the general use of tobacco.

Dr. Prince thought a distinction should be made in the form in which tobacco is employed, whether in cigarettes, or cigars, or a pipe. Cigarettes probably make a more lasting impression upon the system than cigars, and are harder to renounce. There is a popular impression that the principal injury comes from the paper containing the tobacco. This is not true. In cigarette smoking the vapor is inhaled, and coming in contact with the delicate mucous membrane of the air passages its active properties are at once absorbed, and produce an immediate effect, which can be perceived to the tips of the fingers. The succeeding sensation is one of ennui, malaise, indolence, and muscular hebetude, which soon becomes burdensome unless the stimulation be renewed and prolonged by a fresh cigarette.

Dr. Marcy said that the question of the *form* in which tobacco is used is really important, if we are to judge of the *effect* from the quality of the substance employed. Many cigars are made from refuse of all kinds, which is pressed into shape and inclosed in a genuine tobacco leaf for a wrapper, while cigarettes more generally contain pure tobacco, particularly when they are made by the smoker as required for use. Certainly, as far as wholesomeness and cleanliness are concerned, cigarettes must be ranked as far preferable to cigars.

Dr. Langmaid stated that the most important questions in cigarette smoking are these: Does the inhalation of the vapor induce any disease of the mucous membrane with which it comes in contact? Does the smoke act upon the mucous membrane simply as smoke, or from the fact that it contains nicotine? Does smoking increase naso-pharyngeal catarrh? To these an affirmative reply must be given. If the mucous membrane is irritated, smoking invariably makes it worse. Will smoking produce a catarrhal state when none exists, or awaken a new one in a patient who has been cured of the disease? Observation teaches that it can do this. There is an increased secretion from the membrane, and all the other features of a catarrhal condition. Singers almost invariably abstain from smoking on those days upon which they expect to sing.

Dr. Bowditch added that he will not treat a patient for sore throat unless smoking is abandoned for the time. He has, however, never observed any affection of the bronchial tubes as indicated by râles or other physical signs which could properly be laid to the influence of tobacco.

Dr. Cutler asked if any distinction was to be drawn between smoking and chewing. He stated that a teacher told him that students became much more stupid after smoking than after chewing tobacco. Dr. Mussey has made the same observation in regard to the mental depression from tobacco.

DR. EDES remarked, in closing the discussion, that the subject had been presented with great clearness and in a very unprejudiced manner. One of its excellent features was the absence of exaggeration upon a topic which is generally discussed in an eminently partisan manner. There is no doubt something to be said on both sides.

DR. GEORGE M. GARLAND presented the next subject of the evening, as follows: —

THE TREATMENT OF FOLLICULAR TONSILLITIS.

Follicular tonsillitis is a self-limited disease, which runs its course in a certain definite time, presents a sequence of definite and successive phenomena, and finally returns to a normal condition in about the same interval of time, whether any active treatment be employed or not. Any treatment, therefore, is directed chiefly to minor points, such as (1) the rapidity of relief; (2) the time when the patient may return to business; (3) the convenience and comfort of the patient as far as the method of treatment is concerned, and the ease with which the remedies can be applied. The disease invariably presents itself in one of two types. First, there is a type in which the follicles are stuffed full, with swelling of the parts, general malaise, high temperature, and great prostration. The malaise lasts from twenty-four to thirty-six hours, and subsides entirely without treatment. I generally give some quinine and a gargle, because it seems necessary to give something in order to minister to the feelings of the patient and his friends, but the cure would take place equally well without any treatment whatever. In the second type there is high fever, considerable pain, prostration, and high pulse. The patient is in bed, and appears very sick. The general symptoms far outrank the amount of disease in the throat. This variety lasts from three days to a week or fortnight, running through a similar series of changes, excepting that they are somewhat more pronounced, as are observed in the milder variety of tonsillitis. The tonsils gradually return to a state of health, and the patient is cured just as in the type before mentioned. I have seen advised and have tried some of the nastiest things which can be made in the form of gargles. There is no danger attending the disease itself, there is no necessity for treatment of any kind, and above all there is no excuse for anything in the shape of disagreeable treatment of this disease by dirty and nauseous mixtures. The question of treatment rests only on the plea of shortening the disease and benefiting the patient. My plan is about this: Where the temperature is elevated to 102° F. or 103° F., I first give the patient a *sweat*. I do this by means of aconite. I prescribe five drops of the tincture, and direct that one third be taken immediately, one half of the remainder in half an hour, and the rest in an hour. I then give five grains of Dover's powder, and cover the patient warmly, up to the neck. When sweating commences I give all the water the patient desires for two hours. At the end of that time the sweating is generally pretty profuse. The patient is dried and allowed to get on the dry side of the bed, and is directed not to rise until the next day. My apology for the sweat is that it always relieves the sore throat, backache, pains in the limbs, and nausea. The relief to the throat from aconite is very great, so much so that the patient can generally take milk with comfort, which he could not do before. The next day there is only slight further treatment for the throat. I generally direct the patient to gargle with hot water; and by hot water I mean *very hot*, as hot as the patient can bear it. Hot water is preferable to cold. There is no treatment before the sweat, and no call for anything further after the gargle. Each time the hot water is used the patient feels better. There is no excuse for carbolic acid or any other medicament. No germicide can be used in sufficient strength to affect bacteria without being injurious to the throat. After the treatment above described there is generally constipation, which is relieved by a seidlitz powder; and I usually prescribe quinine as a tonic, to be taken for some time afterward in small doses.

My reason for introducing the subject of the treatment of follicular tonsillitis is that many physicians do not understand that it is a self-limited disease, and will do very well if let alone. They prescribe some disagreeable or disgusting gargle, which the patient often will not use, and sometimes *cannot*, and which it is practically impossible to employ in the treatment of children, who do not know how to gargle, and who resist anything of a disagreeable nature in the throat.

In a recent number of a Philadelphia medical journal I find an article by a man of that city upon this subject, and I desire to call the attention of the Section to the plan of treatment there advocated. If anything more nonsensical in theory or more disgusting in character can be put together, I do not know what it is. First, the throat is gargled or swabbed with a solution of equal parts of tincture of chloride of iron and water. This is repeated every two hours. The patient is confined to the bed, and not allowed to get up. Ten grains of quinine is given, and repeated in four hours if the fever has not subsided. This treatment is followed up until the throat symptoms disappear, and is then replaced by a tonic. The writer adds, "Cases usually recover in about a fortnight." Think of a child gargling the throat with a fifty per cent. solution of chloride of iron! And the rest of the treatment there advocated is fully as unnecessary as it is painful to the patient and burdensome to the friends. I claim that such treatment is not only useless but unjustifiable in any disease which is bound to get well any way, and which we can influence by measures equally effectual and less troublesome.

DR. LIEBMANN observed that in tonsillitis there is according to the books general malaise but no rigor; while in diphtheria there is rigor. It is frequently the case that diphtheria comes on very insidiously, and commences as a tonsillitis, often confined at first to one tonsil, but afterward extending to the other, and being followed by the local signs and constitutional symptoms of usual diphtheria. It is a mistake to suppose that the onset of diphtheria is always announced by a rigor. Tonsillitis may be preceded by a chill, while diphtheria often supervenes without any such symptom.

DR. LANGMAID said: The great interest in follicular tonsillitis consists not in what the disease *is* but in what it is *not;* in other words, in the absence of any exanthem, or parenchymatous disease, or deep-seated infiltration of the throat or other parts, and in the freedom of the patient from any symptoms of a more serious malady. We are never sure that the sore throat, the follicular disease, may not be the local manifestation or the initial symptom of some grave constitutional affection, and we should be ever on our guard

The patient should be watched, and the same precautions observed in mild cases which would be necessary in a far more serious disease. It is not certain that the particular process of sweating has any advantage over the aconite alone or over the old time remedy for sore throat, nitrate of potash. The pain in the muscles is often relieved by the administration of salicylate of soda. All the older authorities speak of colchicum and guiac, and they evidently considered the pains as of rheumatic character.

Given a case such as is described by Dr. Garland, how can the physician be certain that the superficial inflammation is not to be followed by abscess of the parts. Dr. Garland does not probably mean to indicate that *all* cases should be looked upon as absolutely innocent. How can he know that instead of the creamy deposit there may not supervene a thick deposit and all the signs of a grave exudative disease.

Any one who has had the care of diphtheria must feel anxiety upon this point. A subsequent visit should always be made, in order to be certain that no dangerous condition has supervened upon the simple tonsillitis. After the exudation there is sometimes serous infiltration of the tonsil and the symptoms of diphtheritic infection appear.

The observer in Philadelphia is not so far wrong, for he doubtless felt the apprehension of some grave complication, and was striving to ward off more serious evils.

DR. DE BLOIS remarked that there is tonsillitis and *tonsillitis.* In many cases the patient is unable to open the jaws; and when the throat can be examined there may be very little observable change in the tonsil. Scarification of the gland is often a most beneficial mode of treatment.

On motion of Dr. De Blois, it was then voted that the further discussion of this subject be postponed until the next meeting, as an invited guest of the Section who was present had a very interesting case to show to the members.

(*To be continued.*)

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PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

JANUARY 14, 1884. DR. CHARLES D. HOMANS, presided.

DR. C. F. FOLSOM reported

TWO CASES OF INJURY TO THE BACK.[1]

DR. J. H. DENNY referred to four cases of injury to the back occurring in his own practice.

The symptoms described in the first case were so largely of subjective origin as to justify the extreme distrust of courts whenever presented as a basis of claim for damages on account of alleged injuries to the back. This is because the same symptoms prevail among girls during the early years of menstruation without previous accident, wherever there is a predisposition toward nervous disorders, which I believe is the chief factor in such cases, however it may be masked.

The second case presents objective symptoms, as anæsthesia, and it is to this class of symptoms, uncomplicated, however, with mental phenomena, that I wish to allude, as illustrated in several cases observed by myself at the department for nervous diseases in the City Hospital, showing that seemingly even slight injury, if real, is followed by pronounced objective symptoms. In none of these cases was there history of syphilis or any other predisposing cause.

(1.) A robust laborer was suddenly fastened, by a caving of stones and earth, below the last dorsal vertebra. When released he could walk home, and was not confined to bed, nor did he suffer pain to any great degree. After the lapse of six months I found him with the following symptoms: Legs weak, slightly anæsthetic, gait broadened and stiff, marked ankle clonus, and exaggerated patella reflexes. The symptoms were in brief those of lateral sclerosis, with probable extension of the process to the posterior segments of the cord. The patient remained otherwise in excellent health.

(2.) Following injury to the lower dorsal region in a laborer I found, several months subsequently, marked exaggeration of all the tendon reflex phenomena, occasional spastic rigidity of legs, cutaneous hyperæsthesia, paraplegia, and paralysis of the bladder. These symptoms indicated a symmetrical sclerosis, as in the preceding instance.

(3.) A healthy woman was thrown from a horse, but not immediately disabled. Her legs gradually lost strength, and became more or less anæsthetic, while the symptoms of ankle clonus and highly exaggerated patella reflex phenomena were likewise slowly developed. About a year afterwards, when seen by myself, she was unable to walk, but otherwise in excellent health and spirits.

In such cases degeneration of the lateral and posterior columns appears to have occurred, beginning below and progressing in the form of an ascending sclerosis, affecting the lower limbs first.

In the reported cases of ordinary forms of such disease, not resulting from similar injury, the process begins above, and is a descending sclerosis, affecting the upper extremities first.

In four cases of injury to the back below the dorsal region, reported by Dr. Schultze,[2] of Heidelberg, an ascending degeneration, affecting the lateral and posterior segments of the cord, was found on post-mortem examination. As yet such records of traumatic ascending sclerosis are very rare, but the plain evidence of the clinical modifications of motion and sensation in these cases of injury to the back indicates a similar pathological explanation.

DR. J. J. PUTNAM said that he had seen various manifestations in the same general train of hysterical symptoms occuring in these cases. Robust men, as well as women, may have typical hysterical hemianæsthesia, the symptom being mainly cerebral and not spinal. He also said that one should guard against mistaking a sprain of the deep muscles of the back for concussion of the spine, a condition which, in his opinion, has no existence. He thought, with Dr. Folsom, that rest is very necessary in the early treatment, but that it need not be continued indefinitely.

THE PRESIDENT reported

A CASE OF CHRONIC ULCER OF THE DUODENUM.

The patient was a physician, aged fifty-seven years. In early life he had always enjoyed excellent health, never having been confined to his chamber but for a few days. He was quite robust and fond of out-door exercise, particularly of walking. He had lived a very regular life.

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[1] See page 97 of the number of the JOURNAL.

[2] Archiv f. Psych., etc., Bd. xiv., 1883.

About nine years ago he began to complain of pain in the epigastrium, which he regarded as gastralgia, at times attended with nausea, though not then enough to keep him from his work. This pain was not aggravated by eating, but on the contrary was frequently assuaged by a meal. It was paroxysmal in character, and frequently quite severe, though not at that time necessitating the use of opiates.

In 1878 he went abroad, and while there seemed to recover entirely; the pain left him, and he seemed as well as ever. On the passage home he had again great nausea attended with vomiting, and arrived in Boston in quite a miserable condition. He gradually improved and attended to his business, though having at times more or less pain.

In 1879, while at Bar Harbor for his summer vacation, he suffered during a great part of the time from nausea and pain, at times so great as to confine him to the house and even to his bed; then these symptoms would subside, and he was able to take long walks with satisfaction. After his return home he became better, and was able to do his duty as physician and professor through the winter.

In the last days of May, 1880, he had several large hæmorrhages from the bowels which weakened him very much. He was confined to his bed and chamber for several weeks, but at the end of June was able to go to Bar Harbor, where he passed the summer. He gradually regained strength enough to take short drives and moderate exercise. His urine at this time contained a great deal of uric acid, and in November, after several days of pain, necessitating the use of morphine and ether, he passed a small renal calculus.

Through the winter of 1880–1881 he had attacks of pain, sometimes with and sometimes without nausea, but he was out a great portion of the time, attending to his professson in part.

The summer of 1881 was again passed at Mount Desert, but his sufferings were greater than they had ever been. He was almost continually nauseated, vomited a great deal, and, as he said, "in agony" unless when under the influence of morphine or ether. He became very much emaciated, and came home in September much worse than in the spring. The matter vomited consisted usually of thick mucus, and was very acid. He gradually improved, and during the winter could drive and walk about for short distances, and at times see patients, frequently, however, being troubled with pain and obliged to pass more or less time in his chamber.

The summer of 1882 was much more comfortably passed. He returned to the city, and during the winter was just about as well as the year before.

In May, 1883, he was in his bed for about three weeks with pain, nausea, and vomiting, but was able to go to his island home in the early part of June. Here he immediately began to gain flesh and strength, and for about three weeks had but little pain and enjoyed himself very much. But the old symptoms returned, and he spent a great portion of the summer in his chamber. He came back to Boston in September, and during the fall took short drives and walks, having, however, more or less pain every day. On November 12th he had a severe attack of pain and vomiting during which some altered blood was thrown up. From this time till his death his time was principally passed in his chamber, but in the intervals of comparative ease he went down stairs and out of doors several times. In the night of December 12th–13th he seemed in great agony, and ether was inhaled early in the morning with relief. At this time some tenderness was found at the right of the middle of the epigastrium, which gradually increased and was attended with some swelling, and it was evident that peritonitis was present, probably owing to perforation. He died at half-past six P. M. December 14th.

When the attacks of pain first came on the patient regarded his disease as gastralgia. Afterwards there was a question of malignant disease, but the long duration of the symptoms without the development of a tumor seemed to militate against that theory. As there was never any tenderness of the abdomen in any part, and as the pain was usually mitigated and frequently entirely relieved by the use of food, the diagnosis of chronic ulcer was for a long time uncertain, but after the hæmorrhages from the bowels, of which there were several slight ones besides the severe attack mentioned above, it was considered that his symptoms could be accounted for in no other way than by an ulceration of the duodenum, probably very near the stomach.

By way of treatment all the drugs usually employed to assist digestion were used without any good result. He declined to try the benefit of complete rest and a very restricted diet. Vegetables, sugar, and ordinary bread were not eaten, but when well enough he partook of everything else, though never with any great appetite. Milk and Mellin's food he could take when he could bear nothing else, and he always had one or both of these articles with him even when he went on a short drive. The pain was kept under by the subcutaneous injection of morphine, which he gave himself in the epigastrium. The amount used varied very much. For the last few weeks of his life he never used less than a grain and a half, while sometimes he would inject four grains in the course of twenty-four hours. As might be expected, constipation was a constant symptom. Recourse was had to the inhalation of ether when the pain came on very suddenly and severely, but it was little used save during the summer of 1881, and during the last thirty-six hours of life. He bore his sufferings very bravely, and as soon as the pain was relieved in some degree he would take up his work on a book, which he did not live to finish. He showed great self-control by always reducing the dose of morphine the moment it ceased to be necessary to alleviate his discomfort.

He was seen during the course of his long illness by Drs. Morrill Wyman and Francis Minot in Boston, by Drs. Longstreth and Amory in Bar Harbor, and at several emergencies by Drs. Cutler and Garland, whose devoted care he highly appreciated.

Dr. E. G. Cutler said that on opening the body there was general peritonitis, with little effusion, due to perforation which had taken place in the duodenum. On opening the duodenum one open, and one partially or wholly cicatrized ulcer was found. The former was just without the pylorus, and was the one where perforation had occurred, and the latter was an inch or more beyond it. Each was nearly the size of a quarter of a dollar, with abrupt edges. There were no enlarged glands, and nothing suggestive of a cancerous nature was found. The source of the hæmorrhage was not seen on a superficial examination. At the apex of each lung there was some thickening of the pleura with condensed lung tissue underneath, and increase of the interlobular connective tissue of about an inch and a half area. A minute calculus was found in the pelvis of one kidney, and there was slight pyelitis of the organ. The organs, aside from presenting an anæmic appearance, were healthy.

DR. R. H. FITZ recalled the case of a man of sixty with ulcer of the duodenum, who had slight pain after eating, but no other symptom until perforation occurred.

DR. W. W. GANNETT thought that more blood had been lost than was at once apparent, as the fæces were stained with altered blood pigment, although there were no corpuscles. This pointed to small hæmorrhages.

DR. FITZ remarked on the value of an analysis of diets.

DR. HOMANS had never seen much difference in this patient in that regard.

DR. A. T. CABOT presented a specimen of Osteo-Sarcoma of the Head of the Femur, of five months' duration, from a boy of seventeen.

DR. W. G. WHEELER showed a specimen of

MALIGNANT DISEASE OF THE KIDNEY,

occurring in a man sixty-two years of age. Ascites existed, and the tumor was not detected until the patient was tapped, when sixteen pounds were removed, and a nodulated swelling was discovered. The urine was normal until four weeks ago, when blood appeared. There were neither vomiting nor pain, and the man had been at work until October, although he was treated elsewhere in June for disease of the liver. Œdema made its appearance first in one and then in the other leg.

DR. FITZ spoke of the rarity of the disease, there having been three or four specimens shown in this Society in three or four years, and they coming, some of them, from a distance. These cases are especially rare in children, but they do occur.

DR. WHEELER remembered a similar case in a child of five.

DR. GANNETT mentioned three cases, of from five to fifteen years, in Bamberger's clinic while he was in Vienna.

DR. H. K. SABINE said that in seven cases in children, reported by Monti, bloody urine was seen in two.

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NEW YORK ACADEMY OF MEDICINE.

ANTISEPTICS IN THE NEW YORK HOSPITAL.

AT a meeting of the Academy of Medicine, held January 17th, **DR. R. F. WEIR** delivered an address entitled How Antiseptics are Used in the New York Hospital, — A Demonstration. In speaking of various antiseptics he said that carbolic acid and iodoform were open to serious objection on account of the dangers attending their use from poisoning. In the substitution of bichloride of mercury for such agents a great advance had been made. He had first employed the bichloride as an antiseptic in March, 1882. It was after reading the paper of Delacroix, and he used it at first in a very imperfect way. Since the publication of the researches of Koch, Kimmel, and others, however, we now had very clear ideas on the subject. It had seemed to him the acme of an antiseptic for surgical purposes, efficient, safe, and cheap, but during the last few days he had discovered that it was not entirely free from objection, since its solution was not durable. In the course of one or two weeks it became changed to calomel, as he had found by testing surgical dressings saturated with it with lime water. A few days since he had written to Professor Gibbs, of Harvard, in regard to the matter, and he had just received a letter in reply from him, in which he said that he thought the solution of bichloride might be made durable by the addition to it of a small quantity of common salt, say five parts to one thousand. He proposed, however, to make some further investigations on the subject.

In the New York Hospital wounds were generally dressed with gauze or cheese cloth impregnated with a solution of the bichloride, and a special gauze, free from sizing (which consisted of oily material), was manufactured for the hospital, which cost four cents a yard. The sizing could be removed from gauze which had it, however, by washing it with weak muriatic acid. The solution of the bichloride usually employed was made up as follows: bichloride of mercury 20 parts, water 44,480 parts, glycerine 500 parts. It was sometimes used as strong as one to 1000. The glycerine was added to prevent the gauze from entirely drying, as it became a little weakened when quite dry. Dr. Weir then exhibited a number of other substances which were employed for surgical dressings, such as cotton, jute, peat, wood-pulp, and moss. Of these peat was the most absorbent, taking up sixteen and a half times its weight of water, and it was also the cheapest, with the exception of the moss, costing six cents a pound. That which was used was of two varieties, the light and the dark colored (the two being sometimes mixed together), and it was imported from the north of Germany, though he had no doubt that it could readily be obtained in this country. The dressing which he preferred to all others was jute. This was bleached, pressed, and finely carded, and differed very greatly from the article with which most were familiar under this name. It seemed to him the ideal surgical dressing, although it was more expensive than the other substances named. Moss cost almost nothing, and in the few cases in which he had employed it it seemed to answer very well.

If an amputation, for instance, was to be performed, it was his practice to wash the part the day previous, or on the morning of the operation, with a mixture composed of two ounces of turpentine to a pint of alcohol. Before commencing the operation the "protector" was placed on the patient. This was simply a rubber cloth, with a hole through which the limb to be amputated was slipped, to keep the rest of the body dry. He had seen it used in the German hospitals during a recent trip abroad, and there it was a necessity, as antiseptic fluid was used very freely to irrigate the parts all through the operation. In regard to the spray, he said that personally he had abandoned its use except in operations about the joints and the abdominal and thoracic cavities, in which he still retained it. At this point he mentioned that Esmarch had devised some "antiseptic knives," in which the blades and handles were made of a single piece of steel, so that septic germs could not possibly lodge about them. The objection to them was that if the handles became bloody they were very slippery, and so Tieman, of New York, had made a modification by constructing the handle of baked rubber, but entirely free from crevices.

Having exhibited a number of the most recently invented hæmostatic forceps, the most admirable of which he considered the instrument of Hahn, of Berlin, he returned to the consideration of the supposed operation. The amputation having been duly performed, and any hæmorrhage that might have occurred arrested as promptly as possible, the vessels were tied with catgut ligatures. Formerly he had always used Lister's carbolized ligature, which was quite strong, but objectionable on account of its slipperiness, from the fact that it was prepared with a solution of carbolic acid in oil. Moreover, Koch had recently found that carbolic acid when mixed with olive oil altogether lost its antiseptic properties. Lister had also recommended a ligature prepared with chromic acid; but the objection to this was that it lasted too long, and, consequently, acted as a foreign substance in the tissues, and was liable to cause more or less irritation. The ligature which Dr. Weir now used was one composed of fine catgut treated with solution of bichloride of mercury. It was prepared by dipping it first into a solution of the strength of one to one hundred for ten minutes, and then leaving it immersed in a solution of one to one thousand for twelve hours, after which it was wound on a bobbin and put into ninety-five per cent. alcohol. A ligature thus prepared was liable to be somewhat brittle, but this difficulty could be avoided by mixing oil of juniper with the alcohol. It would be even better, he thought, if it was kept in pure oil of juniper.

The wound was closed with the continued instead of the interrupted suture, catgut ligatures being used for the purpose, and openings being left at both ends for the insertion of drainage tubes. The black rubber tube was that usually employed, but one trouble with it was that if it was allowed to remain in position for more than from three to five days an open tract would be formed which would remain too long. If, on the other hand, the tube were withdrawn earlier than that it would necessitate the changing of the entire dressing, which was often a great disadvantage. In order to obviate this difficulty a decalcified bone tube had been devised, which after a time became entirely dissolved. After the drainage tubes had been placed in position the whole wound was flushed with bichloride of mercury solution until the latter came away perfectly clear. Compresses of antiseptic gauze were then fastened over the wound with sufficient tightness to keep up a moderate amount of pressure, and over these was placed the absorbent cushion, made of one of the substances before mentioned tacked in, so that it would not become disarranged. Then over the whole dressing a crinoline bandage was applied. In many instances an amputation was expected to heal under one or two dressings, and it was found, as a rule, that the fewer the changes of these the more rapid the progress towards cure.

All this, of course, presupposed cleanliness, and, indeed, some went so far as to say that the entire secret of the success of antiseptic methods depended on this point. Lawson Tait, of Birmingham, who did not practice Listerism, and yet had achieved such wonderful success, was the apostle of cleanliness, and his operating room, Dr. Weir said, was the cleanest place that he had ever seen. All his instruments were kept under water, and he was particularly struck with the care which he observed in preparing his sponges. When visiting his wards he saw quite a number of cases of ovariotomy, hysterectomy, and other serious operations, and all were doing well. The only trouble that he noticed was two or three stitch-hole abscesses, which he thought would not have existed if antiseptics had been used. Keith, of Edinburgh, practiced the antiseptic method, with the exception of the spray, which he rejected. Some surgeons now, during their operations, in lieu of using the spray, kept the parts wet with a boro-salicylic acid solution.

Dr. Weir thought it was a point of great importance to use extreme care with the sponges employed in surgical operations, as he believed that more risks were run in this direction than in almost any other. Sponges could now be purchased so cheaply that he thought it advisable, as a rule, to throw them away after using them once. The sponges which were employed at the New York Hospital were first thoroughly hammered, in order to get all the sand out of them, and then placed in warm water, which was preferable to hot. Next they were kept in a solution of permanganate of potassium for about twenty-four hours, and then washed out in water, after which they were treated with a solution of one part of sulphide of sodium to one hundred parts of water, to which had been added one fifth part of a solution of hydrochloric acid or oxalic acid (one to one hundred). Next they were placed in running water, and finally dipped in carbolic acid solution, one to twenty, or bichloride of mercury, one to one thousand. If used in operations about the vagina, rectum, or abdomen, the sponges were thrown away after being used once, but after being used in amputations and other operations they were cleansed and disinfected by the same process by which they were originally prepared.

In concluding, Dr. Weir gave some statistics in regard to compound fractures and amputations, which showed in a very striking way the advantages of the antiseptic method. In compound fractures the rate of mortality at St. Luke's and the Roosevelt Hospitals, New York, had formerly been thirty-three per cent. In the old New York Hospital it had been sixty per cent., and in the Boston City Hospital forty-one per cent. With the open method it had been twenty-six per cent. Under the strict antiseptic plan, however, the mortality in compound fractures in Dr. Weir's hands had been only six per cent., and some surgeons had reported even a better showing than this. On account of the saving of life secured by the methods which he was the first to propose he thought, therefore, that the name of Joseph Lister was entitled to more honor than any other in this century, not excepting that of the discoverer of anæsthetics.

THE NEW YORK COUNTY MEDICAL ASSOCIATION.

DR. AUSTIN FLINT ON THE PATHOLOGICAL AND PRACTICAL RELATIONS OF THE DOCTRINE OF THE BACILLUS TUBERCULOSIS. — PRESENTATION OF A SPECIMEN OF HYDATID TUMOR OF THE SPLEEN.

The first public meeting of this new Society, which has been organized for the purpose of upholding the National Code of Medical Ethics, and securing the representation of the profession of New York again in the American Medical Association, was held at the College of Physicians and Surgeons, New York, on the 14th of January. The president of the Association is Dr. William Detmold, the vice-president, Dr. Charles A. Leale, and the secretary, Dr. E. A. Judson. It was a large and enthusiastic gathering, and when, after a brief inaugural address by the President, Professor Flint arose to read his paper on the Pathological and Practical Relations of the Bacillus Tuberculosis he was received with a prolonged storm of applause. Before commencing it he congratulated the Society on the auspicious circumstances under which it had started upon its career of usefulness, and said that he esteemed it no small honor to be the first to present a scientific communication to it.

The history of tuberculosis during the last quarter of a century, he said in his paper, afforded a striking example of the mutability of medical opinion. About twenty-five years ago Virchow had enunciated the doctrine that the term tubercle should be confined exclusively to the so-called granulations of Bayle. This dogma, which was founded upon a pathological basis, was universally accepted, and from this time phthisis and tuberculosis were regarded as entirely distinct diseases, although it was admitted that the two were associated in certain instances. This view, however, was in direct opposition to the results of the clinical studies of such masters as Laennec and Louis, and so in order to reconcile the old opinions as far as possible with the new, certain predisposing and concomitant conditions were classed under the term vulnerability. The therapeutical aspects of Virchow's doctrine were unfortunate, for patients affected with phthisis were subjected to measures designed for the treatment of chronic inflammation, such as local blood-letting, mercurials, and confinement within doors, notwithstanding the fact that this course was opposed to the clinical results of the illustrious teachers mentioned.

It had required nearly a quarter of a century to convince the profession that these views, based on the microscopic investigations of Virchow, were erroneous, and the conclusions to which they led false. This whole matter, therefore, taught the evil of rash deductions from pathological research, and not only this but the safety of trusting to clinical experience. The lessons taught by Laennec, Louis, and the other great clinical lights of their school were as valuable to-day as they ever were.

Dr. Flint then went on to speak of the researches of Villemin, who, in 1865, announced the inoculability of phthisis. That there was a specific virus, however, was generally regarded as disproved by the fact that the inoculation of other agents beside tubercle seemed also to induce tuberculosis in certain animals. This apparently fatal objection was in a great measure entirely removed when Koch made known his discovery of a specific organism characteristic of tuberculosis in the year 1882. Two things were remarkable about this discovery: (1) that it should at once have excited so much interest in all parts of the civilized world, and (2) that the bacillus tuberculosis should be so generally accepted by practical histologists, who were most competent to disprove or confirm its existence and significance. Having stated that positive proof of the bacillus being a micro-organism distinctly characteristic of tubercle had been afforded by the results of its culture under circumstances which excluded all sources of error, Dr. Flint next proceeded to inquire into the nature and extent of its connection with tubercular disease. The all-important question was whether or not it was the causative agent, and the experiments in the cultivation of the bacillus, quite devoid of any morbific agent adherent to it, outside of the body, he thought had demonstrated conclusively that the question must be answered in the affirmative. Koch's observations had never been successfully disproved. It followed that pulmonary phthisis was an infectious disease, a multiplication of the causative agent taking place within the body. Two conclusions could, therefore, now be stated: (1) that no case of phthisis took place without the presence of the bacillus, and (2) that phthisis was primarily a local disease, having its seat in the lungs, and directly due to the agency of the bacillus. The local pathological process extended, and the development of the disease in other parts of the system depended on the migration of bacilli.

He next took into consideration certain clinical facts which seemed to bear against Koch's hypothesis. This antagonism, he thought, was apparent rather than real. Pulmonary phthisis was undoubtedly a diathetic disease, and heredity was not merely an accidental coincidence in connection with it. In some climates the disease was met with more frequently than in others, and a humid soil, defective alimentation, mental depression, want of ventilation, confinement within doors, and similar conditions were believed to have no little to do with its causation. Age also was a point that entered largely into its ætiology. How could these facts be reconciled with the proposition that the efficient cause was a *contagium vivum?* In order that this contagium should produce its effect upon the system certain special concurrent and coöperative requirements were necessary. The nature of these conditions was unknown, but the fact of their essential importance was perfectly certain. They might all be embraced under the name *predispositions.* The same elements of a contagion and a predisposition were very evident in yellow fever, for instance, and in this disease the two had been very aptly compared by the late Dr. Barton to the two blades of a pair of scissors, which were only of use when coupled together. The contagium and the predisposition were perfectly inert unless combined with each other. The predisposition in phthisis was the diathesis, and this might be either congenital or acquired. It was practically impossible to avoid the inhalation of bacilli as long as phthisis was as common as it was at present almost everywhere in the world, and in the consideration of this affection it was necessary to apply to it the same truths that were applicable to other infectious diseases.

Proceeding to consider the matter of diagnosis, he said that of its great importance he was able to speak from a very considerable experience. Not professing to be himself a skilled microscopist, he had had the sputa of a large number of patients suffering from phthisis examined by Prof. William H. Welch and other competent observers, and the bacillus had always been found to be present. In any case where there had previously been any doubt about the diagnosis, if the bacillus was discovered it was regarded as proof positive of the existence of phthisis. If it was not found the presence of the disease might be doubted. He thought, therefore, that the time was not distant when the examination of the sputa in thoracic affections would be as common as that of the urine in suspected renal disease. So far as his experience went the abundance or fewness of the bacilli found in any instance was a sure index of the activity of the tubercular disease present, and this was a point which had an important bearing on prognosis. For a long time past, Dr. Flint said, he had taught that phthisis was a self-limited disease, and the explanation of this he now believed to be that the race of bacilli after a time became extinct.

The next point taken up was the prevention and treatment of the disease in their relations to the bacillus. In order to insure protection against it it would be necessary (1) to avoid all exposure to contagion, and (2) to remove all predisposing causes. The first point it was evidently impossible to carry out unless we could find some spot in the world where there had never been a case of phthisis. Even at this moment the gentlemen present might be inhaling bacilli if there were in the room any individual suffering from the disease. Perhaps as safe a place as could be found was on shipboard, provided no case of phthisis were on the vessel; but it would not do to order perfectly healthy persons to spend their lives at sea. The danger from exposure varied in proportion to its degree and extent; and here a great deal could be gained. Healthy individuals should breathe as little as possible the same air as those suffering from phthisis, and the disinfection of the sputa of such patients should not be neglected. The freest possible ventilation should also be insisted upon; and not a little might be gained by attention to such points as these. In the removal of predispositions we had to contend with the difficulty of recognizing the presence of the predisposition before it was too late. If deaths from phthisis had occurred in the family, however, the predisposition certainly existed, and special care was to be enjoined during the early years of the individual. If the existence of any predisposition was simply probable, it was better to err on the side of over-caution, and the lessons of common sense and experience would offer a safe guide. Residence in a dry, salubrious climate with an atmosphere rarefied by elevation, the maintenance of cheerful spirits, exercise in the open air, and the highest grade of constitutional vigor attainable had been shown to be useful preventive agents.

Theoretically the treatment would consist of (1) the destruction of the parasite, and (2) the removal of conditions under which it thrives. Although not two years had elapsed since Koch's discovery was announced to the world, a large number of agents had been proposed and experimented upon with a view of destroying the bacillus, such as corrosive sublimate, iodoform, arseniate of soda, and salicylate of soda. As yet no efficient parasiticide had been found which, when taken into the system in sufficient quantity to have any effect upon the bacilli, would not prove injurious to the patient; but that this end might be achieved in the future was not beyond the range of possibility. The removal of the conditions upon which the existence of the parasite depended could be carried out better. The disease would cease to exist when the two factors, the bacillus and the predisposition, could be done away with. The discovery of Koch, therefore, while it had thrown much light on the ætiology and pathology of phthisis, as well as given us considerable aid in the way of diagnosis and prophylaxis, had not materially affected the treatment of the disease, in which we must continue to trust to the light of reason and experience.

Drs. William H. Welch, E. G. Janeway, and **George Peabody** all stated that they were in complete accord with the views advanced in the paper, and also spoke of the comparatively little value of negative testimony, especially after a single examination, in regard to the bacillus as compared with positive. Dr. Janeway called attention to the fact that in the early stages of the disease it was often difficult to obtain any sputa at all from patients. In some instances in which this had been the case he had found later on in the course of the disease that bacilli were abundant in the sputa.

The discussion was brought to a close by **Drs. Leale** and **Nelson**, who related cases in which tuberculosis seemed to be directly communicated from one member of a family to others. In that given by Dr. Leale a family of six individuals was entirely swept away by the disease within a space of ten years.

Dr. William H. Welch then presented a specimen of hydatid tumor of the spleen, which had been removed from the body of a German who died in Bellevue Hospital from extensive superficial burns; there being no previous history of disease. The tumor was a large echinococcous cyst with a firm fibrous capsule, and also characterized by some calcareous deposits. On making an incision into it about four ounces of opalescent fluid escaped, and within it was a large mother cyst, which had collapsed. About this were at least two hundred daughter cysts, varying from the size of a pea to that of a hen's egg. The growth was, therefore, of the exogenous variety, which was stated to be considerably more rare than the endogenous, in which the daughter cysts are formed within the mother cyst. No heads of echinococci were found, but some hooklets were met with. Dr. Welch then proceeded to give a demonstration on the blackboard of the development of echinococcous cysts in the human subject, and in conclusion spoke of the third variety, the multilocular, which, he said, had never been met with in this country, and which, as it was found exclusively in Switzerland and Southern Germany, he thought was probably not produced by the same embryo as the exogenous and endogenous cysts.

NEW YORK NEUROLOGICAL SOCIETY.

Stated meeting, January 8, 1884.

Dr. William J. Morton, President, in the chair.

NOTE ON THE USE OF THE MENTHOL CONE AS AN ANODYNE.

Dr. E. C. Wendt showed a little contrivance called by the Germans "*Migräne Stift*," and explained its application and uses. It consisted of a piece of menthol moulded into a conical shape and secured in a little wooden box, closed by a cover to prevent evaporation and breaking. It seemed to be little known here, although it was much used abroad, especially for sick headache.

His attention had been first directed to the anodyne properties of menthol by a short notice in the *Medical Record* of April 28, 1883, by Dr. Cammann, who had recommended an alcoholic solution of menthol (one drachm to one half ounce alcohol) to be painted over the affected parts. Dr. Wendt had since that time often used this solution, and found it an anodyne.

In this country menthol had not yet received that amount of recognition from the profession to which its pain-obtunding properties would seem to entitle it. In fact, little seemed to be known about it, and for this reason Dr. Wendt thought it might not be amiss to quote a descriptive notice of it: "Menthol, or menthylic alcohol, is a crystalline substance, deposited from the oil of peppermint, prepared in China and Japan from *Mentha Arvensis var. piperascens* and *glabrata*." It formed the chief ingredient of a much valued remedy for neuralgia before its source was generally known, what was sold in small bottles, labeled with Chinese characters.

It is a white crystalline stearoptene, melting when pure at 97° Fahrenheit, and is obtained by the Japanese from the oil of peppermint by submitting it to freezing several times in succession until no more menthol crystallizes out.

It is also said to be contained in the American and English oils of peppermint, but probably in small quantities only. It is somewhat surprising that the Japanese peppermint plant which is grown in England as a curiosity has not been cultivated in that country, as a source of the drug, the supply of menthol being uncertain, the demand great, and the price in consequence occasionally very high.

Menthol is said to be sometimes adulterated with crystals of Epsom salts, to which it bears a great resemblance. These being insoluble in alcohol or chloroform, in which fluid menthol is freely soluble, can easily be detected. Samples of fine crystals sometimes contain some essential oil adhering to them, a fact which must be taken into consideration when the menthol is made into cones or pencils.

Menthol is but slightly soluble in water, although imparting a strong odor and taste to that liquid, and is soluble in aqueous alkalies. It is soluble in fixed and volatile oils and in ether.

Although Dr. Wendt's experience with menthol had not yet been a very extended one, it had nevertheless been sufficient to convince him of the utility of the drug in a rather large class of cases. He had found it a pleasant and reliable anodyne in all the lesser neuralgias, and especially in those so frequently occurring about the face, but it was also serviceable in many painful affections due to inflammatory processes. Its topical action was similar to that of aconite, over which it had the advantage of not being poisonous.

Dr. Wendt remembered one rather striking case of quite severe supra-orbital neuralgia, which refused to yield to the oleate of aconitia, but was much benefited by menthol. But, on the whole, in violent attacks he had found it almost useless. In typical migraine, for instance, where the pain was at all severe, and in all deep-seated aches of more than very moderate intensity, it had no appreciable effect, except, perhaps, the indirect psychical action of distracting the sufferer's attention.

In the discussion which followed these remarks, **Dr. Roberts** asked Dr. Wendt if he had tried the prolonged application of menthol.

Dr. Wendt said that he had in some cases of hemicrania, though without decided benefit. Nevertheless, the patients experienced a pleasant sensation of coolness of the surface, followed by a feeling of agreeable warmth.

Dr. Morton thought that menthol probably acted more after the manner of counter-irritants, by insuring relief in a reflex rather than in a directly local way. Mustard was a typical peripheral nerve-irritant, and it seemed to him that the action of menthol could be best explained on the same principle of procuring peripheral nerve-impressions in a reflex way. Dr. Morton's attention had been first called to the menthol-cone by Dr. Wendt. He chanced to be at the latter's office one day when suffering from a headache. A few strokes of the menthol gave him at once a sense of relief. He felt the effects of the peppermint to be as gratefully cooling as the application of cold metal. In brachial neuralgia, as well as in sciatica, he had been pleased with the good effects of menthol. He thought the drug was deserving of further trials.

Dr. Ralph L. Parsons then read a paper on

DETENTION IN ASYLUMS.

The reader considered the questions whether sane persons were not often unjustly detained in asylums for the insane; and, secondly, whether many uncured and incurable patients were not methodically detained in asylums who might advantageously be returned to their relatives, or placed in the care of private families under State supervision.

It was assumed in the first instance that the detention of patients after recovery had taken place was quite possible and even probable in some instances, but that such detentions were not usually of serious import to the patient; that, on the other hand, too early discharge might be more injurious. It was also admitted that maliciously unjustifiable detentions were possible, as any other sort of injustice is possible on the part of persons holding positions of power and responsibility. But reasons were urged in support of the belief that such malicious detentions were at least very rare; that sentiments of honor and professional pride were strong deterrents, to say nothing of the great danger of detection in the commission of the wrong, and the ease with which patients who were decidedly insane obtained their enlogement through the intervention of the courts.

Cogent reasons were given why various classes of convalescents ought to remain under asylum care for a period of time after they appeared to be well; as, for instance, when they would be immediately subjected to the exciting cause of their insanity on their return, when the progress toward convalescence had been characterized by relapses, or when dangerous delusions had been entertained and had faded away so gradually that there were difficulties in judging whether they had passed away entirely.

But, on the other hand, the discharge of certain uncured curables before they were well was advised, as when after making a certain degree of improvement, this improvement stopped, and the patient seemed to retrograde. It might be highly advisable to discharge some of these patients before they were well.

The major part of the paper was devoted, however, to an advocacy of the discharge from the asylum of harmless incurables and their return to the care of their friends, or placing them with ordinary families as boarders. However comfortable and happy such patients may appear to be in large asylums, there are many causes of discomfort that would not be experienced in ordinary family life. Quotations were made from Dr. Bucknill and from Dr. Maudsley strongly supporting these views.

The question was then considered, what classes of incurables might safely and with benefit be released from asylum restraints. Since in the case of a great majority of such patients moderate cost of maintenance would be essential, those only would be adopted who were quiet and orderly, and would require no especial supervision. Habits of industry would be favorable.

Whether such patients would do better with their relatives or with strangers would depend on the circumstances of the family, the feelings or notions of the patients, etc. Many patients who would not do well with their own kindred would be happy and useful with congenial strangers. It would be impossible for the patient to resume his former position and influence in his own family, and hence he would be subjected to annoyance there.

As a preliminary measure, a system of legalized furloughs was advocated, to the end that at first the patient might still be under legal restrictions and easily returned to the asylum if the trial at large should prove a failure.

The paper closed with the following summary of conclusions, to wit: —

(1.) That, inasmuch as many recoveries take place in asylums for the insane, it is to be expected that some convalescent patients may at any time be found in the wards.

(2.) That while possibly now and then a convalescent patient may be detained on probation an unnecessary period of time, such cases are not of frequent occurrence, nor important in their consequences when they happen, and that when they do occur the detention is very rarely indeed through criminal intent.

(3.) That many harmless incurables are unnecessarily detained in asylums for the insane; that these incurables would be happier in the enjoyment of ordinary family life and associations, and that systematic efforts should be made to secure their enlargement and their establishment under family care.

(4.) That under certain circumstances curable patients should be removed from asylum restraint and associations while yet uncured.

Owing to the lateness of the hour, the discussion upon Dr. Parsons's paper was postponed until the next meeting of the Society.

Recent Literature.

Transactions of the American Gynæcological Society, Vol. 7, 1882. H. C. Lea's Son & Co.

Full abstracts of the papers read at the meeting of which this volume is the official report were widely published in the weekly journals; but so long a time has since elapsed that the book has almost the charm of novelty. We learn, however, that the Transactions for 1883 are already in press, and that hereafter the successive volumes will be promptly issued.

The President, Dr. T. A. Emmet, departing from the custom of his immediate predecessors, chose a professional subject as the topic for his annual address; namely, A New Method of Exploration, with the Pathology and Treatment of Certain Lesions of the Female Urethra. The new method consists in making a button-hole-like opening into the urethra, avoiding the urethral outlet and the neck of the bladder: through this opening ocular and digital examination can be made, and appropriate treatment effectively applied. The urethral fistula thus created can be kept open a longer or shorter time, as required for purposes of treatment, and then closed like a vesico-vaginal fistula, except that the sutures must be passed so as to include the urethral mucous membrane. This method has borne the test of experience, and seems to us to be a great advance in operative gynæcology. Dr. W. H. Baker's communication showing the value of bladder drainage by cysto-vaginal fistula in the treatment of hyperæmia of the neck of the bladder is of especial interest in this connection.

Dr. J. T. Johnson's paper on the Proper Use of Ergot in Obstetrics emphasizes the well-known dangers of this drug, if given before the uterus is empty. We quite agree with Dr. Johnson that, viewing the use of ergot as a whole, the race would be better off without it altogether: and we believe with him that midwives, in whose hands this drug becomes in many cases a veritable "pulvis ad mortem," should be restrained, by legislative means if necessary, from its indiscriminative use.

Dr. Fordyce Barker's paper reminds the profession that leucorrhœa is not a disease to be treated as such, nor the symptom solely of uterine disease, but is often the expression of a constitutional cause which should be combated by appropriate general and hygienic treatment. The tendency of many gynæcologists is to lose sight of this fact in their zealous administration of local treatment.

The valuable paper of Mr. Knowsley Thornton shows by the careful comparison of statistics that the complete removal of the uterine appendages is a safer operation than supra-vaginal hysterectomy, and, at the same time, an equally effective procedure for the cure of uterine fibroids. There are cases, of course, where the latter operation must of necessity be performed, but the mortality reaches the high figure of from thirty to forty per cent. even in the hands of experienced surgeons. On the other hand the experience and intelligent observation of Mr. Thornton have convinced him that the milder operation cures the disease, and that the mortality therefrom should be *nil*. It is necessary however, for success, not only that the ovaries should be completely removed, but that all the lateral vessels in the broad ligaments should be completely ligated and the chief blood supply to the uterus thereby cut off. The paper is an admirable exposition of the present status of the two operations.

Dr. Van De Warker's exhaustive paper on Mechanical Therapeutics of Versions and Flexions of the Uterus deserves careful study by all who resort to mechanical means for the correction of uterine malpositions. The profuse illustrations add greatly to the value of the communication.

Dr. J. Collins Warren submits a new method of operative relief in certain cases of complete rupture of the perinæum where the recto-vaginal septum is largely involved. This method is now undergoing the test of experience, and, so far as we learn, with gratifying results.

The contribution of Dr. M. D. Mann concerning Surgical Operations on the Pelvic Organs of Pregnant Women collates the experience of many eminent gynæcologists and throws much light on a subject on which it was much needed. The paper will repay careful study.

Dr. W. L. Richardson presents a fourth and fifth series, of one hundred and eight cases each, of measurements of the uterine cavity in childbed. This brings the number of cases reported by Dr. Sinclair and himself to five hundred and forty; and when the number reaches one thousand it is Dr. Richardson's purpose to present general deductions therefrom: the profession will await the final report with interest.

The remaining papers are by Dr. Thomas on the History of Twenty-one Cases of Extra-uterine Pregnancy; Dr. Garrigues on Electricity in Extra-uterine Pregnancy; Dr. Parvin on the Care of the Perineum; Dr. R. S. Sutton on the Treatment of the Pedicle after Ovariotomy; Dr. Busey on the Influence of the Constant Use of High-heeled French Shoes upon the Health and Form of the Female; and Dr. Drysdale on the Ovarian Cell. The volume ends with Dr. Thomas's memoir of the late Dr. James Platt White, and the valuable index of gynæcological and obstetric literature of all countries for the year 1881.

C. M. G.

Intra-Thoracic Effusion. By Norman Porritt, L. R. C. P. London, M. R. C. S. Eng., etc. London: J. & A. Churchill; Huddersfield: Alfred Taft. Pages 304.

This essay was awarded the Fothergillian gold medal for 1883 by the Medical Society of London, and deals mainly with effusion into the chest from the point of view of a surgeon, — its operative treatment by paracentesis or tapping, and thoracentesis or free incision. The point of election for both operations is in the back, the seventh interspace on the right, the eighth on the left; and a rule is given for finding the eighth space which is new. The position of the lower angle of the scapula when the arm is at the side is to be marked on the skin, and again when the arm is raised above the head; an inch below the middle of the line connecting these two points will always be found the desired interspace. While we cordially agree with our author in his preference for the back in tapping, the posterior axillary line seems to us better for the free incision, as the patient can then recline or lie upon his back without causing pain by pressure against the tube. The author seems to have discarded the aspirator, but uses a canula to which is fastened rubber tubing, the lower end of which is kept constantly immersed in a five per cent. carbolic acid solution. The trocar is passed through the side of the tubing and into the canula; when the pleural cavity has been reached the trocar is withdrawn, and the flow of fluid is started by the vacuum left in the canula, while the elasticity of the rubber closes the small hole in the tubing caused by the passage of the trocar. The risk of suction of the air in the tube into the chest is very slight, but, for precaution's sake, it is better to carbolize the interior of the tube before using it. Mr. Porritt makes no claim to originality in the use of the siphonage method, but we dwell on it here as we believe it to be in every way safer for the patient, though it requires more of the attendant's time, unless, indeed, "the patient may be left in charge of a trustworthy nurse" while the fluid escapes. We notice that the canula figured on page 21 is furnished with a lateral opening as well as the usual one at the end, the advantages of which are obvious.

In thoracentesis chloroform is preferred for children up to ten years of age, "for, unless very young, it is impossible to restrain their movements;" for all older patients ether is to be used. We are somewhat surprised at the length of double tubing which Mr. Porritt allows to remain in the chest after free incision, six inches in adults, four in children. On the sixth or seventh day the tubes may be shortened, and subsequently at each change of dressing, according to the progress of the case. If the opening is anywhere near the base of the chest we do not see what advantage is to be gained by the presence of six inches of double tubing, and we can see how cure may be retarded. It is almost needless to say that the strictest antiseptic precautions are enjoined.

On page 190 we find details of a case of large phthisical cavity at the base, which was opened and drained with happy results to the patient, the most successful case of the kind which we remember having seen in print.

Paracentesis pericardii should have received more extended notice in an essay so thorough and full of details as to all other aspects of operative interference with effusion into the chest. The author assigns as his reason for relative silence that he has never had occasion to perform the operation. Three of the four cases of free incision for purulent pericarditis with which we are acquainted have been reported since this essay was written, but Rosenstein's successful case was published in 1881.

The paper and typography are not quite up to the mark, and we have met with some half dozen oversights of the proof-reader not noted in the long list of errata which precedes the preface.

In conclusion we must express our obligation to Mr. Porritt for his valuable, painstaking, and nearly exhaustive essay, which should, and doubtless will, be widely read. That we have thought it necessary to criticise a few points may be taken as evidence that we have found the work worth careful study. F. C. S.

A Treatise on the Diseases of the Eye. By J. Soelberg Wells, R. C. S., etc. Fourth American from the Third English Edition, with copious additions, by Charles Stedman Bull, A. M., M. D., etc., etc. Philadelphia: Henry C. Lea's Son & Co. 1883. 8vo, 846 pages.

A new edition of a work as widely and favorably known as this requires notice only of the changes which have been made. The time between the publication of this and the previous edition is less than three years, yet the editor has evidently not been sparing of effort to incorporate in the book whatever of interest and value has appeared in the interval. As in former American editions, there has been little alteration of the original text, but the new material has been added in brackets. The arrangement of chapters has been somewhat altered. The section on Ophthalmia Neonatorum is wholly new, and the author recommends as prophylactic measures a modification of Credé's method. There is also a new section on Membranous Conjunctivitis. The views of Sattler on the parasitic origin of trachoma are given, but the method of treatment of trachoma and pannus by jequirity was published too late to find insertion. Additions are frequent throughout the book, some of the more important being on the operations of the author and Landolt for deformities of the lids; the comparative value of mydriatics; the theories of sympathetic ophthalmia and of glaucoma; optic neuritis in intracranial disease; and conjugate deviations of the eyes with bulbar lesions. The account of the latter condition we think might have been expressed more clearly. On the whole the work maintains its former high standard.

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SOME OLD-TIME DOCTORS.

The "Old Residents' Historical Association," of Lowell, Mass., has done much to collect and perpetuate by its published reports facts of interest which too often, for the lack of such an organization, have been allowed to perish with the lives of the possessors. A recent volume of their contributions, devoted to reminiscences of the early physicians of Lowell and vicinity, has been sent to us through the courtesy of Dr. John O. Green, President of the Association. The paper is prepared by Dr. D. N. Patterson. It is much to be wished that in other communities a similar labor of love might be performed in preserving the memory of a past medical generation. There is much for physicians of the present day to learn from the sturdy characters of such men, and the general public can appreciate from sketches like these the debt under which the community lies to the faithful services of the medical profession.

For reasons which are obvious the sketches published include only the names of men now no longer living, but we find among them several whose reputation had extended far beyond their own vicinity. Such are Dr. Elisha Bartlett, professor in at least five schools of medicine, among them the College of Physicians and Surgeons of New York. Dr. John C. Dalton, born in Boston, and returning hither in his later years to reap the fruits of his medical honors, and to be appointed senior physician to our then newly-built City Hospital, who yet spent the most active years of his life in Lowell and in its adjacent towns. An interesting story is related as to one of his early diagnoses. He had been selected by Dr. Wyman, on the retirement of the latter to the superintendency of the McLean Asylum, to succeed him at Chelmsford, being then twenty-three years of age. An old man from New Hampshire, while traveling through the town, was thrown from his sleigh and sustained an injury to his hip, which Dr. Dalton pronounced a fracture of the neck of the femur, and treated accordingly. The patient became restive under confinement, and insisted on being taken home. He had a large box made, into which he was placed with his apparatus and conveyed in a wagon a hundred miles, not in easy stages. Dr. Dalton naturally condemned the plan, but the patient persisted. Arrived home, he summoned a distinguished professor from Hanover, who said the bone was not fractured, and made the case the occasion of a lecture to his students on the evils of hasty diagnosis in young practitioners. Dr. Dalton hearing of this wrote the professor of his reasons for his diagnosis, but in such cases the weight of age generally carries the day in the public mind. After a few years the patient died, and Dr. Dalton promptly visited the place and requested an autopsy. A dissection showed a most interesting specimen of this fracture, and the young practitioner wrote his senior the particulars, and closed by saying that it *was* "very important in such cases to avoid a hasty diagnosis."

Space forbids us to cite other interesting anecdotes, or to do more than mention some of the other honored names to be found in this record. Dr. Rufus Wyman practiced for a number of years in Chelmsford, which is spoken of as the "mother town" of Lowell, and thence was called to the McLean Asylum at Somerville as its first superintendent, where he took an active part in planning some of the buildings, even drawing the architectural and working plans with his own hand. He was President of the Massachusetts Medical Society in 1840, and was the father of Drs. Jeffries and Morrill Wyman. Another president of the State Society was Dr. Elisha Huntington, also for eight years mayor of Lowell. Dr. Willard Parker, of New York (still living at an advanced age), was born in Chelmsford, but found chiefly in other cities the opportunities for earning the great name he has borne in surgery. Dr. Henry Kittredge, of Tewksbury, was a member of a family so noted for surgical skill in successive generations, that we are told that several physicians in New Hampshire applied to the Legislature to have their names changed to Kittredge in order thus to acquire the hereditary prestige. His biographer says of him that he made the tincture of common sense an important ingredient in every prescription which he compounded.

Taking these men as a whole we may say of them, in the words of Dr. Nathan Allen: "They inherited talents of a high order, and such was their calling and the circumstances surrounding them that they developed marked characteristics. It is doubtful whether any other city or vicinity in the State, except Boston, can present such a list of medical men. Some eight or ten physicians can be named among them whose equals in point of talent, education, and character it would not be easy to find."

Those who never won great renown outside their own town or neighborhood nevertheless left behind them a fragrant memory, and the work has been a good one, which has helped to preserve for a few years more the record of these faithful lives. To leave such a memory behind one is not an unworthy aim.

EMOTIONAL INSANITY AND THE DEFENSE OF NUTT FOR KILLING HIS FATHER'S MURDERER.

The trial of Nutt, a young man not yet of age, in Pittsburg, for the deliberate murder of Dukes, who had slandered and outrageously deceived Nutt's sister, and then killed her father for trying to protect her character, has resulted about as everybody had expected. If Dukes' offense was murder in the first degree, he should have been hanged. His acquittal raised a storm of indignation, to escape which, and, indeed, to save himself from the mob, he was obliged to take to flight. Under the circumstances, after so wretched a miscarriage of justice on the part of the courts, the sympathy of the community would naturally be with the youth who avenged his father's death and his sister's disgrace by killing the murderer of the one and the traducer of the other, a man who otherwise would have been allowed to go at large after having wantonly committed crimes which should meet with summary justice in any civilized community, and the failure to punish which must result in dueling, lynch law, or further crime.

It is unfortunate, however, that such offenses cannot be met by the laws of the land without resort to the plea of emotional insanity, the existence of which it is hard to think could have been believed by the judge and the jury, to the extent of considering it a disease of the mind involving irresponsibility. It is difficult to understand, too, how the medical witnesses could have supposed that in the case in hand there was actual mental unsoundness unless they considered the term emotional insanity to be a mere synonym of righteous indignation and natural passion over an egregious wrong. In either case the result is unfortunate for society. One unpunished crime does not justify another, and no community can long exist except under obedience to law, a disrespect for which has made homicide so common in some of our States in redress for injuries which the courts do not reach. Even that is not the only disastrous result of a verdict which in the least opens the way for another verdict of not guilty of murder by virtue of insanity in which no one believes. It brings medical expert testimony into contempt, and deprives of the reasonable defense of insanity many unfortunate persons, irresponsible, but whose unsoundness of mind is not evident to the lay mind, and who cannot create sympathy.

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THE PRESERVATION OF THE ADIRONDACKS.

As a nation we are becoming aroused to the necessity of taking some action to prevent the total destruction of our forests. The mere loss of fuel and timber incident to their destruction is a small matter compared with the effect upon the water supply of potable springs and navigable rivers. The proposed action in regard to the preservation of the Adirondack forests is of more than local interest.

A bill has been introduced into the New York State Senate contemplating the formation of an Adirondack Park, within whose boundaries will eventually be comprised 1,700,000 acres of forest land. Altogether the State now owns about 750,000 acres in the Adirondack region, and of this, about 150,000 acres have reverted to it, for non-payment of taxes, during the past year. Within the next ten years it is believed that at this rate enough land will have reverted to the State to make the park the size contemplated in the bill. The whole is to be put into the charge of a superintendent, whose duty shall be to protect it from depredations. It is a question, however, whether this measure sufficiently provides for the end which it is designed to accomplish, namely, the conservation of the sources of water supply for the upper Hudson and for the streams which feed the canals and fertilize the agricultural lands of the northern part of the State. It is possible that this tract of 1,700,000 acres may not be large enough for the purpose, and even if this is the case, it would seem desirable that the bill should be amended in such a way as to secure the protection of the forests on the 1,000,000 acres which have not yet reverted to the State, since the work of destruction is said to have already gone on to such an extent as to seriously threaten the water supply.

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MEDICAL NOTES.

— The *Polyclinic* (January 15th) contains the report of the treatment of two cases of obstinate intermittent fever in the hospital service of Dr. J. Solis-Cohen, by the hypodermic injection of the double salt of muriate of quinia and of urea, in accordance with the suggestion of Dr. Bartholow. Ten grains of the salt (the formula for which is given in the last edition of the United States Dispensatory) was injected at a dose, and the effect on the chills and the malarial cachexia in general was apparently most beneficial.

— The same journal gives an account of the extraction of a leech from the larynx of a man, aged sixty-four years, who had entertained the unwelcome guest for fifteen days before he presented himself at the *Policlinica de la Escuela de Medicina de Sevilla.* The patient was unaware of the cause of the obstinate hæmorrhages, associated with aphonia, constant harassing cough, difficulty of deglution, and great embarrassment of respiration, for the relief of which he consulted Dr. Sota; symptoms which, in connection with the family history of the patient and the history of the attack, led at first to the supposition of phthisis; and, when nothing abnormal was found upon physical exploration of the chest, to the idea of primary tuberculosis of the larynx. But laryngoscopic inspection at once revealed the nature of the case, the leech being seen adherent to the pad of the epiglottis, immediately above the anterior commissure of the vocal bands, extending upward and backward, so that its tail rested on the apex of the right supra-arytenoid cartilage. Notwithstanding the intractability of the patient, whose starts and movements interfered with the first attempts at extraction, Dr. Sota succeeded in removing the animal from its dangerous situation *per vias naturales.* It appears that while overheated and covered with perspiration, the patient had swallowed a draught of cold water, and immediately experienced a constriction of the throat, followed by the symptoms above alluded to, as well as a continual tickling in the larynx.

— A little careful inquiry by the officers of medical organizations would undoubtedly show numerous extravagances which if avoided would leave money sufficient to maintain the *Index Medicus* with scarcely any necessity for relying on private subscription. It is not only the honor of the American medical profession which is at stake, but it is also the practical question of maintaining the present advantage of a general index in our own language, and gotten up in a style which makes it a pleasure to consult its clearly printed pages. — *Polyclinic.*

— The *Medical and Surgical Reporter* calls attention to an insult perpetrated upon the medical profession by the Red Star Line Atlantic Steamship Company, which, contrary to the custom of all other lines, has within the last year ordered its surgeons to mess at the second-class table, and ranks them in other respects as second-class passengers. This is an indignity which has been keenly felt as such by all its medical officers; some have resigned in consequence, others have waited, trusting that the remonstrances of members of the profession to the company would have some effect. So far from this, the Red Star Line has added another insult to the profession by passing over its protests with contemptuous silence. In every line except the above the surgeons are assigned quarters and mess with the first-class passengers.

— The daily press reports 542 suicides for 1883 in Paris, a gain of sixty-three over 1882. The choice of means of death shows that hanging is not as popular as it is in England, for while only eighty-one hung themselves, 217 used firearms, and 148 drowned themselves. By thirty-seven, the more scientific expedient of burning charcoal in closed rooms was adopted.

— The *Gazette* protests against a pupil of the Boston common schools being sent as a messenger by the teacher to a house in which there was contagious disease, and represents the great danger incurred of his carrying contagion into the school on his return. It states that the Board of Health, more than a year ago, called the attention of the School Committee to this practice, and asked that it be stopped, but that the School Committee had declined to take action on the subject.

— Dr. Solomon M. Whipple, of New London, N. H., ex-president of the New Hampshire Medical Society, and a well-known physician throughout the State, is dead, aged sixty-three.

— Rev. R. Heber Newton, in a paper on the Obligations of Society towards the Insane, pleads for schools for the special training of nurses for the insane as follows: —

"If trained nurses are coming to be regarded by our best physicians as indispensable to the proper care of the diseased to-day, how much more necessary are they in the care of the mind diseased! There is needed a knowledge of the symptoms of this most miserable of sicknesses and of the methods of dealing with them, which demands special mental training. There is needed, as well, a power to rule with quiet firmness, a gentleness of tone and manner, a delicacy of thought and feeling which requires a special moral training." "Such an institution," he concludes, "properly founded and conducted, would call to the ministration upon this most pitiful form of misery the talent and character of a superior order of men and women, as always follows from the ennobling of a vocation. Hosts of gentlewomen wait new openings for honorable self-support, and such a vocation would command their refined and sympathetic service with benign results."

NEW YORK.

— At a stated meeting of the County Medical Society, January 28th, Dr. Charles Heitzman read a paper on Recent Researches in Embryology, and Dr. W. G. Wylie a memoir of the late Dr. J. Marion Sims.

— The seventeenth annual report of the State Board of Charities was presented to the Legislature at Albany on the 24th of January. The greater part of the statistics in regard to the insane of the State was previously given in the Governor's message at New Year's. In the visitations to the almshouse in the different counties during the year special attention was devoted to investigating the character and condition of the children in these institutions, and they were found to be generally vicious and depraved. A few were healthy and intelligent, but many were crippled, paralytic, epileptic, idiotic, or otherwise diseased, while the accommodations for their proper care and nursing were, as a rule, totally inadequate. The number of insane, feeble-minded, and otherwise infirm and helpless individuals from outside localities, who had no valid claim on the charities of the State, committed to New York institutions since October 22, 1883, had been 10,965, but under the examinations of the Board the former homes of 6320 of these had been traced to other States and countries, and they had been sent where they respectively belonged. In regard to the immigration and the shipment of chronic paupers and helpless dependents to this country, the Board urges that the prompt return of these classes costs less than their maintenance and care in the asylums, hospitals, and almshouses of the State for three months, and it recommends another small appropriation by the Legislature to continue this work until Congress shall protect the State against the influx and consequent life-long support of chronic foreign paupers pushed upon it through the various sea-ports and by way of Canada.

— At the annual meeting of the Hospital Saturday and Sunday Association, held January 21st, it was stated that the late collections amounted to date to the sum of $40,082.03, but as contributions were still being daily reported the treasurer asked that the books might be left open until February 1st. The secretary reported that 210 churches of various denominations had already sent in their offerings, and that there were about 100 others which had promised to take up collections, the receipts from which would probably amount to about $3000. The year previous only ninety-four churches and chapels contributed.

— The Rev. Dr. Howard Crosby, late chancellor of the University of the City of New York, has published a letter in which he pays the following tribute to the present excellent condition of Bellevue Hospital: My duties have led me to Bellevue Hospital for the past twenty years, and I am constrained to speak of the vast improvement manifest in every department of that important institution. The order and cleanliness of the wards, the efficiency of the attendants, the skill and faithfulness of the physicians, and the courtesy of all concerned, are fit subjects for praise and pride. But above all the admirable work of the trained nurses should be recognized and commended. These refined ladies, full of enthusiasm and devotion, and ably prepared for their responsible duties, are angels of mercy to the sick and suffering, and their tender regard for the patients is itself a healing balm. . . . There was a time when thoughts of Bellevue were not savory, but now I know no place where I should rather be an invalid to receive the wise and gentle attention of experienced and sympathetic guardians.

Correspondence.

THE TREATMENT OF HIP-JOINT DISEASE. EXTENSION BETTER THAN EXCISION.

MR. EDITOR, — I was much interested in the discussion in your journal upon excision of the head of the femur in hip-joint disease. I must acknowledge, however, that I was somewhat surprised to find that the operation was advocated and so often practiced as was represented during the discussion.

I had supposed that since my introduction of the treatment of diseases of the joints by elastic or continued extension that there had been no occasion for excision of the head of the femur.

As to the frequency of this disease of the hip proving fatal, at the present time, it was entirely new to me. It certainly is at variance with my experience in the treatment of such cases, so much so as to render it difficult for me to realize its possibility, taking it for granted that the treatment was by the present received mode, both in this country and in Europe.

Some thirty years since I began the treatment of joint diseases by continued extension, and between the years 1850 and 1860 published in the medical journals many papers upon the subject, endeavoring to so bring my method of treatment before the profession that they could understand its principles, and thus be enabled to apply the treatment correctly, and obtain the favorable results that had followed it in my hands.

In giving the results of the treatment of hip disease, as practiced by me for so many years, I am embarrassed by the feeling that my statements will be distrusted by the gentlemen engaged in the discussion, when they compare them with their experience. I can say, without equivocation, that among the *vast* numbers that have been under my care, *not one* has succumbed to the disease; and that in those cases that came under my care in the early stages they recovered without deformity or lameness. After the head of the bone has been partially destroyed, it cannot be expected that the treatment will restore it, although the disease was arrested at once by the treatment.

This mode was so fully described in my work entitled Conservative Surgery, that it would seem superfluous to describe it here, yet there are some points that appear not well understood, or at least not fully appreciated, that are essential to good success.

I will mention first the use of the short splint, where the adhesive straps take hold only of the thigh. The short splint was used by me and discarded some time before Otto & Rynders brought out the one that is called Dr. Sayre's splint. I found that the limb would always shorten while wearing it, for the skin of the whole body above will elongate by the traction, thus allowing the limb to steadily shorten. It does not *stop* the destruction of the parts, only retards it, inasmuch as it removes the pressure.

My adhesive straps were not only applied to both sides of the whole length of the limb, but two strips commenced at the outer maleolus and wound around the limb, taking hold of the strip upon the inside of the limb, also compressing the muscles in the calf of the leg, also of the thigh, where extension was made by the long splint. This arrangement of the strips gives a sure hold of the limb, one that will not yield.

Again there is an important, I may say an all important, difference in the perineal band used by me and other instruments. In all the splints that have come under my observation, they are made with only one band, and that for extension alone, whereas in my instruments there is an outside inelastic band, which, after the extension is made and the outside inelastic band is buckled tight, prevents the retraction or shortening of the limb either by the contraction of the muscles or by the weight of the body. When the short splint is used the recovery, as a rule, is very much like that without treatment, except, perhaps, the position of the limb and the freedom from suffering.

Now if you want a speedy, and at the same time a perfect recovery, perfect considering the freedom from the loss of parts when the treatment commences, you must not allow the head of the bone to impinge upon the upper part of the acetabulum, as this contact is liable, if it remains for any length of time, to destroy all that has been gained before. The bony parts involved can never heal so long as they come in contact, as it is this pressure that keeps up the destruction of the parts.

Some of the speakers advised free opening of the abscesses.

Before the adoption of my treatment I had seen abscesses opened, followed by hectic fever, night sweats, and death. Since the adoption of my plan of treatment there has never been an unpleasant symptom following the opening of an abscess, however reduced the patient or unpromising the constitution.

After opening the abscess and discharging the contents I have washed it out with warm water, syringing it two or three times, then injecting chlorine water two or three times according to the sensibility of the sac. I introduce a small tent to keep an opening, and apply a compress. In this way the walls of the sac unite, leaving only a sinus for the discharge of the pus from the diseased bone. This reduces the discharge to a very small quantity, so small as not to affect the health or retard the recovery.

In this connection allow me to ask what will destroy the patient? He can eat, drink, and sleep well, and have not enough discharge to affect his health.

Some spoke of anchylosis being the most favorable result, and the one to be sought for in treatment.

So far as my experience goes this never takes place between ulcerated surfaces of bone. A fixed state of the joint caused by a shortening of *all* the soft parts connected with the femur at the joint is what is generally termed anchylosis. I have yet to see a case where there is bony union. I have produced free motion after this fixture of the joint for seventeen years, accomplishing it without pain or suffering; doing it in the same way that I have reduced dislocations of the hip of twelve years' standing.

Henry G. Davis, M. D.

Newton, Mass. (formerly of New York City).

Miscellany.

PREGNANCY AND MORPHINISM.

Dr. Féré (*Revue Médicale*, November 17, 1883) gives an account of the case of a young woman addicted to the opium habit to the extent of subcutaneous injection of twenty-four centigrammes of morphia daily, who came to Paris when six months pregnant to be cured of her habit. The case was difficult for the reason that as soon as the daily dose was diminished by a half a centigramme, violent uterine colic ensued which threatened to bring on miscarriage. However, with great precautions, times of cessation of treatment, and even a temporary return to stronger doses when the uterine contractions became too marked or the fœtal movements were violently increased, the daily dose of morphia was reduced almost one half, and on the day of confinement, May 6th, the patient only took thirteen centigrammes. The labor, conducted by M. Tarnier, was natural. During the next eight days the allowance of thirteen centigrammes was given daily. But on attempting to resume the reduction, there were renewed uterine contractions with suppressed lochia. It was necessary to temporize as before, but on the 3d of June the patient was taking only eight centigrammes. At this point the injections were abruptly stopped. There was violent colic, nausea, and diarrhœa. But after a few days they ceased, and the patient was finally cured of her habit, the cure remaining permanent.

Dr. Féré insists on two interesting points: In the first place the necessity of proceeding to demorphinize pregnant patients only with the greatest precautions against setting up uncontrollable uterine contractions and premature labor, to say nothing of other accidents which may be caused in the mother. Secondly, the necessity for moderation in the process is not less for the sake of the fœtus, which undergoes disturbance and convulsions in the womb when deprived suddenly of the stimulant to which it has become accustomed. The fœtus after birth may also suffer from the sudden demorphinization accompanying the change in its condition, and the writer thinks it may be proper in certain cases to pursue for the sake of the child the use for a time after birth of the morphia, which it could not safely be at once and wholly deprived of.

A CASE OF PLAGIOMICROCEPHALIA.

The *London Medical Record* (December, 1883) contains a case of asymmetrical microcephalia accompanied by remarkable anomalies of the motor system. A similar case is to be found in the May issue of the same journal. The former case is from *Vratch*, and is as follows: —

Dr. M. Lukin, of Cronstadt, publishes the detailed post-mortem description of a microcephalic boy, aged four. The antero-posterior diameter of the head was twelve centimetres, the transverse nine and a half, the diagonal fifteen. The skull had a dolichocephalic form, and was markedly asymmetric (more developed on the right than on the left side). The cranial bones were thin, with very scanty spongy substance. The brain weighed only 420 grammes. [In Rudanovsky's case, says the reporter, in the Proceedings of the St. Petersburg Society of Psychiatres, 1880, it weighed 258.72 grammes in a patient aged seven years and eight months; in Professor Merzejewski's case 369.053 in a patient aged sixty; in Theile's 300 in a patient aged thirty; in Sander's 372.444 in a patient aged eighteen.] The measurements of the brain were these: The length of the hemispheres was ten centimetres; their height in the middle 5.3; their breadth at the level of the parietal lobes nine; the length of the frontal lobes, six; of the occipital 1.8; of the cerebellum 4.5; the breadth of the latter seven; its height 3.7. Two centimetres of the length of the cerebellum remained free, that is, were not covered by the occipital lobes. On the left side there were absent the anterior part of the fissura olfactoria, the whole gyrus rectus, fissura transversa (between the fissuræ supraorbitales longitudinales), gyrus frontalis medius, gyrus uncinatus, fissura parieto-occipitalis, and fissura præcentralis superior. On the right side the fissuræ transversa and calcarina were absent. On both sides the lobuli paracentrales, quadrati, and cuneiformes were very narrow and very indistinctly separated one from another. During his life the boy presented the following phenomena: He was very cross and violent; in fits of anger he bit his own hands or everybody who interfered with him; he did not learn to speak; he asked for food by gestures; he was not able to take his food by himself (though he swallowed well); he invariably refused to drink; he began to walk at about two years of age; up to his very death he invariably walked only backwards, notwithstanding all his mother's efforts to teach him the normal walk. According to Dr. Khrabrostin, who on two occasions saw the patient with his curious method of locomotion, the boy usually backed pretty rapidly, always carrying his head thrown far backwards.

TYPHOID AND MALARIAL FEVERS IN CONNECTICUT.

In regard to the prevalence of typhoid and malarial fevers during the month of October the secretary of the Connecticut State Board of Health reports as follows: —

The weather has apparently been favorable to the development of malarial fevers, and an increased prevalence is quite generally reported. While perhaps rather more cases of intermittent fever, that is, acute tertian ague, have been seen this season than for several years in the districts where malaria has been prevalent for some time, yet the prevalent type generally is the typho-malarial and the less clearly defined varieties of malarial diseases. Typhoid fever, although steadily increasing in frequency, does not apparently so completely to drive out malaria as malaria appeared to drive out typhoid fever when it first commenced to extend over the State, so that for years not a case of typhoid fever occurred over large areas, and it lost place among the ten principal causes of death throughout the State.

That the decreased frequency of typhoid was entirely independent of the malarial invasion now is quite clear.

The return of typhoid is also not dependent upon the decrease of malarial diseases, as we see it side by side with all varieties of ague, not only where the latter has longest remained as one of the regular diseases of the region, but also where malarial diseases are entering territory hitherto never occupied, so far as human knowledge can determine, by any form of ague; and also where having existed quietly for several years malarial diseases become epidemic, leaving but a small percentage of the people unaffected. The subject is too complicated to discuss here, but the increased frequency of both malarial diseases and typhoid fever are interesting features.

HALLUCINATIONS FROM SALICINE.

A WRITER in the *Australasian Medical Gazette* (November, 1883) gives an account of some mental phenomena following large doses of salicine, which, though not entirely unknown heretofore, are sufficiently unusual to be interesting, and were, moreover, recorded as the observations of a medical man on his own person. A peculiarity of this case was the perception of a number of musical airs, in a regularly recurring order, but having no objective reality. The writer says: —

"On July 9th I took to my bed with, as I thought, a slight attack of acute rheumatism. I treated myself (not liking to trouble Dr. ——) with alkalies, lemons, and entire abstinence from alcohol. I remained in bed for all the week, and, not getting much better, commenced to get very anxious about my practice, and determined to try salicine in large doses, such as I have frequently seen mentioned in the *Lancet*, although I had never given it quite so heroically to patients. Accordingly, on Sunday, July 15th, I took four doses, at intervals of only two hours, of forty grains of salicine in each dose. It made me drowsy, and I slept most of the afternoon. Just after dark I awoke, and found myself apparently mad, and yet conscious of my own madness. There seemed to be all sorts of people about me and in the room, and yet I was conscious that they were fanciful creations of the mind, and had no fear or dread of them. They were all, so far as I can recollect, human in appearance, and all strangers to me. The music had now commenced, and it was so natural that I said to my wife that I had never heard (it was Sunday night) the church music so far off before. The music gradually got louder and more defined, until it settled down to one perpetual repetition in regular order — much after the fashion of a musical box — of a certain six airs, one of which had a choral accompaniment, the human voices being perfectly distinct and audible. Only one of the airs was known to me, namely, 'Scenes that are Brightest,' from Maritana. All the others were strange. I am not a musician, but I know enough to be sure that the time kept was perfect. This lasted for forty-eight hours, and I was nearly mad in reality at the end of that time from the constant apparent noise and din. The chloral did me some good but immediately on awakening from a deep chloral sleep *my band*, as I got to call it, would begin again. It gradually wore away on the third day, but for some days afterwards I occasionally heard one of the tunes, and perhaps part of another. I was, throughout, much interested in all the symptoms, and recognized from the first what had happened, and that the salicine was to blame, but I was uncertain how the case might end. I have had a long and slow convalescence, suffering a great deal from occasional pains and great weakness, and am now slowly coming round."

PAROVARIAN CYSTS.

Dr. Goodell recently exhibited two cysts of the parovarium before the Obstetrical Society of Philadelphia (*Medical and Surgical Reporter*, January 5th). Both patients got well; he indeed had never lost a patient from whom he had removed a parovarian cyst. In both cases a correct diagnosis was made previous to the operation. Regarding the differences between this tumor and the cyst of the ovary, he remarked that one interesting diagnostic point was the complete absence of the *facies ovariana*. The color in the cheeks was good, and the countenance was free from the anxious expression present in cases of ovarian tumor. One tumor had existed for ten years, the other for one. Another important point in the differential diagnosis is not only the flaccidity of the tumor but its variable degrees of flaccidity. Upon inspection, it is seen to reach to the sternum, and seems to occupy a large portion of the abdominal cavity, but where the hands are placed upon its sternal edge it can be compressed to the level of the umbilicus. An ovarian cyst, on the contrary, is hard and uncompressible. Exceptions to this rule are very rare, that is, either a tense parovarian cyst or a flaccid ovarian one. A third important distinguishing point is the long time — ten years in one case — which the tumor existed, and further, without marked deterioration of health. After being tapped these tumors usually refill, but occasionally they do not, and a cure is thus brought about. The fluid withdrawn has been in every case limpid and generally colorless, but it has sometimes had in his experience an emerald tint. These tumors are generally free from serious adhesions, but if, in an operation for the removal of one, adhesions should exist where for any reason their forcible separation would be unadvisable, or the cyst were intra-ligamentous, he would not hesitate to leave the adherent portion of the cyst wall, or the whole cyst itself, after making a big hole in it, as the fluid it secretes is bland and unirritating to the peritonæum.

Any one examining one of these cysts for the first time would consider it to be of ovarian origin, for it is only by patient search that the ovary can be found spread out over the cyst wall. The microscope will decide with certainty in any otherwise doubtful case. The tumor is covered with a beautiful net-work of veins.

When a cyst of the parovarium exists on one side, the ovary of the opposite side is usually found to be diseased and should be removed. In these cases the remaining ovary was seen to be enlarged, and the site of a small ruptured cyst was pointed out. The Fallopian tube was also enlarged, and the terminal vesicle of the Fallopian tube, or the hydatid of Morgagni, was enlarged and cystic. This hydatid sometimes attains the size of an orange, and often ruptures spontaneously without any bad effects. A few years ago one of these small cysts ruptured while he was making an examination of the patient to ascertain its character.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 19, 1884.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	560	181	14.76	20.46	.54	5.58	2.52
Philadelphia	846,984	376	137	15.12	11.76	2.68	6.21	3.24
Brooklyn	566,689	255	98	12.48	19.89	.78	5.85	.78
Chicago	503,304	190	71	21.20	13.25	3.18	8.48	4.24
Boston	362,535	186	53	18.90	18.36	2.16	7.56	2.16
St. Louis	350,522	146	—	22.08	24.84	1.38	13.11	—
Baltimore	332,190	183	75	18.15	10.34	1.11	6.05	1.66
Cincinnati	255,708	—	—	—	—	—	—	—
New Orleans	216,140	135	29	14.80	9.62	—	5.18	.74
District of Columbia	177,638	111	47	25.23	22.52	.90	2.70	4.80
Pittsburg (1883)	175,000	58	23	17.01	11.34	1.89	5.67	7.56
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	46	19	21.74	21.74	2.17	4.34	4.34
Providence (1883)	116,755	38	8	7.89	7.89	—	2.63	2.63
New Haven (1883)	73,000	23	4	13.05	—	4.35	4.35	—
Charleston	49,999	32	11	15.65	6.26	—	—	—
Nashville	43,461	17	5	11.76	23.52	5.88	—	—
Lowell	59,485	30	7	3.33	33.33	3.33	—	—
Worcester	58,295	21	6	19.04	9.52	4.76	9.52	—
Cambridge	52,740	29	11	17.25	10.35	—	3.45	3.45
Fall River	49,006	22	5	9.09	—	—	4.54	4.54
Lawrence	39,178	17	5	29.40	11.76	5.88	11.76	11.76
Lynn	38,284	14	3	14.28	7.14	7.14	—	—
Springfield	33,340	8	4	37.50	—	—	25.00	—
Salem	27,598	9	3	11.11	—	—	11.11	—
New Bedford	26,875	8	0	12.50	12.50	12.50	—	—
Somerville	24,985	7	4	28.56	—	14.28	14.28	—
Holyoke	21,851	11	3	—	—	—	—	—
Chelsea	21,785	10	3	20.00	—	—	20.00	—
Taunton	21,213	12	2	25.00	16.66	—	—	—
Gloucester	19,329	6	2	50.00	—	—	16.66	—
Haverhill	18,475	3	1	33.33	—	—	33.33	—
Newton	16,995	5	1	—	20.00	—	—	—
Brockton	13,608	5	1	—	20.00	—	—	—
Newburyport	13,537	6	1	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	6	3	16.66	33.33	—	—	—
Seventy-four Massachusetts towns	284,874	89	14	14.61	—	—	6.74	1.12

Deaths reported 2574 (no reports from Cincinnati and Buffalo): under five years of age, 840: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 430, consumption 432, lung diseases 407, diphtheria and croup 164, scarlet fever 66, typhoid fever 40, measles 38, diarrhœal diseases 34, malarial fever 25, whooping-cough 21, puerperal fever 19, cerebro-spinal meningitis 11, erysipelas nine, small-pox two, yellow fever one. From *measles*, District of Columbia 13, Baltimore 11, New York five, Pittsburg three, Brooklyn and Chicago two each, Charleston and Nashville one each. From *diarrhœal diseases*, New York eight, Boston six, New Orleans five, Philadelphia four, Baltimore and Charleston two each, Brooklyn, District of Columbia, Providence, New Haven, Cambridge, Lynn, Springfield, and North Adams one each. From *malarial fever*, New York and St. Louis seven each, New Orleans five, Brooklyn, Chicago, and Baltimore two each. From *whooping-cough*, New York six, District of Columbia three, Brooklyn, New Orleans, and Cambridge two each, Philadelphia, Chicago, Boston, Gloucester, North Adams, and Arlington one each. From *puerperal fever*, Boston and Milwaukee four each, St. Louis three, Philadelphia, Chicago, Baltimore, and Charleston two each, New York one. From *cerebro-spinal meningitis*, New York three, Chicago and District of Columbia two each, Philadelphia, Boston, Milwaukee, North Adams, and Dedham one each. From *erysipelas*, New York three, Philadelphia two, Brooklyn, Chicago, Boston, and Gloucester one each. From *small-pox*, Philadelphia and St. Louis one each. From *yellow fever*, New York one.

One case of small-pox was reported in Holyoke; scarlet fever 41, diphtheria 30, typhoid fever 14, and measles three in Boston.

In 92 cities and towns of Massachusetts, with an estimated population of 1,285,557 (estimated population of the State 1,922,530), the total death-rate for the week was 20.00 against 18.00 and 17.41 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 5th, the death-rate was 22.2. Deaths reported 3731: acute diseases of the respiratory organs (London) 387, scarlet fever 112, measles 100, whooping-cough 103, fever 51, diphtheria 30, small-pox (Birmingham eight, Sunderland seven, London and Liverpool six each, Manchester one) 28. The death-rates ranged from 12.1 in Norwich to 31.3 in Cardiff; Bradford 17.7; Nottingham 19.1; London 21.6; Birmingham 21.9; Sheffield 23.8; Liverpool 23.9; Leeds 26.5; Manchester 29.1. In Edinburgh 21.8; Glasgow 29; Dublin 28.7.

For the week ending December 29th, in 162 German cities and towns, with an estimated population of 8,472,338, the death-rate was 24. Deaths reported 3912; under five years of age, 1812; consumption 542, lung diseases 447, diphtheria and croup 281, diarrhœal diseases 118, scarlet fever 66, whooping-cough 60, measles and rötheln 58, typhoid fever 53, puerperal fever 25, small-pox (Schwerin one) one. The death-rates ranged from 12.8 in Wiesbaden to 32.1 in Leipzig; Königsberg 26.6; Breslau 30.4; Munich 25.8; Dresden 22; Berlin 23.5; Hamburg 29.5; Cologne 18.9; Frankfort a. M. 15.2; Strasburg 29.7.

For the week ending January 5th, in the Swiss towns, there were 26 deaths from lung diseases, consumption 25, diphtheria and croup 13, diarrhœal diseases seven, whooping cough four, typhoid fever four, scarlet fever three, puerperal fever three, measles one, erysipelas one. The death-rates were, at Geneva 19.5; Zurich 22; Basle 16.7; Berne 29.4.

The meteorological record for the week ending January 19th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Jan., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 13	29.842	26	38	9	61	37	66	61	N	SW	SW	6	15	20	C	I	O	—	—
Mon., 14	29.859	33	42	24	85	50	72	69	SW	W	N	19	16	8	T	C	H	—	—
Tues., 15	30.179	19	27	15	70	48	56	58	NW	N	NW	11	8	10	O	O	O	—	—
Wed., 16	30.368	13	18	6	57	51	70	59	NW	W	W	14	8	10	C	C	C	—	—
Thurs., 17	30.177	22	27	11	70	67	64	67	W	SW	SW	10	15	14	F	C	O	—	—
Fri., 18	29.916	34	42	26	59	43	68	57	SW	SW	NW	15	14	4	O	C	C	—	—
Sat., 19	29.890	21	34	12	84	96	80	87	N	N	N	5	21	16	S	S	O	—	—
Mean, the Week.	30.033	24	34	15				65										18.40	.53

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JANUARY 26, 1884.

Anderson, F., passed assistant surgeon, granted leave of absence for six months.

Whiting, Robert, passed assistant surgeon, detached from the Naval Hospital, Norfolk, and ordered to the U. S. Receiving Ship Colorado, New York.

Fitts, H B., assistant surgeon, detached from the U. S. S. Jamestown and ordered to U. S. Coast Survey Steamer Gedney.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, OCTOBER 1, 1883, TO DECEMBER 31, 1883.

Bailhache, P. H., surgeon. Relieved from duty at Cape Charles Quarantine Station. October 13, 1883.

Detailed as member of board to examine candidates for promotion. October 30, 1883.

Granted leave of absence for thirty days. November 27, 1883.

Hutton, W. H. H., surgeon. Granted leave of absence for twenty days. October 1, 1883.

Wyman, Walter, surgeon. Detailed as member of board to examine candidates for promotion. October 30, 1883.

To proceed to Norfolk, Va., to investigate the conduct of the service at that port. December 31, 1883.

Long, W. H., surgeon. Leave of absence extended ten days. October 26, 1883.

Murray, R. D., surgeon. To proceed to Ship Island Quarantine Station. October 17, 1883.

To inspect sites for quarantine stations. November 30, 1883.

Granted leave of absence for twenty days. December 18, 1883.

Smith, Henry, surgeon. Granted leave of absence for twenty-five days on account of sickness. October 13, 1883.

Relieved from duty at Norfolk, Va. October 17, 1883.

To report to Surgeon Sawtelle, at New York, for temporary duty. November 27, 1883.

Relieved from temporary duty at New York and placed on waiting orders. December 31, 1883.

Fisher, J. C., passed assistant surgeon. When relieved by Assistant Surgeon Banks to proceed to New York for duty. October 29, 1883.

Granted leave of absence for thirty days. November 28, 1883.

Goldsborough, C. B., passed assistant surgeon. Granted leaves of absence for thirty-two days on account of sickness. October 12, October 20, and November 1, 1883.

Lewis, Fairfax, passed assistant surgeon. To proceed to Norfolk, Va., and assume charge of the service, relieving Assistant Surgeon Glennan. October 16, 1883.

Mead, F. W., passed assistant surgeon. To proceed to Portland, Oregon, inspect the service, and report the condition of Assistant Surgeon Devan. December 5, 1883.

To return to station, Port Townsend, Washington Territory. December 18, 1883.

Cooke, H. P., passed assistant surgeon. To proceed to Charleston, S. C., for duty. November 27, 1883.

Banks, C. E., assistant surgeon. Detailed for temporary duty at Georgetown, D. C. October 11, 1883.

Granted leave of absence for thirty days. October 12, 1883.

Bennett, P. H., assistant surgeon. Placed on waiting orders. December 15, 1883.

Granted leave of absence for thirty days. December 22, 1883.

Upon expiration of leave of absence to proceed to Detroit, Mich.. for duty. December 29, 1883.

Peckham, C. T., assistant surgeon. To proceed to Wilmington, N. C., and assume charge of the service, relieving Passed Assistant Surgeon Irwin. October 16, 1883.

Devan, S. C., assistant surgeon. Granted leaves of absence for ninety-five days on account of injury and sickness resulting therefrom. November 15, December 5 and 22, 1883.

Bevan, A. D., assistant surgeon. To proceed to Portland, Oregon, and assume charge of the service. December 29, 1883.

Glennan, A. H., assistant surgeon. To proceed to New Orleans, La., for duty. October 17, 1883

Wasdin, Eugene, assistant surgeon. To proceed to Mobile, Ala., for temporary duty. October 11, 1883.

To proceed to Galveston, Texas, for temporary duty. November 17, 1883.

PROMOTIONS.

Benson, J. A., passed assistant surgeon. Promoted and appointed passed assistant surgeon, by the Secretary of the Treasury, from October 1, 1883. October 4, 1883.

Banks, C. E., passed assistant surgeon. Promoted and appointed passed assistant surgeon, by the Secretary of the Treasury, from November 1, 1883. November 6, 1883.

Gynæcological Society of Boston. — The next regular meeting of the Society will be held in the Medical Library Rooms, on the second Thursday of February, at four o'clock P. M. F. S. Billings, D. V. S., will read a paper upon Eclampsia in Woman and in the Cow. Profession invited.

Henry M. Field, M. D., *Secretary.*

Books and Pamphlets Received. — The International Encyclopædia of Surgery. A Systematic Treatise on the Theory and Practice of Surgery by Authors of Various Nations. Edited by John Ashhurst, Jr., M. D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with Chromo-Lithographs and Wood-Cuts. In Six Volumes. Vol. IV. New York: William Wood & Company. 1884.

Transactions of the American Surgical Association. Volume the First. Edited by J. Ewing Mears, M. D., Recorder of the Association. Philadelphia: Printed for the Association, and for sale by Presley Blakiston & Co. 1883.

The Influence of the Commercial Prosperity of the Country on Epidemics. By Harvey E. Brown, M. D., Surgeon U. S. A. The Annual Oration before the New Orleans Medical and Surgical Association for 1883. (Reprint.)

Original Articles.

CEREBRO-SPINAL MENINGITIS. FIVE CASES. ONE, OF THE FULMINANT (FOUDROYANT) TYPE, TREATED BY SUBCUTANEOUS INJECTION OF APOMORPHIA, MORPHINE, AND ATROPINE; RECOVERY. ONE AUTOPSY.[1]

BY A. L. MASON, M. D.

November 13, 1881. G. H., a healthy young gentleman of twenty-one, was seized without premonition, immediately after a hearty dinner, during which he had been in his usual spirits, with sudden vertigo. He staggered with assistance to a sofa, and became unconscious, with pallid countenance, clammy skin, and no pulse. I saw him fifteen minutes later, at 8.45 P. M., when the condition was as follows: semi-conscious, eyes vacant, pulse 70 of fair strength, breathing shallow, skin moist, hands and feet cold. Movements indicated that there was pain or distress in the head and cardiac region. In a few minutes convulsive shivering and twitching of the lips and jaw were observed. Ammonia was applied to the nostrils and hot bottles to the extremities. An attempt to swallow brandy and water caused a convulsion of great severity, the muscles of the neck, back, and thorax being in a state of prolonged contraction, with upward rolling of the eyes and clenching of the jaws. The breathing stopped, the heart became feeble, there was cyanosis and, apparently, impending asphyxia, which was averted by the gradual relaxation of the spasm. These convulsions recurred in rapid succession, and seemed to be very exhausting. The friends could assign no possible cause for the symptoms. The patient had never had a similar attack; there was now no frothing at the mouth, paralysis, or vomiting. There had been no previous complaint of any discomfort whatever up to the moment of attack; uræmic or irritant poisoning seemed improbable; cerebro-spinal meningitis was not prevalent, and it was not until the following day that a probable diagnosis could be arrived at.

The state of the patient was critical, and I immediately sent for Dr. J. Collins Warren to consult with me, requesting him to bring a stomach pump and ether. Dr. Warren came at 9.30 P. M., one hour after the beginning of the attack, and he also brought some apomorphia, which proved to be of the greatest possible service. The patient, who was a large, heavy man, was with difficulty carried up to bed, mustard was applied to the extremities, and ether was administered. The latter was found to be of no use, as the convulsions were excited to an alarming extent by the first inhalations. At 10.30 P. M. one sixth of a grain of muriate of apomorphia was injected under the skin, and in eight minutes the stomach was emptied, without retching, as if it had been turned inside out. A basinful of solid food, quite unchanged, was evacuated. Relief followed. The face, which had been congested, became pale, free perspiration ensued, the convulsive action subsided, the pulse was 72, and the patient rested quietly until five A. M. without further treatment.

November 14th. At nine A. M. there was a return of convulsions of the same type. The patient was unconscious; face dusky, pupils dilated, head drawn back, with rigidity of cervical muscles. There was inability to swallow and retention of urine. A pint, normal in character, was drawn by catheter.

At 11.30 A. M. Dr. Warren again saw the patient in consultation. It was determined that he was suffering from cerebro-spinal meningitis, and a guarded prognosis was given.

The bowels were emptied by a large stimulating enema, six grains of calomel were given, ice was applied to the head, and leeches to the nucha. The leeches and ice were of no benefit, however, because their application caused general convulsions, with opisthotonos, and after a few minutes it was evident that the subcutaneous injection of morphia was the only remedy likely to prove of any value. The patient was kept constantly under its influence, one eighth grain of morphine combined with one one hundredth of atropine being given at varying intervals for many days. Owing to the inability to swallow, nutritive enemata of milk, beef-tea and brandy were given every three hours. Bromide of potassium was also administered by the rectum. The calomel acted once.

November 15th. Drs. Borland, Warren, and William Appleton saw the patient in consultation. Dr. Borland, who had been the family physician for many years, concurred in the diagnosis and treatment. The condition thirty-six hours after the attack began remained about the same. But the convulsions were partially controlled, the enemata were retained, the kidneys secreted about two pints of normal urine daily, which was drawn by catheter, there was a good pulse of 85, and little or no fever. Still the condition was dangerous, and during the following days Dr. Warren met me frequently in consultation. After the first forty-eight hours the patient was placed under the constant medical care of Dr. Charles P. Strong, who for twelve nights gave him the benefit of much judicious attention, which contributed greatly to his recovery. From Dr. Strong's notes I make the following extracts regarding the progress of the case: —

November 15th, third night. The convulsions were recurring in series of three or four, with several hours' intermission, with less severity, but the muscles of the face, neck, and extremities were in a state of constant spasm, producing twitching movements, which were, however, to a great extent under the control of morphine.

The sensibility to external impressions had become very great, sudden admission of light, shutting the door, and the like, producing convulsions. There was hyperæsthesia of the whole body, most marked over the cervical vertebræ however, where the slightest touch produced a spasm.

Pulse, temperature, and respiration were normal, but the pupils were widely dilated. Slight epistaxis. Nourishment was given by enema. Subcutaneous injections of morphine, grain one eighth, atropine grain one one hundredth, were required at eleven A. M., 2.45 and ten P. M.

During the third day the patient swallowed two ounces of milk by teaspoonfuls, though showing no other consciousness.

November 16th. Aside from two convulsions produced by enemata the night was passed very quietly. Hyperæsthesia of the neck was fully as marked as on previous days, and several convulsions were induced by the patient's putting his hands on that region. The pupils were a little less dilated than on the preceding days, and pulse and temperature both normal.

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[1] Read before the Boston Society for Medical Improvement, January 28, 1884.

Bromide of potassium was given in twenty-grain doses, and to the amount of a drachm and a half daily during the rest of the sickness, being omitted sometimes because of bromism, which was readily induced. Nourishment was given through a soft rubber tube, around which the patient's lips were held. There were no convulsions between eight A. M. and 2.30 P. M., or 2.30 and 10.30 P. M. Temperature 99°; pulse 65.

Subcutaneous injections of the same amount as yesterday were given at 4.30, 8, and 10.30 A. M. 2.30 and 10.30 P. M.

November 17th. There were but two convulsions during the night, and the muscular twitchings were much less marked. Considerable nourishment had been taken, and the patient's general appearance was improved. There seemed at times a semi-conscious condition, as shown by the patient opening the mouth when told, smacking his lips in a peculiar manner when he wanted water, and at such times refusing to drink anything else. He could close his lips around the tube when it was put in his mouth without requiring them to be held. His pulse was stronger and temperature still normal.

Subcutaneous injections were given at 10.30 A. M. and 9.30 P. M.

November 18th, fifth day. There had been an intermission of fourteen and one half hours without convulsions, most of the time the patient sleeping quietly, but at two P. M. a series of very violent ones began, requiring morphine frequently. As the patient continually put his hands upon his abdomen, and some flatus was noticed, it was thought that an enema might produce a more comfortable condition, but no sooner was the tube inserted than there were convulsions of as severe a type as he had on the first night. The whole body would become rigid, then the head and knees would approach until nearly touching, when, suddenly, he would throw himself into complete opisthotonos, and lie so until the face became livid, when relaxation took place. There were four of these convulsions, with about two minutes' interval between before the subcutaneous injection, which was at once given, produced its effect.

After lying about two hours in a perfectly exhausted condition, his temperature meanwhile rising to 100.2° F., he began to talk with perfect distinctness. These were the first articulate sounds he had made since the commencement of his sickness. The words were perfectly intelligible and the sentences well arranged, but his ideas were all terrible delusions. He saw strange and frightful animals about, whose attacks he tried in vain to ward off, but they always bit his head; he was caught in the sands, and the tide was rising around him; his head was bound with hot irons, etc. He remained in this condition of delirium nearly all night, but as the morphine took effect his fancies became more pleasant. The head and limbs were in constant motion until he fell asleep, towards morning. Pulse 58.

Subcutaneous injections at 2, 4.15, 6.15, 9.30, and 11 P. M.

November 19th. When he awoke he was in the same lethargic condition as before the delirium, but this soon passed away, and his delusions returned; yielding, however, more readily to morphine. The temperature was 101° F.; pulse 60. There were no convulsions until evening, then but two slight ones, and he passed the night more quietly and naturally than any previous one.

Subcutaneous injections at 1.45 and 8 A. M., and at 8 P. M.

November 20th, seventh day. When he woke he recognized his relatives, who were in the room, but did not speak to them. He took full amounts of nourishment, and appeared perfectly conscious of his surroundings, dozing at intervals during the day. In the evening, without apparent cause, there was a very severe convulsion, after which the customary delirium. When asleep there was absence of those muscular twitchings which were present during most of the waking hours, and were especially induced by any excitement, however trivial, such as drinking, etc.

Subcutaneous injections at 3.15 and 11 P. M.

November 21st, eighth day. During the night he complained of pain in the front of the head, but said this had passed away in the morning. He was perfectly rational, knew and spoke to those about him, inquired the day of the week, and, when told, said, "I've been sick only a day then." He slept much during the day, but at night grew very restless. No morphine given.

November 22d, ninth day. Perfectly rational during the day. Micturition and defecation voluntary for the first time. Although perfectly quiet through the day, at night he was very restless. No morphine given.

November 23d. After a restless night the temperature was 103° F., pulse 90, and the general condition worse. The muscular twitching returned, and he lay in a lethargy so deep it was impossible at times to rouse him for nourishment.

Subcutaneous injections at 5.45 A. M. and 8 P. M.

November 24th. During the night the skin became moister, and he was greatly improved when he woke in the morning. The same condition of nervous excitement returned at night, although he slept a great deal during the day. Yawning was quite a noticeable symptom. Pulse was 78, temperature 100.4° F.

Subcutaneous injections at eight and eleven P. M.

November 25th. Complained of pain in the head, especially in front, and passed the day in the same somnolent state, growing restless towards evening. Epistaxis.

Subcutaneous injections at nine and ten P. M.

November 26th. Pulse 66, temperature 99° F. Epistaxis. Patient was very much improved, sleep was natural, and nourishment was taken freely. The history of succeeding days was that of steady convalescence, the only point of interest being the pulse, which remained below 60 for some time, and then gradually rose to its normal rate.

December 7th. Convalescence, beginning at the end of the second week, was interrupted in the middle of the fourth week, after the patient had been about the house for some days and out of doors once, by a return of convulsions, in a less severe form, accompanied by dilated and insensible pupils, and followed for two or three days by moderate fever, restlessness, and debility. The patient complained of renewed pain in the head, neck, abdomen, præcordia, and legs. The cervical muscles were contracted, there was intolerance of light, frequent spasmodic twitching of the face, lips, and arms, coated tongue, and a sluggish mental state as before, with active delirium at night. The subcutaneous injection of morphine was resumed, and the services of Dr. Strong were again needed for three nights, after which progress toward recovery was rapid. At the end of five weeks the headache had disappeared, but there was still some stiffness of the neck, and after two months the patient was well enough to return to college.

Six weeks later he had a severe attack of diphtheria, involving the tonsils, soft palate, pharynx, and nostrils, attended by marked prostration. As neither of the above attacks could be traced to any local cause, it was thought that they indicated an unusual susceptibility to zymotic influences on the part of the patient.

Case II. J. C., aged fourteen, school-boy, entered the City Hospital November 27, 1881. He had been taken two days before with headache, pain in the back and legs, and persistent vomiting. Tongue moist and coated. Bowels constipated. Pulse 99; temperature 101.6° F. An ice-cap was ordered. Cracked ice; milk and lime water; sponge bath. Ten grains of bromide of potassium were given every four hours. Bowels evacuated by enema. The night after entrance he became delirious, and on the next day the head was strongly retracted, with tenderness over spinous processes and hyperæsthesia of the extremities. The skin was cool, the face somewhat cyanotic, and an eruption of herpes appeared on the lips. Vomiting continued. Ptosis of right eyelids.

On the fourth day he was transferred to the care of Dr. Webber in the Department for Nervous and Renal Diseases. December 1st it was noted that attempts to straighten the head caused much pain, and that the skin was hot and dry. No *taches cérébrales.* The ice-bag was continued, with the use of ergot, morphine, and chloral.

During the second week the temperature, which had been as high as 105° F., remained at about 100° F., with a pulse of 60, strong and full. The pain diminished, but the head was still bent back and vomiting was frequent, so that small quantities only of milk and Mellin's food could be given, with stimulants. The mind was pretty clear.

In the third and fourth weeks the head was straighter, there was slight deafness, and complaint of pain in the neck and head. There was no recuperation, however; the stomach remained irritable; and the temperature was sub-normal most of the time, falling to 96.5° F. the day before death, which took place one month after entrance. There was no autopsy.

Case III. J. H., laborer, aged twenty-four, was admitted to the hospital May 12, 1883, in wild delirium. The surface of the body was cool and bluish; head drawn back; eyelids closed; pupils contracted; tongue and lips dry, the former brown and cracked; sordes on teeth; jactitation of limbs; a few brown maculæ, apparently of recent origin, on shoulders and thighs. No rose spots; no œdema; no paralysis. The bladder extended nearly to the umbilicus and fifty-nine ounces of bloody urine were drawn by catheter, the patient becoming more tranquil afterward, and the next morning he had recovered consciousness. He then stated that for several days he had had a dull headache, and suddenly without warning fell down, remembering nothing afterward. At entrance the temperature was 102° F., pulse 100. Urine normal, with the exception of the blood. Catheterization was necessary for several days, during which he was roused with some difficulty, lying with the head thrown back and suffering pain in the neck when touched or moved. The temperature remained at 101° F., and the pulse at about 100, during the first week. An eruption of herpes appeared on the lips, and debility was great. Half an ounce of whiskey was given every hour for several days, with milk, and an ice-cap was in constant use. There was no vomiting, but constipation was marked.

In the second week after admission the pain disappeared, leaving no stiffness; the temperature was subnormal, tongue clean; emaciation and weakness considerable. Convalescence slow, the patient remaining six weeks in hospital. In the treatment no drugs were used except morphine.

Case IV. M. C., laborer, aged twenty-six, was admitted May 15, 1883, having suffered three days with pains in the head, neck, and extremities, constant nausea, occasional vomiting, nosebleed once or twice, insomnia, and constipation. At the time of entrance there was severe pain in the dorsal region of the spine, with constant groaning, the slightest movement causing intense suffering. Temperature 101° F.; pulse 84. A poultice was applied to the nape of the neck, ice-cap to the head, and large doses of morphine were given. The bowels were moved by calomel and enemata. The next day there was extreme spinal tenderness, retraction of the head, and herpes on the mouth and nose. For ten days the patient remained in a stupor, with temperature 103° F., pulse about 80. But the signs of pain gradually subsided, and on the eleventh day after admission he was comfortable, with a sudden fall of five degrees to the normal temperature, and a pulse of 70.

Convalescence was interrupted early in the fourth week by a recurrence of the spinal pains and stupor, which lasted two days, but after a month the patient could walk about, though there was considerable muscular stiffness.

Case V. C. H., aged thirty-six, was brought into the hospital by the police September 25, 1883, in a semi-comatose condition. He had no friends, and no previous history could be obtained. His conjunctivæ were slightly congested; pupils equal; considerable apparent deafness; retention of urine, and mild delirium from the time of entrance until death. There was no paralysis of the extremities, no nausea or vomiting, and no muscular tremor. Fifty-one ounces of urine were withdrawn by catheter, and his bowels moved once. Temperature 102.6° F.; pulse 94.

September 26th. Last night he complained of considerable pain and was quite noisy. He took little nourishment, owing apparently to difficulty in swallowing. The urine was slightly high colored, strongly acid, of 1018 specific gravity, and contained a slight trace of albumen. Pulse very weak. Brandy was given subcutaneously.

September 27th. He gradually failed, and died this morning at 2.10, about thirty-six hours after entrance. Dr. George B. Shattuck, under whose care he was, gave me the above notes and the report of the autopsy.

Autopsy by Dr. Gannett (eighteen hours after death). Body of medium size and fairly well developed and nourished. Marked lividity of dependent portions. Rigor mortis present.

Brain. Nothing unusual about calvaria. Dura everywhere thin and translucent. Sinuses contained a moderate amount of coagulated blood; sulci of pia of convexities opaque and of a grayish-yellow color. Surface of convexities dry. Convolutions flattened. Pia at the base of brain along clivus and the under surface of cerebellum opaque and of a greenish-yellow color. On scraping with the knife, soft greenish-yellow masses could be removed. Vessels at the base and of the fissure of Sylvius showed nothing unusual. Lateral ventricles distended three times their usual size, containing an opaque grayish fluid. Ependyma everywhere velvety, softened, opaque, and of a grayish tint. Velum interpositum reddened and injected. Fourth ventricle showed similar appearances. Section of the brain substance in general showed the puncta cruenta of normal size. Brain substance of normal consistency. Section of pons, medulla, and basal ganglion showed nothing of especial importance. Vessels of pia contained considerable blood.

Cord. Abundant escape of puriform fluid from submural space of the cord. Vessels of pia along surface of enlargements and along whole dorsal posterior region showed an abundant collection of greenish-yellow puriform fluid. Anterior region, same appearances of a less degree. Cord not opened; preserved.

Diaphragm. Right and left upper border of fourth rib.

Pericardium contained fifteen cubic centimetres clear fluid. Visceral surface of pericardium thickened and grayish in portions over anterior surfaces.

Heart somewhat enlarged in long diameter. Left ventricle very firmly contracted. Right ventricle and auricle distended with partly coagulated blood. Mitral valve admitted tips of three fingers; tricupsid tips of four. Valves and cavities not remarkable. Muscular substance of left ventricle increased one third in amount. Color and consistency good. Nothing remarkable about coronary arteries. Pleural surfaces of both sides free from adhesions.

Lungs partially contracted and everywhere crepitant, on section showed a rather pale red somewhat moist surface, and yielded on pressure a slight amount of pale fluid. Bronchi contained throughout a moderate amount of thick mucus. Bronchial mucous membrane showed nothing remarkable.

Spleen nearly double in size; usual color; somewhat diminished density. On section, pulp somewhat increased in amount and softer than normal.

Left kidney diminished one third in size; of a red color; density slightly increased; capsule detached with tolerable ease; external surface granular. On section, cortex somewhat diminished in size; of a grayish-red tint, and somewhat opaque. The distinction between convoluted and straight tubules not easily made out. Pyramids showed numerous gray lines parallel to course of tubules.

Right kidney slightly smaller than usual; had a few cysts size of large filberts beneath capsule with clear fluid contents. Otherwise kidney presented same appearances as described in the other. Œsophagus, stomach, intestines, and liver, not remarkable.

Diagnosis. Acute cerebro-spinal meningitis; acute ependymitis; acute hydrocephalus; chronic circumscribed pericarditis; hypertrophy of left ventricle of heart; acute hyperplasia of spleen; chronic interstitial nephritis (moderate degree) with cyst formation.

Remarks. In commenting on the above cases it may be said that all were severe, Cases I., II., and V. presenting many of the graver symptoms. All were adult males except the boy of fourteen. What the first case would have developed into in twelve or twenty-four hours if it had been left untreated it is impossible to say, but I thought at the time that the early evacuation of the stomach by apomorphia prevented exhausting vomiting, and that the anti-convulsive effect of morphine and atropine, with the use of nutritive and stimulating enemata during the period of unconsciousness, might have been the means of saving life. In epidemics, cases of the fulminating type rarely recover, the initial collapse usually becoming complete and death ensuing rapidly, sometimes in a few hours. Patients who survive the shock to the vital functions and live for a few days have a fair chance of recovery, a majority of fatal cases ending within five days.

Diagnosis. Hospital cases are seldom seen at the beginning of the attack. When they are brought in unconscious, as in Case V., an accurate history is not obtainable, and it is hardly possible during life to discriminate between the various causes of coma. The absence of paralysis, however, with normal or slightly albuminous urine, and the exclusion of hysteria, epilepsy, and poisoning, might, in times of epidemic, determine a probable diagnosis. The general appearance is not characteristic of typhoid, more so of typhus. In some epidemics of cerebro-spinal meningitis the petechial eruption, from which the synonym, spotted fever, is derived, is often seen, in others rarely. It was not present in any of the cases reported. The retracted head and hyperæsthesia of body and extremities due to the spinal meningitis are usually noticeable even in a state of partial coma. Herpes of the lips and face is of some value as a diagnostic sign. Certain cases of malignant or suppressed scarlet fever, so-called, fatal within twenty-four hours, may present much the same symptoms as those of the severest form of cerebro-spinal meningitis, and even an autopsy might not aid the diagnosis.

Symptoms. In these five cases retraction of the head with intense pain in the back of the neck, and prolonged headache with general hyperæsthesia, were the most noticeable indications of the disease, in all except the last, who entered the hospital moribund. Persistent vomiting, in Case II., seemed to be the main cause of exhaustion. In two other instances it was an early symptom. Constipation was present in every case; herpes of the lips and face in four; retention of urine in three, in one of whom it lasted a week; hæmaturia once, and a small amount of albumen twice; epistaxis in two cases; sore throat in one. The patients usually lay upon the side, as that position favors retraction of the head and relaxation of the cervical muscles.

The skin was dusky or cyanotic in most instances, the tongue dry and coated. There was in all more or less fever, the temperature rising to 105° F. in one case, but the height of the thermometer was not always proportionate to the severity of the symptoms, especially in Case I., whose axillary temperature was usually about 99° F., occasionally rising two or three degrees. In Case II. a sub-normal temperature and high pulse prevailed during the last week or more, the case ending fatally. The pulse generally ranged below 100, in two cases falling to 60.

Among the symptoms referable to the nervous system delirium, more or less prolonged, was noticed in every case, sometimes with subsultus and carphologia. Stupor, in varying degrees to complete coma, with hyperæsthesia, as before mentioned, usually coexisted. Convulsions occurred in one case. One patient had dilated and insensible pupils for a week; in another they were contracted. The conjunctivæ were congested in two cases. Deafness was observed twice; ptosis of the eyelid once. There was no other form of muscular paralysis, and this comparative immunity among the subjects of cerebro-spinal meningitis has often been remarked.

Relapses or recurrence of symptoms, lasting a few days, happened twice in the third and fourth weeks. Muscular stiffness and debility in most instances lasted some time, and in one case there was effusion into the knee-joint, rapidly absorbed. Two cases were fatal. The death-rate in epidemics has varied from thirty-six to eighty per cent.

Pathology. The pathological appearances are well illustrated by the autopsy in Case V. The inflammation of the arachnoid and pia mater generally assumes a purulent form. In cases immediately fatal from shock and collapse, the anatomical evidence may be slight or wanting, although the brain is usually anæmic and œdematous. The ventricles are often found at a later stage distended with serum.

Treatment. In treating a self-limited disease of short duration with such a violent onset that the vital functions are often disabled at the start it is all-important to try to bridge over the few most critical days by artificial means. At the outset, if the stomach and bowels are full, it is well to empty them, and no emetic agent is so good as apomorphia, which may be used hypodermically in doses of one sixth to one tenth grain in adults, and one twentieth to one thirtieth in children. The sedative and relaxing effect of apomorphia is also very valuable in cases of convulsion, like Case I. A comatose condition or vomiting of cerebral origin would indicate the propriety of rectal alimentation. In many cases early blood-letting is advisable, and the utility of cold applications to the head and spine is generally conceded, although I could see no direct benefit from them in the cases reported, on the contrary, they were often uncomfortable.

Beyond this, symptomatic treatment is necessary, and chief among drugs is opium, supplemented, perhaps, by atropine and bromide of potassium during the acute stage of the disease; there is little fear of narcotism. Diuretic and diaphoretic measures are useful, especially the hot-air bath. Quinine and ergot, with iodide of potassium and mercury as absorbents of the effused product at a later stage, have been recommended, but in no disease is the "post ergo propter" mode of inference as applied to the effect of drugs more likely to be fallacious.

Causation unknown. Under the same sanitary conditions cerebro-spinal meningitis prevailed extensively in Boston in 1873, when there were 216 deaths as compared with sixty the year before, and thirty-five the year after, the violence of the influence appearing to exhaust itself in a single year. In 1872–1873 it went hand in hand with an extensive outbreak of scarlet fever, following closely or accompanying the end of the severest epidemic of small-pox that Boston has experienced since the introduction of vaccination, items which I quote from the late Dr. T. B. Curtis's valuable report on the Sanitary Condition of Boston, published in 1875. Of course those localities suffered most from these diseases where the worst sanitary conditions prevailed, and the victims were least able to withstand their ravages, but the surroundings play a less important part in the causation of cerebro-spinal meningitis than of other epidemic diseases. Winter and spring have been the seasons, and crowded barracks the favorite places for its attacks, excessive fatigue, insufficient food, and exposure to cold acting as predisposing causes. A few doubtful cases only of contagion have been reported. Robust males between fifteen and thirty-five are the usual subjects, although in children, among whom the disease has at times extensively prevailed, the disproportion between the sexes of the patients is not great. The occurrence of cerebro-spinal meningitis in animals has often been observed, especially among horses in New York for some months before the epidemic in 1872, which preceded the outbreak in this vicinity by about a year.

History. Although there is not time to enter at length upon the history of cerebro-spinal meningitis in New England the narrative is interesting, and brief mention may be made of the earliest epidemic in Massachusetts, in 1806, when nine cases occurred in the town of Medfield, all fatal; of the report on Spotted or Petechial Fever, in 1810, by Drs. Thomas Walsh, James Jackson, and John C. Warren, a committee of the Massachusetts Medical Society; of the report to this Society, by Dr. Joseph Sargent, of a limited epidemic in Worcester County in 1849; and again, in 1866, that of a committee of the Massachusetts Medical Society, who found that 280 cases had been recorded in the State during the previous nine years, with a mortality of sixty-one per cent.

Much of the earlier literature on this subject is French, and admirably presented since the beginning of this century. Great Britain, with the exception of Ireland, where one epidemic among the constabulary caused a mortality of eighty per cent., has been comparatively free from the disease, and in Germany it attracted little notice until about twenty years ago. In this country, however, no disease has been more carefully watched and recorded, and among the numerous publications of later years the Boylston Prize Essay for 1866, by Dr. Samuel G. Webber, is especially complete and suggestive. Dr. Webber called attention to the pneumonic form of the disease, in which the lungs bear the brunt of the attack, the cerebro-spinal symptoms being delayed or imperfectly developed. Such a class of cases, in which croupous pneumonia was complicated by cerebro-spinal meningitis, especially in children, was afterward described by Immermann, Heller, and other German writers. Dr. J. Lewis Smith, of New York, in commenting upon this type of disease, states that in the epidemic season of 1872 in that city an unusually large number of cases of pleuro-pneumonia of an asthenic kind occurred among old people, suggestive of a common atmospheric cause.

The monographs of Professor Stillé and of Dr. Meredith Clymer portrayed the disease as it appeared in Philadelphia and New York, and the Sanitary Memoirs of the War contain a valuable article by Dr. S. B. Hunt. The State Board of Health of Michigan published an excellent report by Dr. Henry B. Baker in 1874, and in the same year Dr. J. Baxter Upham, who had previously described the Epidemics in the Camps about Newbern, N. C., in 1863, wrote a very complete and interesting history of the epidemic of 1873 for the State Board of Health of Massachusetts, in which it appears that 517 cases were returned by 199 physicians, and that there were 216 deaths in Boston alone. Dr. Upham informs us that it was not until 1867 that "cerebro-spinal meningitis" appeared as such in the nomenclature of the city records, and not until 1872 in those of the State, cases of this disease having previously been classed with others under the head of "cephalitis."

During the decade 1873–1883 2053 deaths have occurred from cerebro-spinal meningitis in Massachusetts, 747 of them in 1873 alone, leaving an average of 130 fatal cases for each of the other nine years. Suffolk County has returned 476 deaths, Middlesex 412, and Worcester 240, but there has been a steady though small rate of mortality from this cause in most of the cities and many country towns in all sections of the State except Cape Cod and the islands, where it has been trivial. For the last two or three years the number of deaths has increased moderately, namely, to 157 in 1881, and 166 in 1882, the distribution in 1881 being chiefly as follows: Middlesex County, 27; Suffolk, 24; Hampden, 21; Essex, 19; Worcester, 14.

The valuable Mortality Tables of the State Board of Health, published weekly in the JOURNAL, show that neither of the diseases mentioned above, small-pox, scarlet fever, and cerebro-spinal meningitis, has prevailed during these years to an alarming extent, the epidemic type having been mild, but the seed has still lingered in our midst, and is wide-spread, cases of cerebro-spinal meningitis cropping up from time to time among the susceptible in such a way as to suggest the probability of a future outbreak whenever the mysterious combination of influences occurs on which such visitations depend.

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A CASE OF SUDDEN AMAUROSIS. RECOVERY.[1]

BY HASKET DERBY, M. D.

THE following case is both so unusual, as to occurrence, and so unexpected, as to result, that I have thought a brief report of even the scanty details I have at my command might not be without interest.

October 13, 1883, I saw Mary T., aged fifteen, for the first time. Near sighted since early childhood, she had grown steadily more so during her school life, and was using spectacles, right –9.5 D, left –8 D, all the time and for all purposes. A close, ambitious student, and attending a public school, she had worked unremittingly for the past year, making her studies her principal object in life, and paying little or no attention to her general health. This, however, had ordinarily been very good, with the exception of catamenial irregularity. The flow commenced at the age of thirteen, and had never been present oftener than once in two months. She was large for her age, and apparently neither nervous nor imaginative. Since the spring of this year she had, for the first time, been subject to severe headaches, not attended by nausea, extending over the whole head, lasting both day and night, materially worse during this fall. She came to me on account of failure of sight, which had been coming on for two weeks. Observing that her eyes were watering and her vision blurry, she had covered her left eye, and ascertained, to her astonishment, that she could not see with the right. Since making this discovery, a fortnight ago, the left eye had rapidly lost ground, and she was now unable to continue her studies.

The eyes were prominent and the pupils large, but presented no abnormal appearance to external inspection. Ophthalmoscopically there was a large, but defined and apparently non-progressive sclerotico-choroiditis posterior surrounding each optic entrance. The remaining fundus of each eye was entirely normal; no isolated patches of atrophy, no change in the circulation, no whiteness of the nerves. With 13 D concave the left eye had vision one tenth, the visual field being not contracted. *The right eye had no perception of light whatever*, either when tried by the mirror of the ophthalmoscope, by a lighted candle in a dark room, or exposed to the full glare of sunlight. The pupil of this eye was most active, contracting and expanding under light and shade, the other eye of course being closed.

What was the diagnosis? The first suspicion was naturally of malingering. The perfect honesty and simplicity of the patient went far towards removing this, and the usual tests with prisms showed the entire correctness of her statement. There were no other symptoms to encourage the diagnosis of hysterical amaurosis, no signs of general hysteria, of nervous derangement, of affections of other organs of special sense, or of local hyperæsthesia. All ophthalmoscopic indications were wanting. The ready response of the pupil to light and shade showed the deep-seated character of the affection, and that, according to Flourens, it must be located beyond the corpora quadrigemina; hence that it was likely to be diffused through a considerable portion of the brain. Such affections, says Leber, may occupy a region the integrity of which is essential to the maintenance of life itself. When the blindness is complete the general prognosis, according to him, is always grave. Should, in a short time, however, no affection of the general health occur, the chance of an ultimate restoration of sight is encouraging, the probability then being that there is no gross material lesion, but a local derangement that may readily disappear.

Four days later the condition of the patient was wholly unchanged. Entirely at a loss as to diagnosis, but in the hope that a possible derangement of the cerebral circulation might be connected both with the headache and the loss of sight, and if so, be affected by a local abstraction of blood, I applied the artificial leech to the right temple, removing an ounce and a half of blood. Lactate of zinc was also ordered in moderate doses.

The next day showed a result as remarkable as it was unexpected. The headache, which had been continuous and severe for six months, disappeared after the cupping, and has never since returned. Five days later there was distinct perception of light in the right eye, and even ability to follow the motions of the hand, held close to the eye. The cupping was now repeated, and again applied a week later. During this time each eye steadily gained. October 30th the right eye, armed with –12 D, had vision four tenths. The left, with –13 D, had two tenths. Each visual field could now be taken, and was found to be normal. November 6th there was

o. d. V 0.5 nearly.
o. s. V 0.4.

and this amount of vision continued when I last saw the patient, December 8th. In her own opinion her sight had fully returned. Her health was perfectly good, and she was wholly free from headache. Except for the high degree of myopia, and consequent imperfect vision, each eye seemed normal. She returned to school early in the present year.

None of the ordinary causes of cerebral amblyopia seem to have been active here. The termination of the case, of course, forbids the supposition of organic change at the base of the brain, of apoplexy, of a tumor, or of meningitis. There had been no suppression of urine. There was no suspicion of spinal disease. There had been, beyond the headache, no antecedent sickness. Finally, there was no ophthalmoscopic change, save the choroidal atrophy.

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[1] Read before the Ophthalmological Section of the Suffolk District Medical Society, January 29, 1884.

That the headache was in some way or other connected with the blindness seems probable, and that the sudden disappearance of the headache is due to the application of the Heurteloup cannot reasonably be doubted. This much-neglected instrument never entered into the armamentarium of the Vienna school of ophthalmology, much as its use was insisted on in Berlin. It is, I imagine, seldom if ever used by the majority of those here present. Of course it has no advantage over the old cupping apparatus, save in the greater facility of application to a region like the temple, particularly in the case of females. I think its disuse among ophthalmologists is seriously to be regretted. It was much employed and warmly advocated by Graefe, especially in cases of congestive amblyopia and chronic affections of the choroid; in fact, in all cases where a rapid evacuation of an appreciable amount of blood was indicated, but not, of course, in those forms of external ophthalmia where the prolonged and slow flowing of a steady stream is productive of decided benefit.

Local cupping has in our day seemed to share the fate of general venesection, a therapeutical method of value when judiciously used, greatly abused by routine practitioners, but whose total neglect is a distinct loss to medicine.

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AN IMPROVED APPLIANCE IN THE PHYSIOLOGICAL TREATMENT OF CLEFT PALATE.[1]

BY HENRY A. BAKER, D. D. S.,

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It has usually been said that lesions of the palate arise from one of two causes, that is, they are either congenital or accidental.

Congenital cleft of the palate was as commonly treated surgically as by mechanism. The former treatment has been nearly or quite abandoned in recent years for two very good reasons: First, it is a very painful one for the patient, and difficult for the operator, and a failure of closure is largely in the majority. Second, it universally fails to improve the speech even after a successful closure.

Notwithstanding the above facts some physicians recommend staphyloraphy. They must certainly do so from want of knowledge of the anatomy and physiology of the vocal organs and their use in the mechanism of speech, which is the production of sound, and its direction through the nasal passage or the mouth at will, being controlled by certain organs whose modification and resonance enable us to form what we term articulate speech.

One of the most important aids in producing the above results is the soft palate. This organ is lifted up and comes in close contact with the pharyngeal wall, thus shutting off the nasal passage, which is absolutely essential in producing all excepting nasal sounds. After the operation of staphyloraphy such a closure is impossible, owing to the soft palate having been made too short and tense, hence defective speech invariably follows.

Accidental lesions of the palate, as the name suggests, are caused either by accident or disease. These cases may be successfully treated with a very simple appliance, while the same amount of skill exercised on a congenital cleft would have no beneficial result. This may be accounted for by the fact that in the former case the patient had learned to articulate distinctly, and use the organs of speech efficiently and correctly, while persons who are thus deformed from birth are obliged to learn the art and methods of articulation by slow and painful processes. The organs require the training which is necessary for one who acquires a new language. Hence the appliance for relief should not only fill up the gap in the defective palate, but should also be so constructed as to work on physiological principles in harmony with the natural movements; that is to say, it should be under perfect control of the surrounding muscles. It is manifest, therefore, that the success even of the most scientifically adjusted instrument depends largely upon the coöperation of the patient who uses it.

As the above malformations are classed as congenital, and accidental, the appliances for their relief are classed as follows: obturators and artificial vela. Among the former Dr. William Suersen is the inventor of one which has created much interest. The most important and significant advance in this department of science, however, made itself manifest in attempts to form an artificial velum, and Dr. Stearns was probably the first to introduce its true principle. I speak of these two investigators, Suersen and Stearns, because I am led to think that they have brought before the profession the most scientific apparatus of each class, and it is from a consideration of both of their appliances that I have evolved the principle, in explanation of which this paper has been prepared.

Suersen says: "In order to be able to pronounce all letters distinctly it is accordingly necessary to separate the cavity of the mouth from the cavity of the nose by means of muscular motion. That separation is, under normal conditions, effected, on the one hand, by the velum palati, which strains itself (consequently by the levator and tensor palati), but, on the other hand, also by a muscle, which to my knowledge has not yet received a sufficient amount of attention in connection with these operations. I mean the constrictor pharyngeus superior. This muscle contracts itself during the utterance of every letter pronounced without a nasal sound just as the levator palati does. The constrictor muscle contracts the cavum pharyngo-palatum, the pharyngeal wall bulging out, and it is chiefly on the action of this muscle that I base the system of my artificial palates."

It will be noticed that Suersen admits that the levator palati is an important organ of speech, yet he makes no provision for utilizing it as such, and only provides for the superior constrictor muscle coming in contact with the distal surface of his appliance to shut off the nasal passage. In my opinion, for the patient afflicted with congenital cleft to acquire perfect articulation with such an appliance (even if it be possible) years of application and training of this muscle would be necessary. A little reflection will show that this muscle, besides performing its own function, must be trained to fulfill those of the velum palati, levator palati, and tensor palati. But in an *accidental* lesion this may be all that is necessary, as the patient having previously learned to articulate distinctly, and having this deformity come upon him afterwards, the superior constrictor muscle would, no doubt, be sufficiently developed to perform that function.

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[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, December 12, 1883.

Sir William Fergusson, in his report of a dissection made by him of a cleft palate in 1844, states distinctly that the superior constrictor was very full, and he also claimed for that muscle very decided forward action in deglutition. It was in the year 1841 and 1842 that Dr. Stearns made his first artificial velum. In 1860 Dr. N. W. Kingsley came into the field, and took up Dr. Stearns's appliance. Finding it too complicated for the general practitioner to construct, and too expensive when completed for those in ordinary circumstances, he was led to serious thought in regard to modifying its production, but he still adhered to the same principle of utilizing the levator muscle.

Dr. Kingsley says respecting Dr. Stearns's appliance: "Two principles were vital to Dr. Stearns's instrument, namely, first, the artificial velum should embrace the levator muscles of the palate, so that it could be lifted by them; and, second, that it should bridge the upper pharynx behind the uvula, and cut off nasal communication at will."

Dr. Kingsley's modification of Stearns's instrument consisted chiefly in leaving off the triple form, and doing away with the central slit, the flap, and the springs. The simplified form consisted of two leaves of soft vulcanized rubber, connected in the median line, the palatal portion running down to the uvula, and then bridging across at that point, and the nasal portion reaching across the pharynx. Instead of the appliance being made in sections so as to slide across each other, as in the Stearns, the bifurcated uvula slides between the two leaves, and the levator muscles of the palate lift it up to meet the pharynx, thus shutting off the nasal passage. It will be noticed that in this simplified form the Stearns principles are fully carried out, and to Dr. Kingsley that credit is due. His claims to originality are in the simplifying of the Stearns instrument.

Dr. Kingsley says: "An important principle enunciated by Dr. Stearns as essential to the success of all artificial vela for congenital cleft was that the instrument filling the fissure in the natural palate must be of the nature of a valve under the control of the muscles surrounding it, and so arranged that it could be elevated by them, thus shutting off the nasal passage, as is absolutely essential in the production of certain sounds belonging to articulate language. This principle was carried out by him first in the character of the material chosen, being of a yielding, elastic nature, and second in the form, being made to embrace the levator muscles, and subject to their control."

Dr. Kingsley in speaking of Suersen's appliance says: "First, that of all obturators this is the best form for a congenital fissure, but while the wearer is enabled to articulate with such an instrument it is only after he has learned articulation with another apparatus. Second, that a soft, elastic, artificial velum is much better adapted to the acquirement of articulation than any unyielding, non-elastic substance, but when acquired an obturator may be substituted. Third, that in very rare cases articulation may be acquired with an obturator only, but it is the result of the extra activity of the pharyngeal muscles, while with the elastic velum the levators of the palate contribute largely."

A great many practitioners in treating a fissured palate simply separate the nasal and buccal cavities by a thin plate, thinking that the separation is all that is required. Some even make a great parade of this device, claiming it to be an improvement over any other appliance. A little reflection will show this to be impossible, as I shall endeavor to explain before closing this paper.

My own experience with soft vulcanized rubber for an artificial velum is that if it would resist the fluids of the mouth, and not go through a process of decay, and change its form, in short, if it could be made permanent, it would be all that could be desired. Since this is impossible I do not hesitate to say that it is a very objectionable material, and I have been led to long and careful meditation regarding it.

I experimented for five years to provide an artificial appliance with hard rubber, carrying out the Stearns principle, whereby I could utilize the levator muscles to control the movement of the appliance, and with which articulation could be learned as well as with the soft rubber. My studies and experience induced me to settle upon the following device, which consists of a gold or hard-rubber plate (A. Fig. 1), covering the roof of the mouth down to the junction of the hard and soft palates. From this point the artificial velum, F, extends back and downward, restoring the symmetry of the palatal surface by bridging across and lying upon the muscles of each side. The distal surface, G, or that portion coming in contact with the pharyngeal wall, is quite broad, and so constructed as to articulate perfectly with this surface, while the constrictor muscle contracts and closes around it on a semicircle. This is the Suersen principle, and the main ideas I take from that appliance.

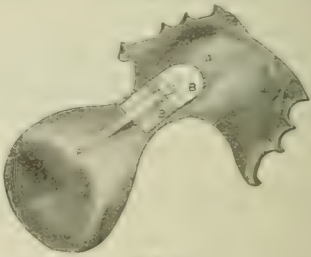

Fig. 1.[1]

The velum is of polished hard rubber, gold, or platinum, and much resembles a chestnut in form.

It is attached to the plate with a hinge joint, B, B, thus giving free movement at the junction of the hard and soft palate. At the junction of the hard and soft palate there is a stop, which prevents any downward pressure upon the muscles when in a relaxed condition.

The bulb-like form of the velum (see D, Fig. 4) necessitated a thickness which would naturally have made it quite heavy, and, as the resultant weight would be a serious objection, I was desirous of overcoming the difficulty. A suggestion happily came to my relief in this way: While in a drug store I accidentally took up a hard rubber truss made by a Philadelphia firm. Discovering that the pad was made hollow, I thereupon wrote to the manufacturers, asking them if they would inform me how they prepared the rubber in that way. In their reply I found that the method was quite simple. It is as follows: Take the vulcanite rubber in the soft state and cut the sheets so that when joined together the desired form is given. Then a little water is dropped into the cavity (I found it better to add a little alcohol), the edges are sealed, and the piece vulcanized in the usual way. The steam produced by the water and alcohol inside creates sufficient pressure to keep the walls distended. By this method the appliance that the cuts were taken from which illustrate this article was made so light that it would not sink when put in water.

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[1] The accompanying cuts are kindly loaned by Dr. J. W. White, the editor of the Dental Cosmos.

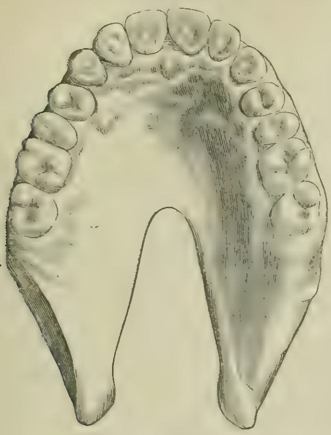

Fig. 2. The cleft, extending a little beyond the soft into the hard palate.

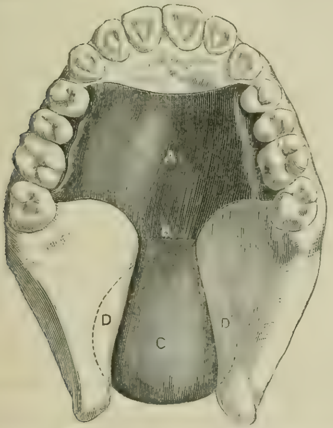

Fig. 3. Appliance in position: A, the plate; B, the stop, preventing any downward pressure when the muscles are in a relaxed condition; C, the artificial velum; D, D, muscle lying under it, the dotted lines showing the appliance resting on the muscles.

In treating a case by Kingsley's method I was obliged to use a hinge-joint to bridge over a union by staphyloraphy. I found in that case that the appliance was much better controlled by the surrounding muscles, and saw a much more rapid progress in acquiring articulate speech. This led me to more fully provide for that muscular movement, and I will endeavor to give the reasons why this should be done. As we have before quoted from Suerseu, in order to pronounce all letters distinctly it is necessary to separate the cavity of the mouth from that of the nose by muscular action, and to close the nasal passage in pronouncing every letter, except *m* and *n*. This can be demonstrated by holding the nose while endeavoring to pronounce all the letters as plainly as possible.

In studying the mechanism of speech we learn that more than three fourths of the sounds of articulate language depend upon the integrity of the soft palate for their perfect enunciation. This being the fact, articulation with a rigid obturator must be extremely difficult to acquire. If three fourths of the sounds depend upon the free movement of the natural palate, it seems to me a sufficient reason why we should provide for that movement in an artificial one.

Dr. Kingsley says that with a yielding appliance the levators of the palate contribute largely to correct speech. The surrounding muscles have control over my appliance in the following way: The artificial velum bridges across the opening and lies upon the muscles of either side. (See Fig. 3, D, D.) With all sounds requiring the closure of the nasal passage it is thrown up (D, Fig. 4) by the levator muscles, there being no resistance. The thickness of the velum brings its posterior surface in close apposition with the superior constrictor muscle, F, and thereby affords, in the pronunciation of the gutturals, a firmer resistance to the pressure of the tongue, G, than can be obtained with a thin obturator. By the presence of the hinge, B, the above movements are rendered so free and easy that there is no tendency to any displacement of the plate, such as occurs with a rigid appliance. If a nasal sound immediately follows a guttural, the descent of the velum is rendered certain by its own weight. (Fig. 5, D.) My first instruments show a spring bridging over the hinge, by which I intended to accelerate the movements of the velum. This I found later to be unnecessary.

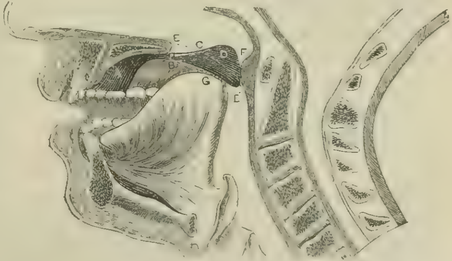

Fig. 4. The artificial palate thrown up by the muscles, E, E, as in all sounds requiring the closure of the nasal passage; F, the superior constrictor muscle advanced to meet it; G, the tongue, raised, pressing hard against the appliance, as in pronouncing the letter *k* or *g*; A, the plate; B, the hinge joint and stop.

To accomplish the above with a material that would be permanent was a problem very difficult of solution. Of course it is impossible to give to a piece of mechanism muscular power, but it should be made so easily movable as to be acted upon by, and be under perfect control of, the muscles surrounding it.

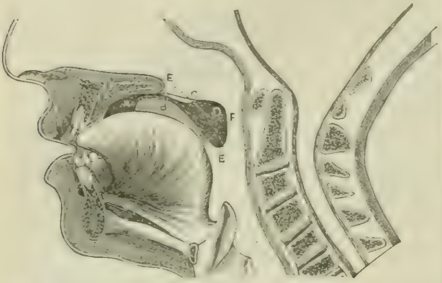

FIG. 5. The muscles relaxed, the appliance descended, thus giving a free passage for nasal sounds and respiration.

I claim the following advantages for my appliance: —

First. That it is made of a permanent material.

Second. That articulation can be learned with it more readily than with any other appliance.

Third. That it is much easier to make.

Thus the unsatisfactory operation of the surgeon has been replaced by artificial organs of precision, working upon physiological principles. The ingenious appliances of our distinguished colleagues, Suersen, Stearns, and Kingsley, whose scientific attainments and researches have reflected such lustre upon the art of dental prosthesis, have excited my admiration as I have studied their complex operations; and if I have been enabled to extend their usefulness, and increase their value by substituting an imperishable material for the less excellent substances now in general use, I shall consider that the years of study I have given to this remote and rarely considered problem of science have not been altogether without their reward.

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REPORT ON MEDICAL CHEMISTRY.

BY WILLIAM B. HILLS, M. D.

DISTRIBUTION AND ELIMINATION OF POISONS.

V. LEHMANN[1] has continued his researches on the distribution and elimination of lead. His experiments were made upon rabbits, and the preparation employed was plumbic nitrate, which was administered by subcutaneous injection in quantities varying from 0.016 to 0.500 gramme. The separation and quantitative determination of the lead were effected by electrolysis and the colorimetric method, using sulphuretted hydrogen in an alkaline solution. The results show that the liver, which in most cases of metallic poisoning holds the first place in order of examination, contains relatively to the weight very little lead. The bile, on the other hand, and the bones likewise, contain a large proportion. As much lead was found to be excreted in the fæces as in the urine; the lead thus excreted must have been eliminated in the bile, and not reabsorbed by the intestines, a circumstance which serves to explain the smaller proportion found in the liver, from which elimination by the bile would naturally occur.

The author investigated the changes which are brought about in the elimination of lead in the urine under the action of various therapeutic agents, especially potassic iodide. He found that the action of this salt is to promote the elimination of lead, exciting it, when this has ceased to take place naturally, by bringing again into circulation that which, so far as his investigations tend to show, had become deposited in the bones. He further found that potassic bromide, and probably also potassic chloride, have analogous effects in promoting elimination, and may therefore serve as substitutes for potassic iodide when the use of the latter is inadmissible. Sodic chloride did not appear to exert any influence on the process.

Guareschi[2] finds that arsenic is principally accumulated in the liver; a notable amount, however, is found in the lungs and kidneys, a very small quantity in the muscles and only traces in the brain.

C. Bischoff[3] has recently investigated the distribution of poisons in the various organs of the body, and has tried many of the methods recommended for the estimation of poisons. The present paper deals with cases of poisoning by phenol, potassic chlorate, oxalic acid, and potassic binoxalate, and by hydrocyanic acid, potassic cyanide, and essential oil of bitter almonds.

For the determination of phenol, the author recommends Landolt's method, but finds it necessary to continue the distillation until the distillate gives no further precipitate of tribromophenol on addition of bromine water. To isolate 0.5 gramme phenol from one kilogramme of substance about two litres of distillate is required.

In the case of a man who had died fifteen minutes after taking fifteen cubic centimetres of a ninety-one per cent. solution of carbolic acid, 242 grammes contents of stomach and small intestines gave 0.1711 gramme phenol; 112 grammes blood, 0.0259 gramme phenol; 1480 grammes liver, 0.637 gramme phenol; 322 grammes kidney, 0.201 gramme phenol; 508 grammes heart muscle, free from blood, 0.1866 gramme phenol; 1445 grammes brain, 0.314 gramme phenol; 420 grammes gluteal muscle, traces; 125 grammes urine, 0.0014 gramme phenol.

In two cases where putrefaction had set in before the post mortem either traces of phenol or none at all could be found in the organs.

Potassic chlorate is best estimated by dividing the dialysate from the organs into two parts, estimating the chlorine of the chlorides directly with silver solution in one, reducing the other with sulphurous acid, adding not too dilute nitric acid, and estimating the total chlorine as silver chloride. From the difference the chlorate can be calculated. Potassic chlorate is very soon reduced by most organic substances, and especially by blood, so that chemical evidence may not be obtainable in undoubted cases of poisoning with potassic chlorate. Four cases were investigated in which death had followed the use of considerable quantities of potassic chlorate for gargling, etc. In two cases not a trace could be detected; in one case traces were found; and in a fourth slight traces of chlorate could be isolated from the stomach and intestines, and their contents, but none from the liver, kidneys, or pancreas.

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[1] Journal of the Chemical Society, London, 1883, page 1163, from Zeitschrift für Physiologische Chemie, vi., p. 528.

[2] The London Medical Record, October 15, 1883, page 436.

[3] Journal of the Chemical Society, London, 1883, page 1020, from Berichte der Deutschen Chemischen Gesellschaft, 1883, page 1337.

In cases of poisoning with oxalic acid or oxalates, quantitative estimation is essential on account of the wide diffusion of oxalic acid in the vegetable kingdom, and its consequent ingestion in food or medicine. Salt of sorrel consists more frequently of potassic tetroxalate than of dioxalate, and the tetroxalate on treatment with absolute alcohol is completely decomposed into free oxalic acid and insoluble dioxalate. On finding oxalic acid in an alcoholic extract, therefore, further experiments are needed to ascertain if the poison was oxalic acid or salt of sorrel. The organs are best extracted with alcohol, without addition of acid, to dissolve free oxalic acid and the "half bound" acid of tetroxalates, then digested with water to dissolve any alkaline oxalate, and finally with dilute hydrochloric acid to dissolve any calcic oxalate, the oxalic acid being estimated in each extract. The quantitative results in five cases of poisoning are given.

The best method for the quantitative estimation of hydrocyanic acid is to mix with excess of alcohol, acidulate with tartaric acid, and distill, a constant stream of air or carbonic anhydride being passed through the apparatus, and the distillate received into a concentrated solution of silver nitrate. The results obtained in five cases are tabulated. The contents of the stomach and intestines contained the largest amount; next in order was the blood. No hydrocyanic acid was found in the urine, and very minute quantities only or none could be found in the muscles.

ARSENIC.

Dr. D. W. Finlay[1] reports a case of poisoning in which death took place in one hour after swallowing a solution containing upwards of twenty-six grains arsenious oxide (white arsenic). This is, we believe, the shortest fatal period on record with one exception. Symptoms referable to the stomach were slight, but collapse was profound.

ON CHANGES IN THE CORD AFTER POISONING WITH ARSENIC, LEAD, AND MERCURY.

Dr. N. Popow[2] has studied the above subject experimentally. The results of his investigation are tabulated as follows: —

(1.) Arsenic, lead, and mercury produce marked changes in the cord in acute cases of poisoning, which must be regarded of the character of an acute central myelitis.

(2.) In relatively protracted cases these changes are not confined to the gray substance, but invade the white, and thus represent the form of a diffuse myelitis.

(3.) The peripheral nervous system remains entirely unchanged by the rapid action of these poisons.

(4.) The clinical symptoms on the part of the nervous system are fully explained by the changes described above, while no one of them can be explained by an affection of the peripheral nerves.

Popow's experiments were made chiefly upon dogs, and the doses were in most cases regulated, so as to contrast the results in both acute and chronic poisoning.

MODIFICATIONS OF GMELIN'S TEST FOR THE BILIARY PIGMENTS.[3]

Krehbiel adds to four parts of the urine to be tested one part hydrochloric acid, then drop by drop a saturated aqueous solution of chloride of lime. After the addition of three to six drops the characteristic green color appears, and is followed upon further addition of chloride of lime by the well-known play of colors.

Capranica recommends the following reaction as especially sensitive. The coloring matter is first extracted by shaking with ether or chloroform. To the solution thus obtained a five per cent. solution of bromine in alcohol is cautiously added until the green color appears. The coloring matter can now be completely removed from the ether or chloroform by shaking with hydrochloric acid. The green color is perceptible if the original solution contains no more than one part of coloring matter in two hundred thousand.

EXAMINATION OF URINARY SEDIMENTS.

Certain urines, especially concentrated urines and those passed in febrile conditions, deposit upon standing a considerable sediment composed chiefly of alkaline urates, and often deeply colored by uroerythrine. The detection of the organized sediments, such as blood globules, epithelium, casts, etc., in such cases is difficult and often impossible. To facilitate the examination in such cases Méhu[4] adds to such sediments, after they have subsided and after most of the urine has been removed, a small quantity of a saturated aqueous solution of ordinary sodic phosphate. This dissolves completely the pigments and urates so that the subsequent examination of the sediment is comparatively easy. An excess of the sodic phosphate does no harm, but its addition frequently causes a precipitation of crystalline calcic phosphate. Méhu prefers this method of treatment to the common one in which the urates are dissolved with water. The latter delays the subsidence of the organized elements, and besides tends to soften and break them up.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

JANUARY 28, 1884. DR. CHARLES D. HOMANS presided.

COLLOID CANCER OF THE APPENDIX VERMIFORMIS.

DR. F. W. DRAPER presented a specimen of colloid disease of the appendix cæci, and related the history of the case as follows: —

The patient was a man, sixty-five years old, a cooper by occupation. He used liquor moderately. He was always healthy until three months ago, when he had diarrhœa with alternations of constipation. Three weeks before his death vomiting first supervened, initiated by griping pain above the umbilicus. Everything ingested was almost immediately returned unchanged. There was no pain about the lower parts of the abdomen or about either iliac fossa.

The patient entered the City Hospital January 14th, and died January 18th. During this interval some temporary relief was obtained for the obstinate vomiting by the use of morphia, dilute hydrocyanic acid, and champagne. The matter vomited consisted of mucus mingled with undigested milk-curds. There was moderate pain or "soreness" along the course of the transverse colon, but no tenderness in any part of the belly. The dejections were loose, dark-colored, or greenish, but the diarrhœa was less troublesome than the vomiting. Emaciation and weakness were marked. The temperature was 99.2° F.; the pulse varied but little from 100. Careful physical examination failed to detect any tumor or other local alteration to aid in establishing a diagnosis. The urine was normal in its chemical and microscopical characters. Obstinate hiccough occurred on the day before death, and aided the vomiting and diarrhœa in determining fatal exhaustion.

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[1] The Lancet, December 1, 1883, page 943.

[2] Virchow's Archiv, vol. xciii., p. 351.

[3] Zeitschrift für Analytische Chemie, 1883, page 626.

[4] Journal de Pharmacie et de Chimie, 1883, page 228.

The autopsy found the specimen exhibited to the Society to be the only morbid part having relation to the cause of the death. The ileum immediately above the ileo-cæcal valve and for some distance along its course was dilated and distended with liquid fæcal matter. Just at the valve, upon its upper side, three foreign bodies — two small fragments of bone and a prune stone — were found lying loosely before the orifice into the cæcum. The valve itself was constricted so as to admit with difficulty the tip of the forefinger. The mucous membrane of the cæcum and lower part of the ascending colon was thickened and deeply reddened, but not ulcerated. The upper third or head of the appendix was enlarged and dilated to such a degree that externally it was of the size and shape of a large plum; its cavity, deeply injected, was irregular in its surface, and would admit the little finger. The opening to the intestine from the appendix was also dilated. The thickened wall of this enlargement presented the characteristic appearances of colloid disease. The free end of the appendix beyond the dilated portion was very slightly enlarged, and contained inspissated fæcal matter in its canal. The peritonæum and sub-peritoneal tissues adjacent to the new growth were normal in appearance.

Dr. W. W. Gannett, in answer to a question, quoted Recklinghausen, that during his fifteen years' service at Wurzburg gall-stones and cancer of the gall-bladder were both rare. In his later service at Strasburg he found them both much more common. He did not advance this as absolute proof of the effect of mechanical irritation in producing malignant disease.

MALFORMATION OF THE VAGINA SIMULATING EXTROPHY OF THE BLADDER. LOBAR PNEUMONIA IN A YOUNG CHILD.

Dr. T. M. Rotch showed the specimen, and said that it had been seen by many physicians during life at the West End Dispensary, and had been taken by all of them for extrophy of the bladder. There was a large abdominal hernia, and below it a mucous surface that had been taken for the posterior wall of the bladder. On this surface were two culs-de-sac, which from their position had been taken for ureters. Still below and in the median line was a large orifice resembling the meatus of the urethra. A dissection by Dr. Whitney showed this to be the vagina, a probe passed outward from the uterus coming through it. The supposed ureters were culs-de-sac. Below them were two hitherto undiscovered orifices, the right of which was a blind opening, the left being the real urethra, as water flowed out through it when injected through either of the real ureters. By following down the ureters a normal bladder was found, through which the water passed. The exposed mucous surface was, therefore, a malformation of the vagina. The case was also interesting as dying from lobar pneumonia after an illness of twenty-four hours, beginning in the third day of life; young children having commonly lobular, catarrhal rather than lobar, fibrinous pneumonia. The left scapula was drawn up to the neck and attached to the upper rib.

CHRONIC NASAL CATARRH; REMOVAL OF HYPERTROPHIED TISSUE.

Dr. F. I. Knight showed two specimens removed by an operation which he has reason to think is not generally known except to specialists, and which gives much relief in some cases. The adenoid tissue of the vault of the pharynx and its posterior wall, resembling the tonsil, and sometimes called a "third tonsil," is capable of being much hypertrophied, and *may* block the nares, thus hurting the voice, and keeping up catarrh by compelling the patient to breathe through the mouth. This has been removed by twisting it off with forceps, which, if the tissue is hard, may do injury; or by burning it with galvano-forceps, which last is very dangerous if done carelessly, because it may set up inflammation in the middle ear. The speaker did not mean that the galvano-cautery has no place. It may be used with care in cauterizing a stump. The specimen presented had been removed by a snare. The other specimen was of the mucous membrane and submucous tissue (erectile tissue of Bigelow) covering the turbinated bones. This when hypertrophied does the same mischief as the large "third tonsil." Touching it with nitric acid is of no use. A weak snare may snap, but No. 5 piano wire, proposed by Jarvis, of New York, cuts through anything. It is placed through the nostril with the aid of the rhinoscope, and at least two hours must be used in cutting through or there may be serious hæmorrhage. The patient holds the instrument, and has pain only when the screw is tightening. He should be warned not to blow his nose for some hours.

Dr. A. L. Mason read a paper on

CEREBRO-SPINAL MENINGITIS. FIVE CASES. — ONE OF THE FULMINANT TYPE, TREATED WITH APOMORPHIA, MORPHIA, AND ATROPIA. RECOVERY. — ONE AUTOPSY.[1]

Dr. S. G. Webber said that he had been much interested in the paper, especially in the first case, which was rather anomalous. As the reader states, the causes linger after an epidemic, and now and then break out in sporadic cases. Such cases have occurred at Vienna since the last epidemic there. The speaker had himself seen a case in a neighboring town in which the symptoms developed ten days after a blow from a school teacher. This had been at first supposed to be their cause, but the disease was later seen to be cerebro-spinal meningitis, and this was confirmed by autopsy.

Dr. J. J. Putnam referred to cases which have been reported (including one by Dr. Webber) in which the naked eye appearances of the membranes in undoubted cases of cerebro-spinal meningitis were negative, and also to the fact that spasms may be absent, or nearly so, throughout the sickness. Cases of this kind resemble in many respects severe cases of diffused neuritis.

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[1] See page 125 of this number of the Journal.

Dr. Putnam also said that he had seen several children suffering with the sequelæ of cerebro-spinal meningitis, and that they were sometimes characterized by a peculiar oscillatory trembling of the hands, and sometimes localized atrophy of muscles.

Dr. Mason, in reply to Dr. Putnam's question as to the probable cause of death at a very early period in the disease, said that he supposed the fatal result might be due to shock. In cases fatal within a few hours, where the patients are struck down as if by lightning, the toxic influence is so powerful that the vital organs may cease to perform their functions before the anatomical changes in the nervous centres have developed. Sometimes, under such circumstances, the brain has been found to be anæmic and œdematous.

Dr. C. E. Stedman said that the different symptoms of the disease were illustrated by (1) a boy of eight years old who came home from school, and went out to play in apparent health ; in the door-yard he had a fit, in which he died before Dr. Stedman could reach him, though answering the summons at once. The autopsy, in which Dr. Edes assisted, revealed cerebro-spinal meningitis, with deposits of pus. On the other hand, (2) a child, aged three, had cerebro-spinal meningitis, and was unconscious three weeks, taking little food and no medicine; at the end of that time he woke, was rational, called for his toys, and recovered. In regard to the connection between this disease and pneumonia, Immerman and Heller write of the Erlangen epidemic, that in fifteen cases meningitis complicated croupous pneumonia fourteen times and scarlatinal nephritis once. Dr. Stedman found one morning, in making his visit at the City Hospital, a man of sixty-five, unknown and unconscious, whom he recognized as a nurse. He died in a few hours, comatose, with paralysis of the left arm and ptosis of right eyelid. Autopsy showed cerebro-spinal meningitis. His former physician reported that he had just attended him through an attack of pneumonia, and in recalling the case, after the result of the autopsy was told him, he could recollect no symptom pointing to the brain or cord. The autopsy also illustrated the correctness of the diagnosis of pneumonia.

Dr. R. H. Fitz thought that the first in the series of cases reported was particularly interesting from the anomalous character of its symptoms. The course of the disease was so irregular that a certain doubt as to the exact nature of the process readily suggested itself. The low range of temperature in particular, in a disease whose synonym is "spotted fever," seemed especially noteworthy. If he had understood aright the temperature in general was in the vicinity of 99° F., exceeding this limit only in a single instance, somewhat late in the course of the disease. Although an atypical range of temperature was an important feature in the differential diagnosis between cerebro-spinal meningitis and other protracted febrile diseases, as typhus and typhoid fevers, the lack of type in the present instance seemed exceptionally characterized.

During the epidemic of 1873 Dr. Fitz had made numerous post-mortem examinations of cases of this disease, including those terminating fatally within ten hours from the beginning of the attack and those lingering for several weeks, if not months. The anatomical evidences of meningitis were always present, though in the extreme instances the macroscopic changes were far from being characteristic. A cellular infiltration of the pia mater was found in the fulminant cases, and the remains of the inflammatory product were seen in patients whose disease was continued throughout weeks and months. The extension of the inflammatory process into the cerebral ventricles, with the associated hydrocephalus, sometimes extreme, seemed of importance in explanation of the suddenness of death in certain cases, especially in those whose termination was rapidly fatal. A paralysis of respiration or an insufficiency of the heart might be regarded as the direct result of the greatly increased intracranial pressure, manifested not only by the obliterated furrows, flattened convolutions, and the anæmic brain, but also by the widely distended ventricles.

The reference made by Dr. Webber to the medico-legal importance of the recognition of cases of cerebro-spinal meningitis reminded Dr. Fitz of an analogous experience. During the late epidemic a young man was thrown to the ground in a drunken quarrel, his head striking a curb-stone. Death followed in the course of a few days, and evidences of a severe cerebro-spinal meningitis, without fracture of the skull, were found at the autopsy, which was made at the instance of the coroner. The question raised at the time concerned the relation between the violence and the lesions. It was concluded that the latter might have arisen independently of the violence, owing to the existing epidemic. The possibility of the lesions being excited by the blow could not be eliminated, although this alternative was regarded as less probable than the former in virtue of the appearances and the collateral circumstances.

Dr. Mason, in reply to Dr. Fitz's suggestion that Case I. was so anomalous in symptoms, especially in the low range of temperature, that the diagnosis might be questionable, said that it was not more so than many cases he had met with in the literature of the subject; that the best authorities called attention to the very great variety in temperatures or symptoms observed, so that so far no one who had not seen a large number of cases could be familiar with all the types. Cases with considerable depression might present a sub-normal temperature, as in Case II., but the axillary temperature is often a poor guide.

In Case I. Dr. Mason, after very careful observation in consultation with others, could find no more probable explanation of the symptoms, although he would be glad to have one suggested. The patient evidently had meningitis. Syphilis and tubercle could be fairly excluded, as the recovery was complete; and a simple idiopathic cerebro-spinal meningitis, if there is such an affection, must be very rare and undistinguishable from the disease in question.

Dr. C. F. Folsom said that in 1873 he had seen a case quite similar to the first of the five reported by the reader. The period of unconsciousness was somewhat longer, and the duration of the illness considerably longer, than in Dr. Mason's case. The patient was not able to resume his occupation until six months after his attack. The temperature was low, seldom going above 101° F.

Dr. Webber said, with reference to the point raised by Dr. Putnam, that during the epidemic of 1873 he had made an autopsy, in which, although no pus was seen by the naked eye, yet that microscopic sections had shown pus cells under the pia mater and in the substance of the cord.

The speaker had known total deafness to result from an attack, and to remain unrelieved after six or eight years, notwithstanding much treatment from both physicians and quacks. He does not suppose this to be from a lesion of a nerve, but from disorganization of the labyrinth from infiltration of pus cells.

The symptoms vary as the brain or the cord is the principal seat of disease. He can well understand that, with cerebral lesions predominating, the temperature may be low. With regard to treatment, he recalls a case in which iodide of potassium was used with apparent good results. He does not remember whether ergot was used in the case or not. In simple cerebral meningitis iodide of potassium is of value, but it must be used in large doses, twenty or thirty grains four or five times a day.

Dr. J. O. Green said that all the cases so far analyzed are insufficient to show the different conditions of deafness. They are not always the same.

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PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.[1]

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

THE TREATMENT OF CLEFT PALATE.

Dr. H. A. Baker by invitation exhibited a patient for whom he had contrived an improved appliance for cleft palate, which is described on page 127 of this journal.

Dr. Henry J. Bigelow remarked that he had been asked to say something upon this subject. It is quite exceptional that staphyloraphy alone without an obturator does much service to the speech. It is not difficult to get a union of the fissure, or of most of it, but the flaps are usually so tense afterward from the contraction of the dissected surfaces behind the palate that the play of the palate necessary to articulation is prevented. I have, therefore, usually recommended patients to get one of the varieties of artificial palate or obturator, whether inflexible like Suersen's, or flexible like Kingsley's, and to submit only to so much operation as may be necessary to keep it in place. After an operation patients expect to talk at once, but they cannot do so. A long education is needed to show any considerable improvement in alternating the mute and nasal consonants. As a rule there is no improvement of speech at first. Fifteen years ago I devised a short series of exercises in articulation for a patient I operated upon. It begins with the only consonant which a patient can usually best articulate, namely, "*t*" in "*tar*," and gradually leads to the rest, constantly referring to the acquired "*t*" as a point of departure. Here it is, as it was then printed for the private use of a patient: —

"The great difficulty in pronouncing correctly with a cleft palate is in distinguishing the nasals from the mutes; thus, p and b from m, pap or bab from mam, t and d from n, tat from nan; k and g (hard) from ng.

"'Tar' is well pronounced by most beginners with an obturator. When the beginner can pronounce 'stark' and 'car' he has the key to most of what [illegible]. The above words should be practised carefully, not 'tar' and 'ca,' but 'stark' and 'car,' and should be spoken loudly, or, as the elocutionists say, 'exploded.'

1.	tar	artar	kar	arkar	kar
2.	kar	arkar	arkgar	kgar	gar
3.	kar	arkar	arkdar	kdar	dar
4.	kar	arkar	arkpar	kpar	par
5.	kar	arkar	arkbar	kbar	bar
6.	kar	arkar	arklar	klar	lar
7.	kar	arkar	arksar	ksar	sar

Practice all the above with the following vowels: —

8. o as in coke.

Thus, instead of kar, akar, etc., ko — oko — oklo — klo — lo

9. a (long) as in cake.
10. i as in kite.
11. e as in keep.
12. u as in suit.

13.	kar	arkar	arngar	arkar	arngar	kar	ngar
14.	tar	artar	arnar	artar	arnar	tar	nar
15.	par	arpar	armar	arpar	armar	par	mar
						bar	mar
						dar	mar
						sar	rar

(Practice reading loudly from a book.)

"*February*, 1870."

Dr. George F. Grant spoke as follows: In the physiological treatment of cleft palate there are many points which require the most careful consideration. I have listened to the paper of Dr. Baker with great interest because the subject is one to which I have devoted much time and attention, and during the past fourteen years have treated over seventy cases of congenital cleft palate. While I may claim to have succeeded in almost every case in securing a good articulation there have been great variations in the degree of success as well as in the length of time which is required for the patient to master the art of distinct articulation and enunciation.

At the commencement I made the mistake of expecting too much from the appliance unaided by proper direction to the patient in its use, that is to say, after adjusting the palate it was my practice to give the patient an exercise in sounds simply requesting him to follow me in their pronunciation. This plan did not prove satisfactory in all cases, and I now often wonder how so many did so well under so imperfect a system of training.

It soon became plain to me that patients of this class required to be taught the art of correct articulation technically, just as we are taught any other art which depends upon accurate technique. This fact applies also to the sister art of enunciation, and although there is quite a wide difference between these two factors of speech they are so closely allied in this particular branch of study that they may be considered as one in speaking of them in this relation.

I found that this class of patients is almost universally deficient in the management of the breath; that in the use of the voice they speak directly from the lungs without any check at the larynx as is the case in normal speech, and where this fault does not exist they attempt the closing of the nose by using the depressor muscles of that organ and disfigure the face greatly thereby.

While this fault exists, the development of correct habits of speech is impossible; for many, if not all the sounds of the language require for their proper enunciation that the air column be under the most perfect control. For example, most patients are quite unable to give the sounds of those letters which are classed as labials, with any force whatever after being taught the method, simply because they do not have the power of sustaining a sufficient pressure of air. The proper thing to do is first to teach them to control the breath. It is best to give them a tube of some description, and teach them to blow through one end while the other end is immersed in water; the bubbles which arise are a good indication of the progress which is being made. They are then taught to check the air in the throat by the tongue, and by distending the cheeks make a reservoir of the mouth which furnishes air to the tube while the lungs are being filled through the nostrils so that a continuous stream of air passes through the tube. This, many of you will recognize as the method of using the blow-pipe, familiar to chemists and artisans. I know of no plan which so rapidly gives the patient that control of the breath so necessary to the first steps in articulation. This practice gives tone and strength to the lips and cheeks, the muscles of which I have observed to be much weaker than in persons of normal formation. I have seen many patients who could apparently distend the cheeks as well as any one, when in reality there was little or no pressure upon the inside, and the act was a fictitious one, as the cheeks would not sustain percussion.

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[1] Concluded from page 104.

After I have taught a patient to direct a column of air through the lips and to control its passage, it is much easier to instruct him in applying those modifications to the air current which constitute articulate speech. These modifications are taught singly, and the proper position and conditions of the organs employed in the production of a sound are ocularly demonstrated, first, because the patient can more quickly understand what he can *see;* secondly, because it is of great importance that the best skill should assist in developing the work which the appliance is designed to accomplish.

I have only time to say that this plan or system which has been slowly and practically developed, has for its basis the reduction (by analysis) of speech to its simplest mechanical principles, and no effort has been spared to bring the mastery of those principles within reach of the most ordinary intelligence. I do not agree with much that has been written and said regarding the classification of the sounds in the language. But I have one remark to make regarding the most common error, which, as I believe, can be shown by a little reflection. It is a common belief that patients of this class must struggle with the consonants, while the fact is that with a few exceptions the vowel sounds are much the most difficult to teach them, because the vowels are more dependent upon the quality of the voice as a whole than upon any position or local arrangement of the organs of speech; consequently a patient may be technically correct as to articulation and have a most unpleasant enunciation, due entirely to faulty location of the vowel sounds. That is, a patient may be able to give the sounds of simple single letters or elements, and yet be unable to converse or read distinctly because the voice has not received attention.

Few of these patients have made use of the anterior portion of the mouth in their efforts to articulate. Their whole mechanism has been misdirected to an almost vertical line with the larynx, so that if the same line were followed with a normal palate the voice would pass through the nares behind the palate instead of being thrown upon the anterior portion of the soft palate and the whole of the hard palate, and thence by reflection through the lips, as should be the case.

If you have followed me to this point you will observe that I have first taught the patient that he must have the air to make the sounds under his control; secondly, he has been taught how to employ it in conjunction with the organs of speech in forming the parts of speech; now it remains to show him where to put it. We all agree that those sounds, or tones rather, which have the best penetrative power and are most clearly enunciated have a high or sharp pitch; then the next thing to consider is how is it produced. Why are some men's voices so much clearer in tone than others? Some of it is due no doubt to anatomical causes, — the height of the dome of the palate for instance. But still there are physiological reasons. The man who enunciates best, and whose voice has purity and clearness of tone, makes it better still by careful study and training. He brings the focus as far forward upon the palate as it is possible to do; the sound wave from the larynx is projected as far upon the anterior portion of the palate as possible by holding the head in an erect position and opening the throat, bringing the tongue forward. It is this very point which it is important to impart to a cleft palate patient, and which it is necessary for him to master in order to complete the work which an artificial palate makes possible.

No enunciation is good without it; no articulation can be secured which will repay the trouble unless careful attention is given to these points, and I have seen so much accomplished by these methods that it seems almost a possible thing to train a patient into a fair articulation without any appliance. Two quite remarkable cases have come under my notice. In both the fissure was quite large, in one patient extending through the soft palate, in the other through the soft and half way through the hard palate. In both cases the articulation was remarkably good, and either by accident or training the method in one was almost faultless, so that I advised the patient to let well enough alone.

A word about appliances. Dr. Baker's appliance seems to me to be the addition of a hinge to a modification of the Suersen obturator, made by Dr. Kingsley, of New York. The original Suersen obturator was a solid bulb of hard rubber, so shaped as to retain contact with the divided palate under all conditions, and at the same time close the opening into the nares by the contact with the superior constrictor of the pharynx. Dr. Kingsley's improvement consisted in making the bulb hollow and placing it so as to slide upon a bar until the most effective position was determined, and then securing it in the desired position. The method of making the bulb hollow, and the conclusions at which he arrived regarding the comparative value of the Suersen and Kingsley systems, may be found in the book on Oral Deformities by Norman W. Kingsley.

Dr. Kingsley is of the opinion that a soft rubber appliance is best to acquire articulation with, while the hard rubber might be inserted with good results after articulation has been acquired, and I coincide with that view; for when a case of cleft palate has been brought to a successful result, and the palate is then removed, the patient is in a position analogous to perforate palate.

The articulation exists and only requires mechanical aid, so that whatever meets that requirement suffices.

There are objections to soft rubber as a material, but it has proved of too much benefit as an aid in giving the best results in acquiring good articulation, and in that respect surpasses anything which I have seen. I do not think Dr. Baker did it justice in his remarks upon it; for he must have known that if it was properly made the die in which it was made was a permanent mould which rendered the vela capable of easy and limitless duplication, and so easy of adjustment that it could be sent to any part of the world, or, if necessary, made or duplicated by any dentist who would follow the directions which accompany it.

The cleanliness depends upon the individual, as does the cleanliness of anything worn about the person.

The best results are dependent solely upon skillful manipulation, and no appliance can be successfully adapted by an unskilled hand. There can be no fixed rule to follow; each case presents new features, which must be met as they appear. My preference is for the soft rubber, because it more readily fulfills the requirements, and because it has done better work than any appliance which I have yet seen, though I have seen a few cases in which the hard rubber obturator had proved very beneficial.

I will not intrude further upon your time than to say that one of my greatest complaints against the Suersen principle has been that it seems almost impossible to obtain a clear voice with it, a fact which I have attributed to its thickness obstructing the posterior portion of the nares, and in Dr. Baker's appliance I cannot see that the hinge obviates that difficulty.

The patient was then introduced, and the appliance could be seen in the mouth, and, by causing him to swallow, the relation of the instrument to the wall of the pharynx and to the alæ of the velum palati could be easily observed. It was evident that in the act of deglutition no communication between the nasal cavity and the pharynx existed, the posterior part of the obturator being raised up by the superior constrictor muscle of the pharynx, and pressed firmly against the posterior wall of the pharynx at the line of the naso-pharyngeal junction. The patient now removed the appliance, when an enormous fissure was disclosed, extending from a point near the incisor teeth through the entire hard palate and velum. Upon being asked to read, it was quite impossible to understand what the patient was saying. After replacing the appliance the same sentences were read, and every word was spoken with great distinctness, and could be easily understood by every person present. After this the patient was asked to read some new selection, and opening a book at random, commenced as follows: "Physicians generally agree that the moderate use of wine is beneficial." At this point the audience, pleased with the improvement in speech, and possibly desiring to express approbation of what was read, burst into applause, and appeared to be perfectly satisfied as to the usefulness of this instrument in cases of cleft palate. The patient remarked that he found the greatest comfort and solace in the fact that with the appliance in his mouth he was able to smoke, while without it he could not draw the vapor of the tobacco from the pipe into the mouth. With it, also, he can whistle, which he cannot do without it.

On motion of Dr. Marcy it was voted that the thanks of the Section be rendered Dr. Baker for his important communication of original studies upon a most difficult subject and demonstration of ingenious mechanical appliances for the remedy of cleft palate.

On motion of Dr. Prince a vote of thanks was tendered to the retiring chairman, Dr. George B. Shattuck, for the zeal and fidelity with which he has conducted the deliberations of the Section during the past two years.

Adjourned at eleven o'clock.

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PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

Thursday evening, January 10, 1884. The President, Dr. Tyson, in the chair.

OSTEO-MYELITIS OF TIBIA.

Exhibited by **Dr. C. M. Wilson.**

G. L., aged forty-two, was admitted into the surgical ward of the Pennsylvania Hospital November 26, 1883. Sixteen days previously he had been knocked down on shipboard, and had sustained a wedge-shaped fracture of the tibia and an oblique fracture of the fibula of the right leg about the middle. When admitted the fragments were in malposition and partially united. There was considerable deformity, the lower fragment of the tibia being tilted up and overlapping the upper fragment. By appropriate treatment the fracture was retained in fairly good position, and the case was progressing favorably until the afternoon of December 26th, just one month after admission, when he had a severe chill, followed by a temperature of 103.5° F. He complained of violent pain in left shoulder-joint. He was treated with salicylate of sodium. Next morning his temperature was 102.5° F., with intense pain in both shoulders and elbows. The same anti-rheumatic treatment was continued under the supposition that the case was one of acute articular rheumatism, the man having been exposed to a draught. The afternoon of second day he had a severe chill, with an evening temperature of 104.4° F., and a presystolic mitral murmur was detected. Dr. Wilson now considered the case to be one of pyæmia, and gave massive doses of quinia, stimuli, and digitalis. The man steadily grew worse, and died of exhaustion on the morning of December 30th.

Post mortem twenty-six hours after death. Rigor mortis marked. Body well nourished. Posterior portion of body much discolored; extensive ecchymoses over arms and shoulders. Smaller patches over abdomen and chest. One and one half ounces of clear serum in the pericardial sac, with many ecchymoses over the surface of the heart. Both sides of heart relaxed and partially filled with post-mortem clots. The valves on right side appeared normal. The aortic valves were incompetent, and their free borders were roughened by recent vegetation. There was also some slight thickening and contraction. The mitral valves showed old thickening as well as signs of recent inflammation. The endocardium of the left ventricle showed numerous spots of ecchymoses. The heart weighed sixteen ounces, and its tissue was a good deal softened. Spleen normal. Left kidney weighed seven ounces, was somewhat swollen, and its tissues were slightly flabby. The capsule was thickened and somewhat adherent. The organ was congested and somewhat swollen. Right kidney weighed six ounces, and presented the same appearances as the left. Liver was large, swollen, and marked by the ribs. Its surface was mottled with rounded yellowish patches surrounded by dark-red areolæ. Section showed it to be markedly congested. Its weight was four pounds four ounces. Lungs much congested. The base of the left being anteriorly bound down by old adhesions. The brain was not examined. Examination of the fracture showed it to be ununited, and there was no callus detectable. The periosteum tore easily. On section the medullary cavity of the tibia showed marked evidences of inflammation. There was a puffy septum of granulating tissue between the ends of the fragments. Above there was evidence of extravasated blood, and two and one half inches above the line of fracture there was a small circumscribed medullary abscess. The medullary cavity was inflamed and streaked with red lines.

Through the kindness of Professor Brinton and Dr. Longstreth, Dr. Wilson was enabled to show several pictures illustrative of osteo-myelitis. This is the only case of death from simple fracture recorded at the Pennsylvania Hospital. This disease must be a very rare sequel of simple fracture. It is not necessarily a fatal disease, as the inflammation may become circumscribed, a depot of pus formed, and the destructive processes end there, or a portion or the whole of a bone may die or be removed. It is easy to see how a virulent inflammation going on to suppuration with no vent to the pus, as in this specimen, could readily give rise to septic poisoning. I am indebted to the courtesy of Dr. Longstreth both for the specimen and assistance in its preparation.

Dr. Tyson said that he had seen many cases of osteo-myelitis from gunshot injuries during the late war, but he could not recall a case where the medullary canal was encroached upon by a condensing osteitis, as in this specimen.

Dr. Nancrede related a case of fatal septic trouble following a simple fracture of the thigh, where the starting point seemed to him to have been a superficial ulceration of the skin, produced by the adhesive plaster. Possibly section of the bone might have revealed an osteo-myelitis, but as the fracture was firmly united, he thought that the skin abrasion was the starting point, and related two cases of pyæmia produced by equally trivial causes.

Dr. Longstreth related a case seen by him when a resident physician at the Pennsylvania Hospital. The patient had a fracture of the thigh of three weeks' standing, and was apparently doing well, when chills, sweats, lung consolidation, etc., etc., ushered in a fatal attack of pyæmia. A post mortem revealed osteomyelitis and general pyæmic manifestations. A possible explanation of Dr. Wilson's case was that the man had been on board ship for three weeks after his injury, where the treatment must have been of the crudest description.

Dr. Eskridge called attention to the endocardial trouble found in septic disease, which he had been taught as a student to consider was of an ulcerative form, and of fatal prognostic import. He had, however, seen two cases which presented all the symptoms of ulcerated endocarditis, but which had recovered, while in two others with a similar clinical history postmortem examination revealed only a simple non-ulcerative endocarditis.

Dr. Shakspeare asked whether this condensing osteitis might not have been due to a previous syphilitic trouble.

Recent Literature.

A Manual of Psychological Medicine and Allied Nervous Diseases. By Edward C. Mann, M. D. Philadelphia: P. Blakiston, Son & Co. 1883.

This book on insanity comprises 700 full-grown pages, to say nothing of some illustrations. Why it should be called a "manual," unless because it was written by Mann, we are at a loss to see, as Worcester defines a "manual" as "a small book, such as can be carried in the hand," and this book is large enough to be carried around in a shawl strap. The original contents, however, if boiled down, would easily go into the vest pocket.

Dr. Mann has adopted the old-fashioned plan of bringing together a large amount of material from a great variety of very good authors, and has strung this together on a slender and often invisible thread, and with so little *zusammenhang* that sometimes there is little relevancy.

His History of Insanity covers one page. Next he begins on Classification, recommending the simple and childish system of Krafft Ebing. This covers two pages. On the middle of the next page he branches into the making of autopsies. On the next page he gives definitions of insanity until he suddenly remembers that he was on the subject of classification, and returns to this again toward the bottom of the page.

After a short chapter on the Ætiology of Insanity, he has a chapter of two pages on the Prevention of Insanity. Why he breaks in on the usual custom followed, and puts in a few words just here on this subject instead of at the end of the book, he does not say.

Chapter IV. has nineteen pages on the Diagnosis and Prognosis of Insanity. Chapter V., sadly out of place, has eight pages on Civil Incapacity. Chapter VI. has nine pages on General Paralysis of the Insane, of which Dr. Mann has the very correct idea that it should be called general paralysis because it is no paralysis in particular. Chapter VII. treats of Idiocy, Dementia, Folie Raisonnante (Syn., Moral or Affective Insanity)."

After a chapter on Mental Responsibility, etc., in Criminal Cases comes a chapter on The Histology and Functions of the Cerebrum.

These specimens of the arrangement of the book will show with what incongruity and lack of system the book is written, and as these faults are combined with those of general incompleteness and a marked lack of thoroughness of treatment of most of the subjects discussed we should say that time would be utterly wasted in reading the book.

We regret the necessity, but it becomes our solemn duty, in the interests of good psychological writing, to openly declare that this book, in our opinion, is a complete *failure.*

— On account of the departure of the Senior Editor, Dr. Pilcher, for Europe, in January, and the expected departure of his colleague, Dr. Fowler, for a similar trip abroad later in the season, the publication of the *Annals of Anatomy and Surgery* is necessarily suspended during their absence.

Medical and Surgical Journal.

THURSDAY, FEBRUARY 7, 1884.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

THE SIMULATION OF STONE.

Feigned diseases form an exceedingly interesting class of cases, though the majority of malingerers fall under the notice of the military and naval rather than of the civil surgeon. In times of general conscription such attempts at fraud are most frequent, and show the greatest ingenuity on the part of the malingerers, calling for equal acuteness for their detection. In France the time of the first Empire was most prolific in such attempts to escape military duty, and many will recall the published lists of the exempt and the disease on which their exemption was founded during the conscription at the close of our late civil war. But even the quietest and least suspicious of civil practitioners is liable to be deceived, as some of the most carefully studied attempts at deceit have been devised and executed without the exciting stimulus of the desire to avoid military duty. One of the most baffling cases was given in this journal some three years ago of the "dummy chucker," or executor of epileptic fits, for the opportunity offered to his accomplices, during the excitement attendant on the fit, of robbing the bystanders. Few cases are so skillfully executed as in the case of this criminal, who boldly "chucked his dummy" in the court room and in hospital wards.

The feigned diseases embrace a wide list of subjects, and under the same general heading which includes the fraud who simulates a disease which he has not must be classed the individual who, wounded or sick, exaggerates the gravity or conceals the cause of the complaint.

An important contribution to the literature of feigned diseases has recently been made by Dr. Brongniart, of Contrexéville. He narrates three cases, all females, which have come under his own observation, in which the pretense was made that stones had been passed from the bladder, and these pretended calculi were preserved and exhibited. Twenty-two similar cases are referred to as found in the literature of the subject, of which one was a man, four were boys, and the rest females. The only adult male case is one narrated by Civiale of an officer who claimed to have been cut for stone just after the retreat from Moscow. The stone that he exhibited was remarkable for its size and polish; a section proved it to be but a common pebble. Reverence for the great lithotomist forbids us to intimate the possibility that both narrator and officer were deceived by the "Jewish surgeon," who desired to retain the fruits of his own prowess and presented to his patient the most convenient substitute. Of the boys, the most interesting case is that of a little fellow of ten years, sent in 1791 to Deschamps for lithotomy. His mother showed pebbles which she had seen issue from his meatus. The boy actually had a stone, was cut, and a true calculus removed at the Charité, and after his recovery confessed that fear of the operation with which he was threatened had induced him to persuade his mother that he was passing the stones himself without the assistance of a surgeon.

The three cases of Brongniart have little if any relation with those numerous cases in which erotic individuals of both sexes introduce various articles into the urethra; they are rather manifestations of a hysterical neurosis. The patients did not always introduce the false calculi into their bladders, but contented themselves with the declaration that they were found in the bed or the receptacle of urine. Had they taken the precaution to procure genuine urinary concretions for exhibition it might have been impossible for the physician called in after their pretended nephritic colic to have discovered or even suspected the fraud.

Suppose that the doctor has, from some point in the appearance of the gravel, a doubt of its authenticity, which is converted into certainty by chemical analysis, shall he consider it as an ordinary deception without motive? Shall he reject as false all the patient's sufferings? Our author does not believe it. It is one's duty, on the contrary, to inquire carefully into the history and heredity of the patient, and if hysteria is manifest in herself or her parents he will perhaps find that the simulation is the consequence of a painful form of hysteria, of a nephralgia, or a cystalgia, of which the real pain must not be overlooked by the discovery of the added deceit. Various authors are cited to show that hysteria may provoke painful phenomena and functional trouble on the part of the urinary organs. One can then easily imagine that a nervous woman, perfectly honorable, without a premeditation of deceit, may be attacked with a hysterical nephralgia so resembling nephritic colic as to deceive even the attending physician. "All the world," commencing with the patient, believe in the existence of the gravel; but after many returns of the attack and no appearance of anything to confirm that opinion one begins to doubt the truth of the diagnosis. The terms "nervous attack," "hysterical crisis," come to the ears of the patient, and to avoid the unpleasant name hysteria she takes pains to demonstrate at her next attack the reality of her pain. A course of deception once entered upon she will not willingly inculpate herself, and the deception may be continued for months and even years.

One of these cases must serve as a sample of the class.

Mlle. B., eighteen years of age, slightly chloro-anæmic, was subject to various nervous accidents. These nervous attacks were attended with very acute lumbar and abdominal pain, difficulty of micturition, and convulsive movements. Having had occasion to assist in the care of an aunt suffering from nephritic colic, Mlle. B., after one of her painful crises, showed gravel which she said she had found in her urine, and more was found in her bed. There was no longer doubt in the mind of her physician as to the character of her disease; she had nephritic colic, and was sent for treatment to Contrexéville. The young girl belonged to an excellent family, and there was no reason to suspect the truth of the story, but the father had brought with him and showed to Dr. Brongniart the gravel, which was seen to be made up of particles of quartz and fragments of brick. At a private interview, the father refused entirely to believe in the Dr.'s explanation, and the suspected gravel was forwarded to Dr. Méhu at Paris for examination. An answer was returned which convinced the father, who became vehement in denunciation of the falseness of his daughter, whose defense the doctor was obliged in his turn to undertake. He told the angry parent that the pains suffered by his daughter were real, that the nervous crises were not simulated, but that they were of a hysterical nature, and that hysterical people were often uncontrollably impelled to reprehensible acts, as, for instance, simulation or theft, without it being possible to consider them actually responsible for these unhealthy impulses. This was a ray of light for the unhappy father, who then revealed certain facts in the history of the mother of the young deceiver, who had been the victim of kleptomania, taking the most worthless objects, necessitating her temporary detention in an asylum.

This nervous heredity explained and excused to a certain extent the simulation of which the young lady was rendered guilty under the combined influence of an imitative impulse and the neuralgic pains of hysterical character. The urine, though often examined, was always found absolutely normal in this case. A suitable regimen was prescribed, and nothing more was heard of the case.

Our limited space permits us only to add the conclusions which Dr. Brongniart draws from his consideration of the subject: —

The simulation of urinary gravel observed sometimes in young boys is much more frequent among females.

The motive for that deception in boys may be that of all other deceptions, idleness, the desire of exciting interest and pity; perhaps erotic motives.

In women and girls the same motives may exist as in boys; much more likely in them are erotic motives as a determining cause. Nevertheless, outside of all depravity, the simulation of urinary calculi may be determined by hysteria under the form of nephralgia: with the purpose of evading the ill-sounding epithet of hysterical, these invalids prefer to give to their sufferings the name of nephritic colic, which induces them to show the fictitious stones.

One ought always to analyze with care the urine and gravel from young boys and nervous women who declare themselves afflicted with stone.

BOSTON'S IMPROVED SEWERAGE SYSTEM.

ON the first day of January the new system of intercepting and delivering sewers for that part of Boston situated between the Charles and Neponset Rivers, which has been in construction for a number of years, was inaugurated. Members of the Massachusetts Medical Society will recall that they were invited during the last annual meeting of the Society to inspect the main sewer, and those who did so are somewhat familiar with the system of which it forms a part. As the growth of the city demanded, sewers were built years ago, each emptying at a locality most convenient and least annoying. According to the new plan a series of intercepting sewers has been constructed belting the city and communicating with the older sewers near their mouths by means of small branch or connecting sewers, provided with gates to regulate the flow. The old outlets are to be for the most part kept open, to be used for storm overflows, and those below tide level will be provided with a double set of gates to prevent the tide from flowing in.

The great bulk of the sewage is, however, by the new system to be conveyed to a considerable distance from the shore, and deposited where it is believed, and thus far proved, that it will not be obnoxious or injurious. The various intercepting branches converge into one main sewer, which runs in nearly a straight line to old Harbor Point, Dorchester, where there is a pumping station. At this point extensive works have been erected, the first of which is a filth hoist, through which the sewage passes before it reaches the pumping station. The filth hoist consists of two chambers, in each of which are hung, so as to be raised and lowered by winches, open cages through which the sewage flows and which retain any large floating objects that would injure the pumps. They are arranged in pairs, one behind the other, so that one may be in place while the other is drawn up for cleaning. Four engines, each of a capacity to raise 25,000,000 gallons in twenty-four hours to a maximum height of forty-three feet, are now in position, and it is designed eventually to double this pumping capacity, allowance having been made for two boiler houses.

The outfall sewer extends from near the engine house to the reservoir on Moon Island, a distance of a little more than two and a half miles. The first portion of the outfall sewer, a section of 1200 feet, is the deposit sewer, which is carried into Dorchester Bay on an embankment; the second portion, having a horizontal length of 6970 feet, is the tunnel under the bay in the form of an inverted siphon, at whose entrance is a vertical descent of 150 feet, the level being regained at the farther end by a rise of one foot in six; the third portion extends from Squantum Neck on the farther side of Dorchester Bay to Moon Island, where it connects with a reservoir having four compartments with a total capacity of 25,000,000 gallons, from which the sewage is discharged at ebb tide into deep water by an outlet sewer.

The total estimated cost of these sewers for the south side of Charles River, including an allowance of

$300,000 for rebuilding and connecting old sewers, was placed in 1876 at $3,750,000. The actual cost has been thus far about $4,500,000, and $750,000 more will be needed, but much of the work proved far more difficult than was expected, and several contractors met with serious losses. The important thing is that the work seems to have been well done, and the system to practically answer the expectations that were formed of it. For the district on the north side of Charles River a main sewer and branches of fifteen miles length with other works, at a cost of more than $3,000,000, will be required, but are not yet contracted for.

In addition to relieving the waters of Charles River and its flats, which had become extremely offensive, the present sewers, providing for a constant and uninterrupted flow of sewage from its entrance to the outfall sewer, deliver the city from the cess-pool tendency of the old sewers; whether the level of the ground-water will be lowered, as was at one time anticipated, it is as yet too early to determine.

It will be easily seen that with the surface drainage of the city and the great consumption of water, — between ninety and one hundred gallons per head daily, — the sewage, when reaching Squantum or the reservoir on Moon Island, will be extremely dilute, yielding but a small percentage of solid constituents and those of a soluble character. It is not reasonable to anticipate any annoyance from its discharge into deep water on an ebb tide, either to those navigating this outer portion of the harbor or to those occupying neighboring shores; the full sewage product of the district drained is not as yet discharged through the intercepting sewer, but of the large amount which is discharged all trace is dissipated in the ocean even more readily than was anticipated. Whether any other disposition could be advantageously made of this sewage when once delivered at Squantum or at Moon Island is a subject whose discussion we reserve for another occasion. Enough is already known, however, of the working of the present system to permit us to say that those who designed and executed it deserve well of the city, as will doubtless be evidenced in due time by a diminished death-rate, and more immediately by a relief of offended senses.

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CREMATION IN CHINA.

In the last issue of the Chinese Imperial Maritime Customs Medical Reports Dr. A. Henry contributes some remarks upon cremation in that country. Marco Polo repeatedly asserts that the Chinese wherever he traveled were in the habit of burning their dead; on the other hand Chinese historical works make no mention of the practice, and burial is the almost universal custom at present. The books in which the subject of cremation in China is treated only speak of it as being practiced upon the bodies of Buddhist priests and lepers. In only one, however, of the many Buddhist temples at the town where Dr. Henry is stationed are the bodies of the inmates burned after death. The method of incineration is commendable as efficient, æsthetic, and inexpensive; but it is too slow except for Buddhist priests in China. In the grounds of the temple is a small dome-like edifice, the interior of which communicates with the open air by a small door only — a charcoal kiln, in fact. The dead priest is placed in a sitting posture inside the dome, and charcoal and firewood are piled around him; fire is applied, and the door is shut until combustion is complete.

Children are sometimes cremated, but for superstitious reasons only. When several young children of a family have died in succession the body of one of them is burned under the belief that this ceremony will insure the survival of the next child born to the family. In these cases the body is simply brought to an open field in a box and placed upon firewood which is ignited.

China and India are preëminently countries in which a rational system of cremation might be encouraged with much advantage.

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MEDICAL NOTES.

— Patrick B. Tully, a new representative in Congress from California, has introduced in the House a bill refusing the privileges of the mails to the advertisements "of any medical preparation, compound, or prescription, or any punch, bitters, cordial, or similar compound or preparation to be used as medicine or mixed with food, liquor, wine, or other substance used as a beverage or as food or medicine," unless the manufacturers thereof can procure from the Federal Patent Office a certificate that it is not noxious or dangerous to health. The progress of this bill will be watched with interest, but it will doubtless be beset with many difficulties, so that prognosis for its survival should be very guarded.

— M. Paul Bert is not, as the sound of his name might suggest, a hyperborean, but a French *savant* who has made an "eloquent" plea against the American hog before the Legislative Chamber. His views on the liability of trichiniasis resulting from American pork are contrary to those of most other leading scientists of Europe. The persistency of his attack and the resulting legislation have opened the eyes of some American traders to irregularities in the composition of French wines and liqueurs of which they were before oblivious. The principal point of medical interest in the argument of M. Paul Bert, however, is his statement that trichiniasis is more frequent in France than generally believed, owing to its being often mistaken for typhoid fever. Though there is an implied compliment to the therapeutic ability of the Frenchmen in that the recent mortality of their so called typhoid fever exhibits no increase even though it is the result of an average between the mortality of trichiniasis and true typhoid, still as a reflection on the diagnostic and pathological acumen of his countrymen the remarks of M. Paul Bert must have had a frigorific effect.

— It is said that the tooth manufacture of the United States amounts to 10,000,000 teeth per annum. There are twelve manufactories, but one of them, founded in 1864, makes half the number. The value of these teeth is a million dollars. The materials of which they are composed are feldspar, kaolin, and rock crystal.

— Dr. Lemoyez, writing to the *Bulletin Générale de Thérapeutique*, recommends parenchymatous injections of pure sulphuric ether for sebaceous cysts of the face and scalp. A case is reported of a man who was relieved of a wen of five years' growth by ten hypodermic injections of ether practiced at intervals of a day or two. The result was the conversion of the tumor into a cyst with fluid contents, the evacuation of the same, and speedy destruction of the cyst wall by inflammatory action. The injections are made into the interior of the cyst, five or ten drops at each sitting, the needle of the hypodermic syringe being moved about so as to break up the contents as much as possible. They are discontinued when inflammation or suppuration begins. In the case quoted the treatment resulted in a perfect cure in a month without keeping the patient in bed or restricting his movements as would have been required by the ordinary operation.

— The New York *Times* of January 12th contains an editorial on the Longevity of Doctors, which the editor evidenly thought would be amusing to his readers. So it is. The article is based on the list of English practitioners who have died at an advanced age during the last four years. The writer attempts to account for their long life by enumerating in a serio-comic strain the healthful features of a doctor's life, chief among which he places the fact that doctors as a rule swallow little medicine. He then enumerates the pleasures which his profession yields him, and gives vent to the following sentence: "The physician meets with quantities of interesting diseases, and is always hoping to be the first to describe some new disease to which his name will be forever attached, like the popular diseases discovered by Messrs. Bright and Cox respectively!" Evidently the funny man's Latin enables him to translate *morbus Coxæ* into Cox's disease.

NEW YORK.

— Truly this is the age of progress (?). At the last meeting of the County Medical Society (New Code) a resolution was adopted urging the passage of a pending bill before the Legislature establishing a State Medical Board of Examiners *composed of regulars, homœopaths, and eclectics*, whose prerogative it shall be to determine upon the qualifications of candidates for the degree of Doctor of Medicine, now vested in the various medical colleges. The bill provides that the examiners shall be appointed by the Governor.

— The fourth course of the Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons was delivered in Association Hall by Prof. Burt G. Wilder, M. D., of Cornell University, on the evenings of February 2d, 4th, and 6th, his subject being Methods of Studying the Brain. The first lecture was devoted to a consideration of the limits of the subject of macroscopic encephalic morphology and the methods of regarding the brain based upon its condition in embryos and in amphibia; the second to the methods of preserving and examining the brain; and the third to the methods of figuring and describing the brain.

— A slight fire occurred in Charity Hospital January 27th, which might have been serious had it not been for the presence of mind and energetic action of Dr. Seaman, chief of staff. It occurred at 5.15 in the morning on the third floor of the section of the building occupied by the house physicians and surgeons, and one of their number, Dr. Weiss, was nearly asphyxiated with smoke. It was thought that the fire was caused by the steam-heating pipes.

— Mayor Low, of Brooklyn, has reappointed Dr. Joseph H. Raymond Commissioner of Health of that city.

— Dr. Elisha Harris, secretary of the State Board of Health, died of peritonitis, after a brief illness, at Albany, on the 31st of January. He was born at Westminster, Vt., March 5, 1824, and received the degree of M. D. from the College of Physicians and Surgeons, New York, in 1849. In 1855 he was made superintendent and physician-in-chief of the quarantine hospitals on Staten Island, and during the greater part of the late war he was a member of the National Sanitary Commission. For a number of years afterward he was connected with the New York Board of Health, and on the organization of the State Board of Health, in 1880, he was appointed its secretary.

Correspondence.

LETTER FROM LONDON.

London, *January* 24, 1884.

Mr. Editor, — At his last ovariotomy Mr. Knowsley Thornton remarked that if the case then on the table recovered, — and he saw no reason why she should not, — it would complete a line of seventy cases which he had done at the Samaritan Hospital within the two years ending February 23, 1884, *without a death.*

As I happen to know personally, these cases have not been "picked," but represent all grades and conditions of ovarian tumors.

If we go back some forty-five or fifty years to the time when Bright was engaged in writing his famous papers on abdominal tumors, and compare that period with the present, we are forced to exclaim that the stride made by abdominal surgery is little less than miraculous. Then it was the practice to puncture the abdomen and draw off the contents of the tumor as often as it refilled and became troublesome, or until the unfortunate patient died of exhaustion or peritonitis or from septic poisoning produced by suppuration of the growth. Then opening the abdomen was an experiment little resorted to, and when attempted generally resulted in such disaster that even progressive men like Bright were inclined to look upon it with suspicion and disfavor. On this point he says: "I believe as far as *cure* is concerned the malignant ovarian dropsy admits of none unless we may consider the excision of the tumor in that light, and *this must ever* *be so doubtful an operation, surrounded by so much darkness and attended with so much danger, that I can only look upon its happy event as the fortunate result of a bold and hazardous enterprise, which should not tempt us to adopt it as a rule of practice.*" [1]

What would Bright have said could he have penetrated the future and foreseen Keith's seventy-six consecutive "excisions of the tumor," without a death, and now Mr. Thornton's brilliant results?

Until Professor Bigelow demonstrated to the contrary, surgeons were always talking of the intolerance of the bladder and urethra, making this a *bête noir.* The peritonæum has also been considered in a similar light, and only within the past few years have surgeons begun to learn that it is not so very intolerant after all, and admits of some pretty rough handling without any particular danger to the patient.

Armed with this knowledge and Listerism the specialist now seems ready to attack any of the abdominal morbid growths, and with a tolerable certainty of success. I say *specialist*, for I do not believe that the general surgeon, however skillful and learned he may be, can compete with one who devotes a large part of his time to abdominal surgery alone, and the many opportunities which I have had of witnessing operations by both verify the statement.

On the 18th inst. Mr. Thornton removed by laparotomy a large fibro-cyst of the uterus, amputating the latter near the middle of the cervix. The spermatic arteries having been tied, Koeberlé's *serre-noeud* was used to constrict the cervix. The "stump" was treated by the extra-peritoneal method. It is now the fifth day since the operation, and the patient is doing well.

On the 8th Mr. Meredith operated on a hydatid cyst of the liver. This case is of especial interest, as the patient came under Mr. Meredith's care about a year ago and underwent a similar operation; the one case I know of where the same abdomen has been twice opened for the removal of hydatids. The patient is now convalescent.

Both Thornton and Meredith continue to use the spray, and operate in a thoroughly antiseptic manner; and I fancy that their excellent results are partially due to this fact.

At the last meeting of the Obstetrical Society of London a very interesting paper On Observations of Puerperal Temperature, by Dr. E. S. Tait, was read. The article dealt almost exclusively with the relation of nervous impressions or disturbances to post-partum rise of temperature.

The observations were made in one of the London lying-in hospitals, and are a valuable contribution to the literature of the subject. The paper provoked an animated discussion, in which the President, Drs. Mathews Duncan, Playfair, Graily Hewitt, Williams, Champneys, and others joined.

Dr. John Williams's paper on Corroding Ulcer of the Os Uteri, was deferred until the next meeting. The specimen, however, was exhibited, and by courtesy of Dr. Williams I saw the drawings which will be used for illustrations. It is to be hoped that this paper, emanating from so high an authority, will throw some light on the ætiology of this very obscure disease, which Emmet says "is almost as rarely met with as is true sarcoma."

The new antipyretic *kairin*, discovered last year by Fischer, of Munich, does not appear to be gaining favor, although I heard Heywood Smith say last week that he had used it with success in a case of high temperature after the removal of an ovarian cyst. Quinia had failed to bring down the temperature after repeated and large doses; but a few doses of kairin had the desired effect.

Since my last letter I have seen Sir Joseph Lister operate by his wiring method both on a fractured patella and on the olecranon. The cases did well. This method of wiring the fragments of bone together is, I believe, steadily gaining ground, although it is still stoutly opposed by the older surgeons.

Very truly yours, W. P. MANTON, M. D.

Miscellany.

FATAL RESULT FROM INJECTION OF THE TUNICA VAGINALIS WITH IODINE.

DR. JOHN A. WYETH reports in the *Annals of Anatomy* (January, 1884) a case where death followed the medical treatment of hydrocele by injection of iodine. The patient was forty-three years of age, of good family history. Had had syphilis and gonorrhœa, the latter several times, but no symptoms of any unusual lesion for at least three years. The hydrocele on the left side was of three months' standing at the time of operation. The urine contained a trace of albumen and pus, supposed to be the *liquor puris.* In the operation, which was done June 27th, the method advised by Van Buren and Keyes was followed. The fluid, measuring about eight ounces, was drawn off with a medium-sized aspirator needle, and one half the quantity of tincture of iodine was thrown in and immediately drawn back into the aspirator. A small quantity, estimated at about one half an ounce, would not return through the needle, and was allowed to remain in and to trickle out through the trocar wound.

Pallor and other evidences of slight shock followed the operation, which was done at ten A. M. At four P. M. patient had a chill lasting fifteen minutes, followed by delirium and a rapid pulse scarcely perceptible at the wrist. Half an ounce of whiskey was given *per os.* By this time a dark-blue spot, insensible to the touch and as large as a silver dollar, had made its appearance on the scrotum, extending to the median raphé. A free incision was now made into the tunica vaginalis through this spot, the cavity was washed out, and the scrotum covered with a poultice. The iodine which was left in was washed out, together with a few small brown clots, which seemed to be coagulated hydrocele fluid, stained with iodine. Urine passed six hours after operation was colored with iodine, and the breath had a peculiar odor. Temperature on this day was, at 3.40 P. M., 101° F.; 4.20 P. M., 102° F.; eight P. M., 99.8° F.; ten P. M., 99.7° F. Quantity of urine in first twenty-four hours, ℥xv.

June 28th. Temperature from one to eleven A. M., 99° F. At two A. M. passed ℥v. dark urine. Slight vomiting, and again at nine A. M., after taking milk. Cellulitis of scrotum, penis, and contiguous skin of abdomen. One P. M., temperature 101° F.; four P. M., temperature 102° F.; urine, ℥ixss.

The next few days sloughing of the scrotum occurred, poultices were applied, and the patient was in general comfortable with temperature never above 101° F. The urine averaged about twelve ounces.

On July 4th patient was seized with a severe diarrhœa, followed by eleven evacuations, which greatly prostrated him before they could be checked with quinine, bismuth, and opium; urine, ℥xv.

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[1] The italics are mine.

The next day, at six A. M., while attempting to sit up in bed and lift himself by his hands, he cried out as if in great pain, and fell back instantly dead. An autopsy was refused.

The immediate cause of death was believed by the author to be severe diarrhœa, which, supervening on the bad condition of the man, caused heart failure. The absorption of the iodine was the entering wedge, which was followed by the other accidents. Uræmia is excluded, from the amount of the urine and the sufficiency of urea. The author's conclusion is that the open operation, that is, free incision, with stitching of the parietal layer of the tunic to the integument, and the introduction of a drainage tube into the cavity, is the safest and surest operation.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 26, 1884.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	592	220	12.75	23.12	.34	4.59	1.53
Philadelphia	846,984	446	162	16.35	12.09	3.14	5.82	5.60
Brooklyn	566,689	237	89	13.86	19.32	.42	5.46	2.10
Chicago	503,304	195	92	23.97	16.83	5.61	6.63	4.08
Boston	362,535	160	40	17.64	18.27	1.89	5.67	3.78
St. Louis	350,522	152	49	13.86	21.12	.66	6.60	1.32
Baltimore	332,190	172	76	22.04	16.24	2.32	6.84	1.16
Cincinnati	255,708	113	37	7.78	20.24	5.28	.88	—
New Orleans	216,140	165	35	21.82	9.09	3.64	1.21	.61
District of Columbia	177,638	79	—	17.52	14.08	—	5.16	2.64
Pittsburg (1883)	175,000	52	22	17.28	9.60	3.84	7.68	5.76
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	47	28	8.52	—	2.13	6.39	—
Providence (1883)	116,755	37	—	8.11	—	—	5.41	2.70
New Haven (1883)	73,000	23	6	13.05	21.75	—	4.35	—
Charleston	49,999	37	9	8.10	16.20	2.70	5.40	—
Nashville	43,461	21	3	13.28	9.52	—	—	—
Lowell	59,485	27	10	29.60	11.10	3.70	11.10	3.70
Worcester	58,295	21	11	33.33	19.04	—	4.76	4.76
Cambridge	52,740	22	9	18.22	13.66	—	4.55	4.55
Fall River	49,006	20	8	—	35.00	—	—	—
Lawrence	39,178	12	5	33.33	8.33	—	16.66	8.33
Lynn	38,284	17	6	11.66	5.88	—	11.66	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	10	2	—	—	—	—	—
[1] New Bedford	26,875	10	3	10.00	30.00	—	10.00	—
Somerville	24,985	14	3	14.28	21.42	—	14.28	—
Holyoke	21,851	10	—	30.00	50.00	—	20.00	—
Chelsea	21,785	6	3	33.33	16.66	—	16.66	—
Taunton	21,213	7	0	—	—	—	—	—
Gloucester	19,329	4	1	—	—	—	—	—
Haverhill	18,475	8	1	—	12.50	—	—	—
Newton	16,995	5	1	—	—	—	—	—
Brockton	13,608	4	0	—	25.00	—	—	—
Newburyport	13,537	7	1	—	—	—	—	—
Fitchburg	12,405	2	1	—	—	—	—	—
Malden	12,017	3	1	—	33.33	—	—	—
Eighty-five Massachusetts towns	310,018	82	21	3.69	—	3.69	—	—

[1] Twenty cases recorded at New Bedford drowned at Gay Head.

Deaths reported 2822 (no report from Buffalo): under five years of age, 978: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 424, lung diseases 460, consumption 396, diphtheria and croup 146, scarlet fever 80, typhoid fever 50, diarrhœal diseases 37, measles 33, malarial fevers 28, whooping-cough 20, small-pox 17, cerebro-spinal meningitis 17, puerperal fever 14, erysipelas 11, typhus fever one. From *diarrhœal diseases*, New York 11, New Orleans eight, Brooklyn five, Boston three, St. Louis, Baltimore, and Cincinnati two each, Chicago, Nashville, Cambridge, and Holyoke one each. From *measles*, Baltimore 11, New York seven, Brooklyn and District of Columbia five each, Philadelphia two, Chicago, Nashville, and Worcester one each. From *malarial fever*, New York and New Orleans six each, Chicago five, Brooklyn four, St. Louis three, Baltimore, two, District of Columbia and New Haven one each. From *whooping-cough*, New York four, Baltimore and District of Columbia three each, Brooklyn two, Chicago, Boston, St. Louis, Cincinnati, New Orleans, Nashville, Worcester, and Chelsea one each. From *small-pox*, New Orleans 16, Philadelphia one. From *cerebro-spinal meningitis*, New York six, Philadelphia and Worcester three each, Chicago, New Orleans, New Haven, Cambridge, and Somerville one each. From *puerperal fever*, Boston five, Chicago three, Brooklyn two, Philadelphia, St. Louis, Cincinnati, and Lowell one each. From *erysipelas*, New York, Chicago, and Lowell two each, Philadelphia, Brooklyn, Boston, St. Louis, and Baltimore one each. From *typhus fever*, New York one.

Eight cases of small-pox were reported in St. Louis, Cincinnati one; scarlet fever 59, diphtheria 29, and typhoid fever seven in Boston.

In 105 cities and towns of Massachusetts, with an estimated population of 1,319,006 (estimated population of the State 1,922,530), the total death-rate for the week was 17.78 against 20.00 and 18.00 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 12th, the death-rate was 21. Deaths reported 3523: acute diseases of the respiratory organs (London) 379, scarlet fever 117 measles 116, whooping-cough 99, fevers 51, diphtheria 32, diarrhœa 29, small-pox (Birmingham seven, London and Sunderland two each, Liverpool one) 12. The death-rates ranged from 13.7 in Portsmouth to 28.9 in Norwich; Bristol 17.2; London 21.4; Birmingham 20.2; Sunderland 20.8; Nottingham 21.1; Bradford 21.4; Newcastle-on-Tyne 22.8; Liverpool 23.7; Sheffield 25.5; Manchester 28.[illegible] [illegible] Edinburgh 18.8; Glasgow 25.8; Dublin 27.1.

For the week ending January 12th, in the Swiss towns, there were 36 deaths from consumption, lung diseases 22, diphtheria and croup 11, diarrhœal diseases 10, whooping cough six, measles three, scarlet fever three, typhoid fever two, small-pox one, erysipelas one. The death-rates were, at Geneva 19.4; Zurich 5.9; Basle 20.9; Berne 23.3.

The meteorological record for the week ending January 26th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Jan., 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 20	30.097	13	21	10	80	100	94	91	NW	N	NW	13	11	6	S	S	C	—	—
Mon., 21	30.256	13	23	5	63	64	80	69	NW	W	W	7	11	7	C	C	C	—	—
Tues., 22	30.135	26	34	10	60	48	72	60	SW	SW	SW	14	15	11	C	C	H	—	—
Wed., 23	30.139	36	44	29	67	85	82	78	SW	SW	S	8	7	7	C	O	F	—	—
Thurs., 24	29.994	34	42	31	78	95	100	91	SW	NE	NW	4	7	6	O	R	R	—	—
Fri., 25	30.325	22	36	18	64	73	91	76	NW	NW	NW	17	8	10	O	O	S	—	—
Sat., 26	30.545	17	27	10	61	63	83	69	NW	NW	NW	16	15	9	C	C	C	—	—
Mean, the Week.	30.213	23	32	5				76										45.15	.98

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JANUARY 25, 1884, TO FEBRUARY 1, 1884.

Alexander, Charles T., major and surgeon. So much of paragraph 7, S. O. 211, September 14, 1883, as directs him to report in person to the commanding general, Department of the Missouri, for duty, is revoked, and he will, upon the expiration of his present leave of absence, proceed to St. Louis, Mo., and assume duty as attending surgeon and examiner of recruits in that city. Paragraph 1, S. O. 21, A. G. O., January 25, 1884.

Elbrey, Frederick W., captain and assistant surgeon. Present leave of absence extended six months. Paragraph 9, S. O. 24, A. G. O., January 25, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING FEBRUARY 2, 1884.

Battle, S. W., passed assistant surgeon. Detached from the U. S. S. Gedney and placed on sick leave.

CORRECTION.

Mr. Editor, — I ought to have stated in my article on Nephrectomy, which you published January 24th, that the form of table was taken from an article by Mr. Barker, in Vols. LXIII. and LXIV. of the Medico-Chirurgical Transactions, and that cases numbered 1, 3, 4, 6, 7, and 14 were found in his table.

Very sincerely yours, John Homans.

OBITUARY.

John L. Clark, M. D., fifty five years of age, a ward master in the Boston City Hospital, died recently in that institution of pneumonia. The deceased was a well-educated man, and was graduated at the Harvard Medical School in the class of 1861, with Drs. Blake and Edes, now visiting physicians to the City Hospital. He served in the Union Army as an assistant surgeon until the war was over. He then practiced medicine for a time in Providence, R. I., but subsequently suffered pecuniary misfortune. Previous to his entering the service at the City Hospital he was steward at the Massachusetts General Hospital.

Appointments. — Dr. Charles M. Green has been appointed assistant in obstetrics in the Harvard Medical School.

Mr. Charles F. Donnelly has been again appointed by the Governor on the Massachusetts Board of Health, Lunacy, and Charity to fill the vacancy caused by the resignation of Dr. Robert T. Davis, M. C.

Death. Dr. Joshua Jewett Johnson. — Died, in Northborough, Mass., January 29, 1884, Joshua Jewett Johnson, M. D., M. M. S. S., aged seventy-four years nine months.

Books and Pamphlets Received. — Hints on the Drainage and Sewerage of Dwellings. By William Paul Gerhard, Civil Engineer. New York: William T. Comstock, 6 Astor Place. 1884

Report of Proceedings of the Illinois State Board of Health. Quarterly Meeting, Springfield, January 17, 18, 1884.

A Manual of Practical Hygiene. By Edmund A. Parks, M. D., F. R. S., late Professor of Military Hygiene in the Army Medical School, etc. Edited by F. S. B. François De Chaumont, M. D., F. R. S., Fellow of the Royal College of Surgeons of Edinburgh, Professor of Military Hygiene in the Army Medical School. Sixth Edition, with an Appendix giving the American Practice in Matters relating to Hygiene, prepared by and under the Supervision of Frederick N. Owen, Civil and Sanitary Engineer. Vol. II. New York: William Wood & Co. 1883. (November Number of Wood's Library of Standard Medical Authors.)

The Relation Dairy Products bear to Disease. By Hugh Hamilton, M. D., Harrisburg, Pa. (Reprint.) 1884.

Transactions of the American Gynecological Society. Vol. VIII. For the Year 1883. New York: D. Appleton & Co. 1884.

So Called "Concussion of the Spine" in Railway Injuries By John G. Johnson, M. D. New York.

Eighteenth Report of the Board of Trustees of the Connecticut Hospital for the Insane. 1884.

Morbid Somnolence. By Rudolph Matas, M. D. Read before the New Orleans Medical and Surgical Association.

Trismus Nascentium, or the Lockjaw of Infants: Its History, Cause, Prevention, and Cure, etc. By J. F. Hartigan, M. D., of Washington, D. C. (Reprint from American Journal of the Medical Sciences.)

Annual Address delivered before the American Academy of Medicine at New York, October 10, 1883. By Henry O. Marcy, A. M., M. D., President of the Academy.

Original Articles.

TWO CASES OF ABDOMINAL SECTION TO DISCOVER THE CAUSE OF INTESTINAL OBSTRUCTION.[1]

COLOTOMY BY THE MEDIAN INCISION IN ONE CASE, AND OPENING OF THE CÆCUM BY A LATERAL INCISION OF THE ABDOMINAL WALLS IN THE OTHER.

BY JOHN HOMANS, M. D.,
Surgeon to the Massachusetts General Hospital.

Mrs. R., aged forty-three, who had recovered from ovariotomy in May, 1881, and had enjoyed fair health since her recovery, began to suffer from constipation in the autumn of 1881.

Her medical attendant, Dr. J. H. Richardson, of Medfield, Mass., wrote to me (I give his exact words) on December 15th, as follows: "I was called to see Mrs. R., whom you no doubt remember, last Sunday, December 11th, and found that she had had an increasing constipation for the last two months, the last dejection was December 6th, and there has been none since to amount to anything. She has been quite comfortable most of the time with the exception of colic pains occasionally. Pulse has been 80 to 84, her temperature 100° F. Treatment at first small repeated doses of castor oil, and later saline laxatives and a diet of gruel. No opiate has been required but once."

On the 16th Dr. Richardson writes: "I find Mrs. R. very comfortable. There is now no distention of the abdomen, flatus passes readily, and she does not look sick. I examined the rectum and found nothing. She has been able all the while to take injections of three pints or more and retain them for one or two hours, then they come away freely without color or odor. How long can this last without change of some kind?"

Again on the 17th Dr. Richardson writes: "Our patient, Mrs. R., continues very much the same. During the last twenty-four hours flatus passed much less readily, and there was more fullness of the bowels, but very little pain. She sleeps well, and is quite comfortable. Since the 8th inst. I do not think the amount of a teaspoonful of solid fæcal matter has passed the bowels."

On the 19th he writes: "For thirty-six hours no flatus has passed, and I found her this morning a little uncomfortable from the distention of the bowels. Last evening she took one eighth grain of morphia. I call the bowels a good deal distended to-day. Pulse 80, and normal. It seems to me there can hardly be any doubt about the case looking rather serious. She has shown no fever or alarm, and she thinks you are going to stand by her through this siege."

On the next day he writes: "I saw our patient this morning, and found that her stomach had not retained much given yesterday, and she looked a little worn. Pulse and temperature the same, the bowels apparently no more distended but more painful, and she had rejected the morphia powder last night. I gave this morning morphia subcutaneously and nutrient injections. I don't know as I have any reason to expect relief without surgical interference, and how long to wait is the question. It seems to me that to-morrow or next day at farthest, — perhaps to-morrow, — it would be desirable for you to see her."

I have given Dr. Richardson's letters as he wrote them because they convey a very clear idea of the state of the case during the two weeks preceding the operation. On December 21st I saw the patient at her home, and explained to her that an exploratory incision might reveal some band or adhesion resulting from the cicatrization following the removal of the ovarian tumor, and that this I might be able to divide or separate and completely relieve her, or that I might find the obstruction not removable and have to make an artificial anus. She was a woman of remarkable coolness, quietness, decision, and courage, and she said that she should like to prolong her life for the sake of her boy, and that she wished me to operate and do the best I could under the conditions I should find. At this time the abdomen was somewhat distended, but not hard, and the peristaltic movements of the bowels were active and very visible to the naked eye, looking as if the vermicular motion was a sort of vibration which moved to a certain point and then returned by a vibration in the opposite direction. This was continuous. The pain was severe, but not unbearable, and the countenance looked pale and worn.

The operation, in which I was assisted by Drs. J. W. Elliot, Russel Sturgis, and J. H. Richardson, lasted about an hour and a half. It was done under the carbolic spray. The abdomen was opened along the line of the former ovariotomy incision; there were some elastic adhesions between the bowels and the cicatrix; and many small round hard nodules (cancer) were felt scattered about in the peritonæum. By careful search I could find no band, nor any adhesion, but at length I found the point of obstruction to be in the descending colon just above the sigmoid flexure. It was a hard (cancerous) mass which filled the calibre of the bowel and produced a linear cicatricial looking stricture. It was impossible to excise this part of the bowel, for I could not drag it up above the pubes sufficiently to enable me to sew the divided ends of the intestine together (and, indeed, I did not feel hopeful enough of success to have attempted the excision even if I could have done it). Accordingly I asked Dr. Elliot to grasp the bowel firmly above the obstruction high enough to enable me to open it above the stricture and to sew it to the skin in order to make an artificial anus in the pubic region at the very lowest point of my incision just behind the bladder.

To Dr. Elliot's careful manipulation the success of the operation was largely due. After I had completed the attachment to the skin, I surrounded Dr. Elliot's hand with sponges and towels within the abdomen, and held the opening as much outside the abdominal cavity as I could. Dr. Elliot then released his grasp, and enormous quantities of semi-solid fæces of a yellow color, mixed with gas, ran out over everything, the patient, the table, the rubber sheet, and the floor. We all thought that some of this ran into the abdominal cavity, indeed we were pretty sure of it, but we did our best to prevent it. The abdominal wound was then sewed up and dressed antiseptically, but this was of no use, as the intestinal contents soon overflowed and soiled everything in the neighborhood. After several cleansings and washings there occurred a pause in the intestinal flow, and we placed the patient in bed. The dressings were changed four times in the next twenty-four hours. At the last dressing the discharge was found to be mucous in character.

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[1] Read before the Surgical Section of the Suffolk District Medical Society, December 5, 1883.

At 8.30 P. M. a subcutaneous injection of one eighth of a grain of morphia was given for pain, and the patient passed a very quiet night. Milk and liquid food were given in small quantities and retained. The discharge from the artificial anus continued to be colorless mucus of a very offensive odor for the second twenty-four hours, and no fæcal matter was seen. In a few days more she was eating solid food. The bowels gradually became pretty regular, moving sometimes twice and sometimes four times a day, and the discharges became fæcal and solid as in health. The temperature ranged between 99° F. and 101° F. for the first fortnight, and rose on the 5th of January, 1882, to 103° F. for the temperature and 115 for the pulse respectively, owing to a little pus in the wound. From this time her recovery was uninterrupted except by a slight attack of diarrhœa on January 22d. The nurse wrote on January 13th: "The patient sits up every day for four or five hours, and to-day she walked across the room twice with my assistance. The opening is very easily managed by putting in a plug of cotton, over that folded compresses, then a roller bandage tightly applied, and over all a tight swathe. When she goes to bed for the night it is dressed more loosely to allow the contents of the bowel to escape."

When she had entirely recovered and could take care of herself Dr. Codman fitted a hard-rubber pad with a movable joint to the artificial anus, and this kept the opening closed except when, as sometimes happened, there was diarrhœa. Mrs. R. enjoyed herself and was happy during the summer of 1882, but she never went about in society at all, as she found it impossible to control the discharge of flatus from the artificial opening. When I asked her if her physical condition made life a burden, she said, "Not at all; I am perfectly comfortable, and can accomplish all I want to. If you have any patient in the condition I was send her to me and I think I can convince her that I am much better off than before the operation, and except that I don't like to go among people, I suffer very little inconvenience."

As I have quoted largely from Dr. Richardson's letters, I will add that he told me that there was no trouble in the evacuation of the bowels from the beginning to the end, and that one could hardly believe that an artificial anus could make so little trouble. All this time, however, the different cancerous deposits in the abdomen were growing, and by the latter part of the autumn one mass reached from the site of the wound to the epigastrium. Mrs. R. gradually failed, and died October 10, 1882, ten months after the bowel had been opened.

There was no autopsy.

The second case of exploratory incision to ascertain the cause of intestinal obstruction occurred in the practice of Dr. A. H. Nichols, of this city. I give the history of the case previous to the operation in his words: —

"On the 1st of June, 1882, I was called to Mrs. T., and found her suffering from obstinate constipation of three weeks' standing, though she did not complain of any especial inconvenience arising from this suspended function. She was apprehensive, however, that this constipation might be an indication of intestinal cancer, a trouble said to be hereditary in her family. She was able to recall the history of three members of her family who had died from this disease, and she remembered that in two of these cases constipation was the first and prominent symptom. It was, furthermore, firmly impressed upon her mind that in these two cases there existed little or no suffering until the administration of powerful cathartics by the advice of the physician. She accordingly stipulated that no laxatives should be ordered in her own case. I saw no reason for sharing her forebodings, and attempted to relieve her constipation by means of frequent laxative enemata, which proved utterly inefficient, though some encouragement was derived from an insignificant dejection at the expiration of about a week, but with this exception no fæces whatsoever were voided. Until about the 22d of June the ordinary signs of intestinal obstruction — pain, nausea, retching, distention, tumor, quickened pulse, elevated temperature, etc., etc. — were all absent. The most that could be made out was a somewhat increased fullness of the bowels, more noticeable in the right iliac region. On the 23d of June this abdominal fullness had increased, but was not especially prominent at any one part, and during the following night she complained for the first time of colic, which was not severe enough to call for any opiate. During all this period she went to the table, and was allowed a limited quantity of simple nutritious food. After the consultation with Dr. John Homans on the 23d of June she was informed that there existed an intestinal obstruction which could not be relieved except by surgical interference, and she was fully warned of the danger and uncertainty attendant upon any such operation. This unfavorable announcement was received by her with fortitude and equanimity. She remarked calmly that her original prediction was verified, and after a brief reflection decided to submit without delay to the operation proposed (colotomy) rather than to wait for the supervention of any further complication. On the evening of the 23d she rode in an open carriage to my office, and proceeded thence to the private hospital selected for the operation."

The operation was done on the 25th of June, after seven weeks of complete obstruction of the bowels. The patient, a fleshy woman, looked worn and anxious, and was in great pain. The abdomen was much distended with gas. I may remark that the day was intensely hot, the thermometer registering, if I recollect right, 93° F. As Dr. Nichols thought there was an accumulation in the right iliac region, and as neither of us knew exactly where the obstruction was, I deemed it best to make an incision in the neighborhood of the right linea semilunaris. The operation was done under the carbolic spray, and with every antiseptic precaution. Encouraged by the result of the previous case I hoped for a favorable issue. My first incision was three inches long, and was made through the external oblique muscle, and just beyond the outer border of the rectus. Two branches of the epigastric artery were cut and bled freely; these were tied before the peritoneum was opened. When the peritoneum was divided great care was taken not to wound the omentum, which presented itself spread out over the small intestines. The omentum was pulled gently out of the wound and divided and tied because it was adherent below beyond the cæcum. If I separated it from its adhesions below the cæcum I feared that I could not control the hæmorrhage, and if I did not either separate it or divide it I could not get in my hand to explore the interior of the abdomen, cause quently I tied it above and below, and divided it between the ligatures. The opening in the abdominal walls was, however, too small for manual exploration, and the incision was extended upwards. The bowels, large and small, were greatly distended with wind, and in some places were of a deep-red color, but had not lost their shining lustre. The exact seat of the stricture was hard to find out. I thought I felt a constriction in the descending colon in the left lumbar region, and as this was below the cæcum I determined to make an artificial anus in the cæcum. The abdominal cavity was, therefore, carefully sponged out, and an incision about three quarters of an inch long was made in the cæcum, and the edges of this opening were carefully stitched to the parietal peritonæum and to the skin. Great care was taken that none of the fæcal contents should enter the abdominal cavity. I placed nine soft sponges around the cæcum, and Dr. M. H. Richardson and F. B. Harrington succeeded perfectly in preventing the entrance of any fæces while I was passing the sutures. Much embarrassment was occasioned by the great distention of the coils of intestine, and it would have been better to have made the opening quickly without searching for the seat of the stricture; however as the obstruction might have been from a band or a twist it was natural that I should have sought for it. The operation was a long one (an hour and a half), and the weather was intensely hot. When the patient was placed in bed her pulse was rapid, but she was otherwise in fair condition. Wind and fæces came out through the opening in the cæcum. Hot bottles had been put at the patient's feet, and I left her in charge of Dr. Nichols. The following is his farther account of the case: —

"Directly after the operation a copious discharge of semi-liquid fæces set in. Upon coming out of the ether she complained of great pain, and was extremely restless. Her pulse soon showed signs of weakness, and she succumbed to the effects of general shock five hours after the conclusion of the operation, the severity of her suffering during the last two hours requiring a resort to ether.

"At the autopsy, made by Dr. W. P. Bolles, the same evening, there was found an annular cancer (scirrhus) in the descending colon, about eighteen inches from the orifice of the rectum, occluding the intestine so completely as to prevent the flow of even water. Below the stricture the intestine was completely empty. Above there was found small, scattered masses of fæces, but the great bulk of the contents had been expelled from the artificial opening. There existed no signs of inflammation of the intestine above the seat of the stricture."

It will be seen that the result in these two cases was different, but in both the operations adopted were logical and proper. In the second operation there was much more handling of the bowels than in the first, and it was very difficult to manage the insertion of the sutures and to keep the bowels from protruding between them or being wounded by the needles. I believe that Mr. Lawson Tait thinks it better surgery to open the bowel at any point you happen to strike (that is, to pull out the first loop that presents itself and open it) than to search for the obstruction. In our second case that mode of proceeding would have been the best. I present these two cases to the Society as a contribution to the study of the treatment of intestinal obstruction.

THE TREATMENT OF RETAINED SECUNDINES AFTER ABORTION.[1]

BY JOHN W. BRANNAN, A. B., M. D., OF COLORADO SPRINGS.

The management of incomplete or imperfect abortion has excited renewed interest and discussion during the past year. The gynæcologist on the one hand and the general practitioner on the other have expressed their respective views with much warmth and earnestness of conviction. The gynæcologist insists upon the immediate removal of the retained membranes and placenta by manual or instrumental means; the general practitioner, while admitting fully the desirability of the complete emptying of the uterus, believes that this is nature's task, and that the physician should not interfere unless the symptoms are urgent. The former fears the present risk of hæmorrhage and the future risk of septicæmia; the latter fears inflammation as a result of uterine manipulation. Such is a brief statement of the points at issue between the disputants.

Let us suppose, for example, a case of abortion at the third month of pregnancy; the fœtus has come away, the secundines are retained, the cervix uteri is more or less contracted, the woman is comfortable, there is no hæmorrhage or offensive discharge. The gynæcologist would at once proceed to extract the membranes and placenta, using the finger, curette, or forceps, according to the state of the cervix; if the cervix is tightly closed, he would dilate it with tents or metallic dilators, and then extract as before. The more conservative general practitioner, however, would preserve an expectant attitude, contenting himself with giving full doses of ergot, and possibly tamponing the vagina; should alarming hæmorrhage or symptoms of septicæmia supervene he would then, but not before, feel called upon to empty the uterus in the manner described above.

On consulting the obstetrical literature of the last twenty-five years we find the same difference of opinion that now exists in the profession. The earlier writers of this period, however, are agreed in advising the expectant treatment of retained portions of the ovum. Tyler Smith[2] and Bedford[3] assert that in such cases there is not the same tendency to decomposition and its dangers that there is in the case of placenta at full term. Meigs[4] prefers to leave such occurrences in the hands of nature, and believes that there is no danger in so doing. Ramsbotham[5] relies upon the vaginal tampon and the use of ergot when the membranes cannot be reached with the fingers in the vagina. Hodge[6] says that "the extraction of the retained membranes certainly ought not to be attempted by manual or instrumental measures if there be little or no bleeding, especially as the os and cervix generally contract, and the membranes are closely adherent." Churchill[7] believes that we are not to interfere when the membranes are retained, unless there is hæmorrhage or evidence of irritative fever. He concludes as follows: "Larger experience has made me less fearful of leaving these cases to nature, and more unwilling to interfere hastily." Leishman[1] advises us to preserve an expectant attitude if the membranes are retained, unless the hæmorrhage be alarming. In the latter case he tampons the vagina. While admitting the danger of blood-poisoning from a putrefying retained placenta, he adds that such poisoning is rare.

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[1] Read before the El Paso County Medical Society, January 7, 1884.

[2] Lectures on Obstetrics, 1858.

[3] Principles and Practice of Obstetrics, 1863.

[4] Obstetrics, the Science and the Art, 1863.

[5] Principles and Practice of Obstetrical Surgery, 1865.

[6] A System of Obstetrics, 1866.

[7] Theory and Practice of Midwifery, 1866.

We now approach the period in which modern gynæcology has made its greatest advances, and its influence upon its kindred branch of medicine, obstetrics, is at once seen. The more a given writer is occupied with gynæcology and the less with the general practice of medicine the greater is his activity in interfering with the processes of nature. Barnes[2] says that the first indication is to "empty the uterus." If the os is open he at once removes the whole ovum with the finger, breaking up the decidua if necessary. If the os is closed he immediately dilates the cervix with laminaria tents, and then removes the membranes with the finger as before. He does not use ovum forceps. He condemns the vaginal tampon as "unscientific and illusory," claiming that it neither stops the hæmorrhage nor favors the dilatation of the cervix. Playfair[3] tampons the vagina and gives ergot in cases of alarming hæmorrhage or of undilated os uteri. If the os still remains closed he employs sponge tents for its dilatation, even though there be no urgent symptoms. He then removes the ovum with the finger. He admits, however, that "cases are frequently met with in which any forcible attempt at removal would be likely to prove very hurtful, and in which it is better practice to control hæmorrhage by the plug or sponge tent, and wait until the placenta is detached."

Prof. A. R. Simpson[4] blames the authors of our obstetric text-books for failing to state clearly how we can best secure complete evacuation of the uterus in cases of abortion. He advocates the use of a sponge tent, previously disinfected, as soon as the abortion appears unavoidable. He also gives ergotine hypodermically. When the cervical canal is dilated he removes the ovum from the uterus with the fingers. In order to render the uterine cavity accessible to the exploring finger he either pushes down the fundus uteri from above or drags down the cervix from below with vulsellum forceps. He deprecates the use of instruments for the detachment of retained portions of the ovum.

Schroeder[5] employs the tampon if the hæmorrhage is alarming or the ovum is retained. He claims that the tampon always checks the hæmorrhage, and as a general rule effects the expulsion of the ovum from the uterus. In case some portions of the ovum are still retained by a contracted os, he dilates the cervix with sponge or laminaria tents, and then empties the uterus with the fingers. If any placental fragments cannot be reached by the hand he employs forceps for their extraction.

Angus Macdonald[6] is more conservative than the four preceding writers. He says: "My opinion, therefore, is that in the ordinary run of cases, in which the hæmorrhage is not specially profuse, we ought to trust to ergot by the mouth, or ergotine subcutaneously, and that we shall most probably find that all will go on all right, except that we shall have to hurry the conclusion of the case with slight manipulation, and that wholesale imperfect plugging of the vagina is to be strongly deprecated." If, however, hæmorrhage is severe, or symptoms of septicæmia arise, he takes "active measures to empty the uterus *tuto, cito, et jucunde.*" If the os is open he removes the uterine contents with the fingers. If the os is closed he introduces a sponge tent and leaves it in situ from two to four hours. He then clears out the uterus, as before, with the fingers. Macdonald opposes the use of abortion forceps for the removal of the membranes, and also considers it an unnecessary and dangerous procedure to drag down the cervix with a vulsellum, as recommended by Simpson.

Lusk[7] endeavors to empty the uterus as soon as possible. If the cervix is patent he removes the membranes from the uterus with the finger. If the cervix is closed he employs the tampon, giving it three trials, each tampon being left in the vagina for twelve hours. If, after the removal of the third tampon, the cervix is still undilated, he resorts to sponge tents. He prefers to use the tampon before the sponge tent, as the former stimulates the uterus to contract, and promotes the separation of the membranes, even when it fails to secure their discharge. Lusk fears the results of putrid decomposition of the retained placenta. At the same time he admits that "fatal results are rare, as decomposition is usually a late occurrence, setting in, as a rule, only after protective granulations have formed upon the uterine mucous membrane, and after the complete closure of the uterine sinuses.

T. Johnson Alloway,[8] of Montreal, agrees with Simpson in his criticism of text-books on obstetrics because in them "insufficient stress is laid upon the importance of removing at once a retained placenta after abortion." He himself advocates the immediate removal of the secundines with the curette, not the finger, either with or without previous dilatation of the cervix. He maintains that, as a rule, it is impossible to remove the membranes with the finger unless the uterus is forced down in the pelvis to a dangerous degree.

Dr. Mundé[9] gives it as his opinion that "the future safety of the patient demands that the secundines should be at once removed after expulsion of the fœtus in every case of abortion in which such removal can be accomplished without force sufficient to injure the woman." His manner of operating is as follows: If the cervical canal is sufficiently patulous he detaches and removes the placenta with the fingers of the right hand while crowding down the fundus uteri with the left hand. If, however, the abdominal walls are fat or tense, or if the cervix is not sufficiently open to admit the finger easily, he employs the curette and placental forceps for the detachment and removal of adherent portions of membrane. The uterus is then washed out with a two to five per cent. solution of carbolic acid, the water used being either very hot or very cold. If there is the slightest suspicion of septic infection he swabs out the uterine cavity with pure tincture of iodine. Should the cervical canal be too narrow to admit even the curette it is at once dilated by the tupelo tent. Mundé prefers the tupelo to the sponge because, although he himself has never met with an accident from sponge tents, he is "afraid to incur the risk of adding another to the *many examples of septic infection from that agent*." (Italics mine.)

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[1] System of Midwifery, 1877.

[2] Obstetric Operations, 1874.

[3] Treatise on the Science and Practice of Midwifery, 1876.

[4] Obstetrical Journal of Great Britain and Ireland, 1876, page 179.

[5] Lehrbuch der Geburtshülfe, 1877, p. 156.

[6] Obstetrical Journal of Great Britain and Ireland, 1880, page 313.

[7] The Science and Art of Midwifery, 1882.

[8] American Journal of Obstetrics, February, 1883.

[9] Ibid.

Mundé asserts that all this manipulation is so free from danger that every physician can employ it, and that the risk possibly incurred from letting the secundines alone is greater than that from their forcible removal. He gives a table of cases seen by him, in which he removed the secundines fifty-seven times by fingers and curette with but one fatal result. The length of time of retention of placenta was less than one day in eighteen, one day to one week in thirty-three, one week to two months in six, cases.

Dr. W. H. Farr[1] is in favor of the immediate removal of the membranes after abortion. He employs the curette forceps, and opposes the use of the finger as being dangerous. He writes: "I have one case in mind in which a physician of experience removed by the finger the retained product of abortion. The woman said the pain he caused was agonizing, and she was left the victim of prolapse of the uterus and a long train of nervous manifestations." Farr also refers to the dangers incident to dilatation of the cervix.

Dr. Walter Coles,[2] of St. Louis, opposes the immediate removal of the membranes as a matter of routine in every case of abortion. He believes that each case should be treated according to its indications. If the immediate symptoms are urgent the placenta should be at once removed by the finger, forceps, or curette, the cervix having been previously dilated if necessary. If there are no urgent symptoms the expectant plan should be pursued. It is his opinion that inflammation, the result of rough manipulation of the uterus, is much more to be feared than either hæmorrhage or septicæmia. Dr. Coles's paper was read before the St. Louis Obstetrical and Gynæcological Society. A general discussion followed, and it was evidently the sense of the Society that the expectant plan is safer than the immediate removal of the secundines by manual or instrumental means.

From the foregoing extracts it is seen that dilatation of the closed cervix with tents and extraction of the secundines with the finger or forceps is the usual method of procedure of those who advocate the immediate removal of retained portions of the ovum. Mundé claims that this manipulation is so free from danger that every physician can employ it. If this be true it is a strong argument in favor of active interference.

Dilatation of the cervix uteri with tents is the first step in this manipulation. Thomas[3] writes as follows with regard to this operation: "There is always danger in dilating the cervix by tents, though it is by no means so great as to make one hesitate in employing them, for the cases which demand them are often urgent ones, and they serve a purpose not attainable by any other means. It is much to be regretted that practitioners have not shown more alacrity in publishing unfortunate results from the use of this method of exploration and treatment. Had all the fatal cases which have resulted from accidents due to tents been faithfully recorded the list would now be a long one, and it would be greatly lengthened by a record of all the instances in which tedious, exhausting, and dangerous disease has thus been excited. . . . In my own practice I have met with four fatal cases resulting from the use of tents. Besides these I have seen, as every other gynæcologist has who has employed this means to any extent, a number of cases in which the following affections have been excited by them: pelvic peritonitis, peri-uterine cellulitis, septicæmia, endometritis, and hæmatocele. This is the record of my own practice, and my observation of that of many of my friends whose results I have an opportunity of seeing exactly agrees with it. Dr. Braxton Hicks says: 'I have seen a case end fatally where there had been dilatation a week previous, mental shock suddenly lighting up the inflammation and extending it to the peritonæum.'" Mundé himself fears sponge tents because of the many examples of septic infection due to them. He therefore uses tupelo, the newest material for tents in favor with gynæcologists. Fritsch,[4] however, asserts that "laminaria and tupelo will disappear just as sponge tents have vanished." He criticises severely the routine dilatation of the cervix uteri that is now so general among gynæcologists, and says that he himself has given up tents altogether, and has no cause to regret it.

It appears, then, that the first part of Mundé's manipulation is attended with danger. Let us now consider the extraction of the membranes by the finger, curette, or forceps. Barnes, Playfair, Simpson, and Lusk of the advocates of active interference deprecate the use of the curette or forceps as being hazardous. They employ the finger, and consider it safe and satisfactory. Alloway and Farr, on the other hand, regard the use of the finger as highly dangerous, and claim that the curette gives better results. We thus have testimony from the gynæcologists themselves that the forcible extraction of the secundines, whether manual or instrumental, is not free from danger.

Having shown that active interference in imperfect abortion is a dangerous procedure, we have now to inquire into the necessity of the operation. If the placenta does not soon follow the fœtus or is not forcibly removed what happens in the majority of cases? Published statistics on this point would be valuable and interesting, but, unfortunately, there are none. We must rely upon our individual experiences for an answer to this question. I think that practicing physicians will bear me out in the assertion that the great majority of these cases take care of themselves or at least require but little assistance from us. The placenta comes away in the next twenty-four hours, or within a few days, or at the next menstrual period. By far the larger proportion of abortions, as of deliveries at term, fall to the care of the general practitioner, the family physician; only a very small percentage reach the gynæcologist in the first instance. The latter sees the exceptional cases, the cases which have resulted badly, and therefore seek his special skill.

As illustrations of the course ordinarily taken by those abortions in which the ovum is not expelled entire I shall here give brief notes of three cases which have occurred in my practice: —

Case I. March 11, 1880. Mrs. O., multipara, aged thirty-two years. Catamenia ceased three months ago. Shifting pains in back and hips for last three days; slight flowing yesterday, increased to-day; uterine pains for several hours. A ten weeks' fœtus found lying in vagina and removed. Placenta could be felt within internal os. No hæmorrhage or discharge. Pulse 120; temperature 102° F. Treatment, one drachm of extr. ergot. fl. and one sixth grain morph. sulph. subcutaneously.

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[1] American Journal of Obstetrics, September, 1883.

[2] St. Louis Courier of Medicine, August, 1883.

[3] Practical Treatise on the Diseases of Women, 1880.

[4] American Journal of Obstetrics, February, 1883.

March 12th, A. M. No change in placenta. Pulse 72; temperature 98° F. Ergot and morphia as yesterday. P. M. Placenta still felt within os: hæmorrhage slight. Pulse 96; temperature 99.5° F. Swept my finger once around the circumference of the internal os, between it and the placenta, otherwise no manual interference. Ergot and morphia continued.

March 13th, A. M. Was told that placenta had come away twenty minutes after my visit of preceding evening. Pulse 90; temperature 98.5° F. Patient made rapid recovery.

Case II. July 25, 1883, six A. M. Mrs. M., multipara, aged twenty-six, four months advanced in pregnancy. Occasional pains in back for last two weeks, with considerable flowing. Lost much blood yesterday, and early this morning a solid mass came away. A four months' fœtus, somewhat macerated, found in the basin. No placental fragments. Examination showed the placenta to be still within the uterus, the os being closed firmly around the umbilical cord. No hæmorrhage. Temperature and pulse normal. Twenty minims of laudanum and one drachm of ergot given. At ten A. M. vagina carefully tamponed with wads of cotton soaked in glycerine. Ergot repeated. Six P. M. Tampon removed and vagina washed with two and a half per cent. solution of carbolic acid. No change in state of cervix. Ergot and laudanum repeated.

July 26th. No change. Tampon again used, removed in evening. Ergot and laudanum continued.

July 27th. No change. Tampon omitted. Ergot and laudanum continued. Vaginal injections of two and a half per cent. solution of carbolic acid to be given twice daily.

July 28th. No change. Medicines omitted.

July 29th, P. M. Placenta expelled entire, no offensive odor whatever to it. Rapid recovery.

Case III. August 20, 1883. Mrs. W., multipara, aged forty-seven years. Sufferer from repeated abortions since twenty years of age. Menses ceased ten weeks ago, patient supposing that she had reached the climacteric. Has not felt well for a week. Yesterday had pain in back, and slight flowing. This morning severe bearing down pains, and passed large amount of clots, together with fœtus and after-birth in fragments. Patient thinks that everything has come away. Nothing found on examination except a hard cervix fissured in various directions, with os tightly closed. Uterus appeared to be about normal in size. Fifteen minims of laudanum and one drachm of ergot given twice daily and carbolized vaginal injections. Nothing of note occurred in the case until August 22d, two days after the abortion, when at my usual visit I was shown a fragment of placenta, about one and a half inches in diameter, which the patient said had been expelled that morning. The mass had scarcely any perceptible odor. From this time on the patient progressed rapidly to perfect recovery.

The above cases caused me no little anxiety at the time of their occurrence. Their fortunate termination, however, would warrant me, I think, in pursuing the same course in similar cases in the future.

We know and may admit freely that the retained placenta does occasionally give rise to hæmorrhage or to symptoms of septicæmia. Mundé's own cases, however, show that forcible removal can even then be effected with good results. In fifty-four of his fifty-seven reported cases the placenta had been retained for a period varying from a few hours to two months. And yet recovery of the patient followed the removal of the placenta in all but one of these cases. On this point Muratoff,[1] of Moscow, who employs Sims's uterine dilators in all cases of neglected abortion, expresses himself as follows: "The presence of inflammation in the uterus or in its vicinity does not contra-indicate the use of metallic dilators; on the contrary, it vitally indicates instrumental dilatation. In the great majority of my cases, dilatation, with subsequent emptying of the womb, was immediately followed by a marked improvement both of the local and of the general conditions; the patient's temperature steadily and quickly fell to the normal level, rigors and pain disappeared, the uterine discharge rapidly lost its offensive odor, and the uterus underwent uninterrupted involution." Muratoff, after dilating the cervix, does not at once introduce the curette or forceps or the hand into the uterus. He first tries bimanual expression of the uterine contents. Should this fail, the membranes are removed by one or two fingers. Besides Mundé's cases, I have collected thirty-two other published cases of forcible removal of long-retained placenta (one retained for 115 days, another for six months), and in all of them the patient recovered. We thus have a total of eighty-six cases, with but one death. Would the fatality be as small if physicians, however lacking in technical skill, were to proceed to dilate and extract in every case of abortion as soon as the placenta showed a tendency to delay?

Having argued to prove that active interference in abortion is as a rule unnecessary and dangerous, it follows that I agree with those who favor the expectant plan of treatment. This does not mean, however, that abortions should be "neglected," as the gynæcologists express it.

The following outline of treatment would seem to me judicious, and as answering all the indications in a case of abortion in which the secundines are retained after the expulsion of the fœtus: If the membranes are lying loose in the open cervix, they should be removed by the finger. If, however, they are still within the cavity of the uterus, no attempt should be made to remove them, whether the cervix be open or closed. Full doses of ergot should be given, and the vagina should be carefully tamponed. The ergot and tampon will check whatever hæmorrhage there may be, and will also serve to excite the uterus to contract and thus effect the separation of the membranes. Two or three tampons may be used, each being left in situ about twelve hours. The vagina should be well washed with a two and a half per cent. solution of carbolic acid at each removal of the tampon. If the membranes still remain within the uterus, and there be no hæmorrhage or evidence of blood-poisoning, we may leave the case to nature, merely continuing the ergot and carbolized vaginal injections for a few days. Besides enjoining the rest usual after all abortions, the physician should keep the patient under observation for a few weeks, if possible. If at any time serious and repeated hæmorrhages should occur, or symptoms of septicæmia should manifest themselves, these steps should be taken to empty the uterus at once. If the cervix is patulou bimanual expression of the placental remains should be tried. If this fails, the fragments may sometimes be brought away by intra-uterine injections. Last of all, we may resort to the use of the finger or the curette and forceps. If the cervix is closed, it should be dilated with the tupelo tent or Sims's dilators, and the uterine contents then removed as before.

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[1] London Medical Record. The Medical Gazette, December 1, 1883.

Therapeutic Memoranda.

AN OVERDOSE OF CHLORAL.

BY JOHN P. REYNOLDS, M. D.

To a young and healthy patient in third labor, with a good presentation of the head, I gave, as I supposed, three times, at intervals of fifteen minutes, a dose containing fifteen grains of chloral. I had no better motive for its administration than the hope of comforting the patient, who was making moderate complaint. I shortly discovered that in forty-five minutes I had given her a hundred grains, and for the hour and a half which ensued I watched her condition with no little uneasiness.

She grew drowsy and heavy. The progress of the labor gave her no farther concern. If addressed, she could be roused to make answer, but soon fell off again. The pains became slow and ineffective. The pulse was at between sixty and seventy, full and laboring. Her hands, held by her husband looked almost black under his pressure. Fifteen minutes after the third dose of chloral I ruptured the membranes; and twenty-five minutes later, not quite two hours from the first appearance of pain, a male child was slowly extruded into the world. The surface of the child was excessively pale, and from head to foot it was besmeared with meconium. After very moderate efforts, however, it began to breathe and cry; but it did not for several hours regain its natural color. The placenta was soon expelled, though without any portion of the membranes. One drachm of fluid extract of ergot was twice given, and a half ounce of brandy. An hour after the birth the mother was in fairly good condition, and both she and thec hild made a safe recovery.

If now I add, that it would be hard to name husband and wife more widely known in the community where this occurred, or more deservedly admired and honored, I may emphasize for some readers the story of personal distress.

— The *Edinburgh Medical Journal* highly recommends for the ordinary eczema of the head in children, so commonly met with in dispensary practice, after two or three thorough cleansings, the daily application of the following salve: —

℞ Acid. salicylic.	gr. x.
Tinct. benz.	♏xx.
Vaselini	℥i.

M. ft. ung.

On other parts where a soft, easily melting salve such as this is not suitable, or where a firm dressing or a drying effect is desired, the following paste should be rubbed on: —

℞ Acid. salicylic.	gr. xix.
Vaselini	℥i.
Zinci oxidi, amyli	aa. ℥ss.

M. leniter terens, fiat pasta.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

IN MEMORIAM. — DR. CALVIN ELLIS.

January 9, 1884. The meeting was called to order at eight o'clock, **Dr. R. T. Edes** in the chair. A summary of the proceedings of the last meeting was given by the Secretary.

Upon motion of **Dr. George B. Shattuck** the business of this meeting was suspended as a token of respect to the memory of the late Dr. Calvin Ellis, formerly President of the Suffolk District Medical Society.

Dr. Edes, in announcing the result of the motion, made some very appropriate remarks relating to his early acquaintance with, and life-long esteem for, Dr. Ellis, a man whose character would long be a living influence in the medical element of Boston. Dr. Edes then called upon Dr. George C. Shattuck, who spoke as follows: —

Dr. Shattuck said that he could not refuse an invitation to say a few words at this time, and to bear his testimony to the worth and excellence of our late associate, Dr. Calvin Ellis. It certainly is well for us survivors, after the departure of a highly esteemed associate, to meet together and put on record our appreciation of worth and skill and our sense of loss. Excellence and distinction in our profession are the result of original endowment, of industry in training faculties, in acquiring knowledge, and of fidelity and skill in the discharge of duties. A medical man must devote years to preliminary education, and then must be constantly studying and training his powers of observation and reasoning, as well as adding to his stores of knowledge. There are those here who were associated with Dr. Ellis in his early years and will tell us of the qualities for which he was remarkable as a young man and a student. I became associated with him when he had already acquired reputation as a teacher and practitioner, and was looked upon as on the sure road to distinction. I noticed, and admired, his knowledge and skill as the pathologist of the Massachusetts General Hospital and instructor in clinical medicine in the Medical School. His ability, knowledge, and fidelity were recognized by professors and students. He was evidently the coming man in his department. And yet he worked patiently in subordination, was always kindly and courteous, and ready to carry out the plans of those who had the direction of affairs. When his predecessor in accordance with his own wishes and ideas of duty retired, Dr. Ellis was chosen professor of clinical medicine and visiting physician of the hospital, without any solicitation on his own part or from his friends, but because those who had the appointing power recognized that he was the fittest man to discharge the duties. The wisdom of the appointment was shown by many years of successful work. And when obliged by painful illness to retire from work, those who appointed him, those who worked with him, and those for whom he worked, preferred to wait for three years in the hope that his health and strength might be renewed so that the same skilled labor might still be at the service of medical science and instruction.

These hopes have been disappointed. He who knows what is best for each and all of us has removed him. We must acquiesce in this decision, whilst we may cherish the example of conscientious devotion to duty, of scrupulous regard to the rights and feelings of associates, of self-sacrifice in ministering to the sick and the poor, and in efforts to teach the young and the ignorant. May we all be able to profit by his example, so that when to each of us the summons to depart comes, the plaudit, "Well done good and faithful servant," may be on the lips of our survivors.

The Secretary then read the following letter from Dr. HENRY I. BOWDITCH: —

January 9, 1884.

To the Secretary of the Section of Clinical Medicine of the Suffolk District Medical Society: —

DEAR DR. BLODGETT, — I am very sorry that I am at present confined to the house, and shall therefore be unable to be at the "Memorial Meeting" which is to be held by the Clinical Section of the Suffolk District Medical Society at its first meeting after the death of our friend, Dr. Calvin Ellis. The Section, in which he so long labored, acts most appropriately in proposing to have this "Memorial Meeting."

Dr. Ellis has just died, after a long and distressing illness, which he bore without complaint and with a manly fortitude, while, however, looking forward hopefully, as was his nature, to its ultimate result, because it was non-malignant.

He was my pupil in his days of medical study, my assistant at the Massachusetts General Hospital, and afterwards my successor there, and also in the Professorship of Clinical Medicine at Harvard University; and, finally, he was always a most beloved friend. For many years past I have often sought his advice, and no one that I met gave wiser counsel than he did; for his words were uttered only after a most rigid examination of the matter in hand. To me his loss is simply irreparable; for no one can fill another's place.

But I do not write this in order to praise him or to mourn for his loss. His own life is his highest praise; and the termination of the earthly career of a really noble soul has not a particle of sorrow connected with it, which is not far outweighed by a kind of satisfaction, not to say joy. The beauty of Dr. Ellis's everyday life from the cradle to the grave seems well rounded out by his serene, uncomplaining death. If with this death we remember the years of almost hopeless and severe suffering so sweetly borne by our friend, then Death has no horrors, but comes rather as an angel of divine mercy to the relief of suffering humanity.

If by his intellectual acts a man has left, as Dr. Ellis has surely done, his impress for good upon hundreds who have either sought his instruction, or have met him in the daily walks of life, then the natural sorrow which we must feel for his loss is wonderfully mitigated; and he becomes forthwith a silent, but not less effective, exemplar, to all who knew, loved, and respected him. And where is there one who intimately knew Dr. Ellis who did not love and respect him?

Since his death I have been led to inquire into the antecedents of his family and of himself before we became personally acquainted, and I have been interested and instructed to find how many of his more striking moral and intellectual traits he owes to heredity. I shall give, of course, only a glimpse of the facts, because my purpose, on the present occasion, requires nothing more.

Two hundred years ago, or thereabouts, his earliest progenitor in this country came here from the ranks of the hard-handed independent-souled yeomanry of England. He settled in Dedham, Mass., and there tilled his acres and reared his family. A home on the site still stands, and it is occupied, as it has always been, by one of the same stock and name. Calvin Ellis, our deceased associate, was the seventh descendant from this first settler. It would seem that as the generations have passed along, work, solid work, and a belief in the real excellence and nobility of work, has been ever a prominent trait among all his ancestry. But there was with it also a love of culture, so far as that was possible in the earlier times. The Ellis family has given clergymen, physicians, lawyers, and energetic merchants and many honorable and excellent men and women to the world. His grandfather brought up a family of eleven children, and, aided by the thrift and economy of his wife in her wise management of his household, left as the net result of their joint lives $30,000 for their heirs! Surely here was a trait of energy, physical and intellectual, worthy of commendation. This same grandsire believed so strongly in work that he had a contempt for the bare idea of a man's having "nothing to do." His favorite expression was, "I would rather my son should throw stones from one heap to another, and then throw them all back again, than have 'nothing to do.'"

Again, fully believing in the excellence of the intellectual, as well as the physical training of any youth, he had his youngest son prepared to enter Harvard.

Unfortunately, as the story goes, the youth was by his brothers fairly laughed out of trying a college life.

Dr. Ellis's parents moved into Boston before his birth, and the father, Luther Ellis, became an energetic and successful iron merchant. Retiring from active business with a property ample for his wants, he had his son Calvin, our associate, educated for Harvard. Both parents have left loving memories of themselves in the hearts of their children, and of others. Their home, as the story comes to me, was one of those delightful places where parents and children mutually loved and respected and helped one another.

Religion, too, was taught in and governed it. The boys and girls went in their earlier days regularly to church. They were not governed by tales of terror as to the future, but were led to honorable thought and action rather by the examples of loving kindness and of independence of thought given to them by their parents.

They were styled Unitarians, a term of obloquy formerly, less so of late, since science has tended to break down sectarianism, that stronghold of the devil. The mother who presided over the domestic affairs had a gentleness and firmness of purpose, combined with a bright, contented, and self-sacrificing spirit. Her example proved to the children the lovableness of these qualities. The father, after long suffering borne with exemplary patience, died during the first year of Dr. Ellis's college life. Thus we see that while receiving from his earliest ancestors the fine manly traits of love of work and of liberality and independence of thought, with a desire for culture of the intellect, so far as was possible, his parents left him also a legacy of sweet and winning traits, that shone so conspicuously, during all the years of our friend's life.

As a boy he was of a quiet character, less boisterous than most boys of this age. He was, however, intelligent and bright, and a favorite with all who knew him. His college life was uneventful. He was an athlete, and was in the first boat's crew ever organized at Harvard. He took no very high honors, but he faithfully did his allotted tasks. Upon entering the Medical School, he used to say, he first awoke to his life's work, as play had been his object during his college days. He became earnest and was ever at work, to do what the hour called him to perform.

When I met him as an assistant he had no flourish or pretense or servility about him. He was always deferential, but not crouching submissively to me, or any one, though cheerfully undertaking what was imposed upon him by his superiors. He rarely, if ever, failed in the due performance of the task; always had that bright yet dignified manner which he subsequently bore in his professional career. In his meetings with you, his associates, I am sure you always found him simple, thorough, and true. When dealing with a professional associate he needed no "Code" of by-laws to keep him fair and honest. His own well-balanced mind and generous spirit forbade him to do anything to injure a brother physician's reputation even in the smallest degree.

To do so by a word, a covert sneer, or even a smile of doubt in the presence of by-standers, as is done at times, by some of the stoutest defenders of the "*Code*," he abhorred. I shall never forget the glee (for, among other good qualities he heartily enjoyed a joke) with which he told me, only a few months ago, how he and others had *squelched* instantly a proposition coming from a committee of the Counselors of the Massachusetts Medical Society, a proposition, which, had it been adopted by the Society, would have violated one of the prime rules of common courtesy, and even those of simple hospitality in many of our country villages and small towns.

As a teacher of medicine I need say nothing, as most of the younger men of this Society must have known him well in that capacity. His object was to teach a student the methods that should be pursued in order to come to a perfect diagnosis. I was much struck with the remark made by one of the juniors of our profession, when I asked what Dr. Ellis's reputation was as a teacher among the pupils. He paused before replying, and then, in substance, said as follows: "Dr. Ellis while unraveling any case was less brilliant than some other more fluent professors, and he was called a little 'slow,' and tedious as some thought. But upon our arrival at Vienna, by comparing our method of grappling with cases in the German hospitals with the desultory and imperfect examinations made by students of some noted schools in other large cities of our country, we soon found that we had been *more thoroughly drilled* than they. The result was that we understood more quickly and fully than they did all of the intricacies of a case."

No higher praise could be given to any professor than this simple, but significant, expression of one of his pupils.

He has left an unfinished work entitled, I believe, Symptomatology. On this he was laboring every hour that his disease permitted him to work, even to the the last few days of life. I sincerely hope that it has been so far finished that his literary executors can publish it. I was visiting him one morning while he sat half erect in bed. He was working then upon it, and was kind enough, at my request, to read to me a short extract. From that, I was led to feel that the work would not only add to his well-merited reputation, and serve the student and junior practitioner long after the writer's death; but that it would perhaps mark an era in the correct study and practice of clinical medicine similar to that which followed the publication of the great French teacher Louis's works. In truth, it seemed founded upon the same principle that underlies all of Louis's works, namely, the absolute necessity of making a most careful diagnosis of a case before proceeding to treat it. It was fortunate for several American students of fifty years ago, that even Louis, the great clinical teacher of that day, whose principles are now everywhere more or less perfectly carried into practice, was considered rather "slow" by his compatriots. Consequently our small "coterie" of Americans and of Swiss students had his oral instructions all to ourselves, which has, of course, been of immense advantage to every one of us during our lives.

In Dr. Ellis's connection with the Harvard School his influence was always for a higher education and better practical measures. He may be called a "conservative reformer." He never moved until his judgment approved of a plan. When once decided in his opinion, no obstruction could prevent him from boldly urging forward the cause against the opposition of even the most powerful. This was seen especially in his efforts at progress in the Medical School's late reforms. During his last illness, he told me that every step taken forward was violently and persistently opposed; and I sincerely believe that had it not been for the efficient work of Dr. Ellis, aided by his earnest *young* coadjutors in the Faculty, no reform would or could have been accomplished, and no one contributed more than our friend did as Dean of the Faculty to these very desirable results. During his long illness he, from love of the School, remained one of the Faculty. At length, his disease compelled him to resign his position of Dean, but he still hoped, even until the end, that in the intervals of his torture he would at times be able to meet, and to lecture to his pupils.

Surely I think that even with these brief hints at the various passages of the life, and allusions to the intellectual and moral qualities of our friend, we can feel, in the language of Wordsworth, that

> "The child is father to the man,"

and his days were

> "Bound each to each by natural piety."

May this fine example of a *life of true work* not be lost on any one of us.

Yours very truly, Henry I. Bowditch.

Dr. C. D. Homans said: Probably no one present knew Dr. Ellis so long or so intimately as I did. Perhaps Rev. Dr. Bartol may have done so, but certainly no one else. We were boys together, we were in college together, we were abroad together, and we have been together ever since. When in college Dr. Ellis though a good scholar was not brilliant, but was a hard student and a continuous worker. He was always a favorite, and was much interested in the pastimes of those days. He was an athlete, and was a member of the first boat club which was formed at Harvard College. We bought a boat together when we were in the Massachusetts General Hospital, and in our spare hours were fond of rowing on the Charles

River. The water then came up almost to the stone building which at that time comprised the entire hospital. He always kept up his love for athletic exercise, and even in his last years was very fond of walking, often preferring to go on foot rather than in his carriage to visit his patients. In some ways Dr. Ellis was particularly fortunate. He was hardly ever ill during his life until the commencement of the disease of which he died. He was fortunate also in possessing a competence, and was not obliged to trouble himself in regard to pecuniary matters. While a student in the Medical College he was one of the few who attracted the attention of the late Dr. J. B. S. Jackson, who for years made all the autopsies in and around Boston, and from him Dr. Ellis derived that love for, and knowledge of morbid anatomy which was so useful to him in after life. He was a worker as long as he lived. During his last illness, in fact up to within a few days of his death, he was engaged in the intervals of his sufferings in the preparation of a medical work for the press, which he left nearly finished.

It afforded him a great deal of satisfaction to be informed that, within a few days of his last attack, a letter had been received by a friend from a young physician, at present in Vienna, who stated that as a result of the careful clinical training received from Dr. Ellis, students from Boston were able to profit much more largely from the advantages offered by European hospitals than were those coming from other American cities and schools.

The disease from which Dr. Ellis died was ulcer of the duodenum. It first commenced about nine years ago, and continued to cause him more or less suffering from that time until his death. It was at first feared that it might be malignant, but the course of the disease disproved this, and it was then supposed to be ulcer of the stomach, but finally the diagnosis of duodenal ulcer was made, and was found by the autopsy to be correct. Death finally ensued from perforation and consequent peritonitis. Dr. Ellis never was willing to make a positive diagnosis of his own case. Through all his sickness he never lost his interest in what was going on. Just before his death he was planning what he would do when he got out again. For some time he was driven in a low carriage, and he was getting tired of this, and thought of buying a coupé as soon as he was strong enough to go out. During the last year he had been obliged to keep his bed much of the time, yet he always got out a little whenever possible. At times he would leave his bed and go for a drive, and and on returning would go at once to bed again. On the day of the last municipal election he rose, and was driven to the polls, and voted, and returning home went immediately to bed as usual, and never rose again. Through all his sickness and suffering he never murmured or complained, but was always patient and resigned, and when the pain became easier his cheerfulness and good humor at once returned. He was always glad to see his friends, and seldom spoke of his own distress.

In all he did Dr. Ellis was actuated by a strong sense of duty and intense love of his profession. He had the greatest interest in the University and Medical College, which he has proved by the fact that he has bequeathed his entire estate to the University after the death of his sister, most of it for the special benefit of the Medical School. As a physician he was loved and respected; as a counselor his advice was sought far and near; as a teacher and professor and public spirited man the entire community knew and appreciated his worth, while only those who were intimate with him can know how faithful he was to every demand which friendship might make upon him.

Dr. Sargent, of Worcester, having been requested, sent the following communication: —

"I am more than gratified, for I am also flattered, in being asked to contribute something to the testimonial of the general 'admiration of the noble and generous qualities' of Dr. Calvin Ellis, whose recent death is so great a loss to the profession and to the public.

"My acquaintance with Dr. Ellis was of long standing, but it was rather friendly than professional, for I never had occasion to have any professional relations with him whatever. It commenced in Paris in one of my periods of residence there, in the year 1850, and I see him now in his long walk from the neighborhood of the Garden of Plants to the schools and the hospitals. Then as always he was studious, sensible, thorough, faithful, and reliable. I renewed my acquaintance with him on his return to Boston, and was somewhat instrumental in his being placed on the commission for investigation of the peculiar pleuro-pneumonia of cattle, nearly twenty-five years ago. I had afterwards some other public relations with him. His sound sense always, his good judgment, and sincere convictions, and his fidelity to them, won, as they deserved, the greatest respect from the profession and the public.

"I never had the advantage of listening to any of his instructions from the professorial chair, but as I have had them described to me by young men who were so fortunate as to be his pupils, their thoroughness and richness and exactness must have been a very valuable contribution to the distinguished excellence which is so conspicuous in the Harvard Medical School.

"Commencing practice in Boston in a new era, when the microscope had just begun to peer into pathological anatomy, and its use was so seductive and engrossing as, perhaps, to warrant the witticism of our justly admired Dr. Holmes, then not more distinguished in literature than in medicine, and probably the best read American physician of that time, "Now for an era of little men," he recognized all that was true in what was new, and adopted all that was valuable. And so with him always. His scope was large, and great good sense directed his judgment and governed his work. His influence and his example have been a great good and an honor to the profession, and an advantage to the public.

"Let no man say that merit shall not command success."

The following letters were then read by the Secretary: —

Harvard University Medical School,
Boston, Mass., January 7, 1884.

Dear Sir, — In reply to your letter of January 4th it gives me great pleasure to express to you the sympathy of the entire Medical Faculty in the feeling which has prompted your Society to appoint an evening for holding memorial exercises in honor of our late professor of clinical medicine, Dr. Calvin Ellis.

Although I am not authorized by the Faculty to promise any formal cooperation in your services, yet the individual members of that body will doubtless gladly avail themselves of the opportunity thus afforded of testifying by their presence to their great respect for Dr. Ellis's noble character, and to their high appreciation of the value of his services as Dean of the Faculty during a most important epoch in the history of the School; as a clinical teacher of rare power and enthusiasm, and as a practitioner of medicine gifted with unusual soundness of judgment.

Yours very truly, H. P. Bowditch, *Dean.*

Dear Doctor, — I regret to say that owing to illness in my family I shall not be able to attend the meeting to-night.

Very truly yours, James C. White.

My dear Bowditch, — I am grieved not to be with you to night to show by my presence at least my appreciation of the character of our late associate and friend.

The profession will do justice to his memory.

Let me add my tribute to his fidelity as a physician, his ability as a lecturer, his integrity as a man.

Faithfully yours, D. Humphreys Storer.

Dr. Oliver Wendell Holmes, who was unable to be present, sent the following: —

CALVIN ELLIS.

My recollections of Dr. Ellis go back to the period of his pupilage. Of the large numbers of students with whom I have been in relation as teacher I do not remember one about whose future I felt more assured. He had all the signs of promise; active intelligence, industrious habits, love of his work, a vigorous frame, a cheerful temperament, an agreeable presence stamped with every outward sign of a sincere and manly character. I looked forward to his becoming a leading practitioner, with a confidence which his after career fully justified.

He united many rare qualifications. He had studied disease long and diligently, in the changes left by it in the various organs, and thus laid the foundations of his skill in diagnosis. But he never forgot that medical science is only the handle of the medical art. His assiduity, his patience, his self-devotion as a practitioner were unmeasured and unstinted, as I have known from personal observation. He forgot everything but his patient, he remembered everything for him in the chamber of sickness comforted by his quieting and commanding presence.

Every interest of the profession was very dear to him. The Medical Faculty of the University of which he was so long the Dean, found him a most willing laborer and a generous benefactor. The Boston Medical Library was indebted to him for valuable services and liberal contributions. He could not be otherwise than faithful in all that he undertook, for integrity — wholeness of character — belonged to him in its fullest measure.

Some of you knew this brother of ours more intimately than I can have known him. You will not think, I am confident, that I have exaggerated the excellences of this wise and skillful physician, this true and good man, whose loss will long be felt by the profession and the community. O. W. H.

New York, *January* 7, 1884.

My dear Sir, — I beg the privilege of offering to the members of your Society my sincere condolence in the loss which they have sustained. I had not the pleasure of a personal acquaintance with the late Calvin Ellis; but he was well known to me, and to all interested in medical education, as a painstaking, conscientious student of disease, and as an able, patient, and effective clinical teacher. In his death not only the School with which he was connected, and his professional brethren in your city, but the profession of the whole country and American medicine have sustained a great loss. Cut off in the midst of his useful labors and at an age when many more years of valuable services in behalf of medical education were to have been hoped for, our only consolation is in the reflection that he leaves a noble example which should incite others to follow in his footsteps.

Will you kindly remember me to those who will be present at the meeting on the 9th inst., with the assurance that I should have been glad to have been able to avail myself of your invitation to be present on that occasion.

With much esteem, very truly yours,
Austin Flint.

Rev. Dr. Bartol, upon being invited to make some remarks, spoke with great feeling and emotion as follows: I am here, Mr. Moderator, through courtesy and kindness on the part of this Society. I have listened with great interest and gratitude to what has been said by those who have spoken before me. The atmosphere of this meeting seems like a new consecration to duty. This Professor of Clinical Medicine whom we have assembled to honor to-night was not a *professor* in any other way. Whatever mistakes or vices the science of medicine or its sister professions of theology and law may be liable to, Dr. Ellis was free from them. There was in him no assumption of wisdom or authority. He took no bias in any unprofessional conduct.

In speaking of what Dr. Ellis was, and did, and said, we have referred to him in the *past*, but my feeling toward him is such that I can only speak of him in the *present* tense. Whatever hope we may have of some future life, or heaven after we have left the body, is revived by such fidelity. Every word which has been uttered to-night finds an echo in my own heart.

Dr. Edward Emerson, of Concord, rose and said: "I thank you for the opportunity to say a word for the older students. The character of Dr. Ellis as a physician has been dwelt on in an appropriate and worthy manner in the remarks of those who have spoken. One special feature of his life has, however, not been touched upon, and that is his position among those who were so fortunate as to be his pupils. He was a leader in the medical profession to a striking degree. He gave no long lectures on morals, delivered no tedious homilies, but his daily life exerted a gentle yet continuous influence, which was always a lesson to those about him, and was all the more powerfully felt because it was exerted unconsciously.

"As a friend Dr. Ellis was always thoughtful, unselfish, and devoted, as I know from my own experience. For some time I was in the habit of going to him for advice, not professional but personal, and he always took a most paternal interest in all which personally concerned those more closely associated with him."

The Secretary then read the following resolutions, which had been prepared by one of the members, and which were unanimously adopted: —

Resolved, The Section of Clinical Medicine of the Suffolk District Medical Society at its first meeting after the death of Dr. Calvin Ellis desires to express its admiration of him as a professional associate, a great clinical teacher, and above all as a man of noble character.

Resolved, That our respectful sympathies are hereby tendered to the sister of Dr. Ellis in this, her great loss.

Resolved, That the above resolutions, signed by the Chairman and Secretary of the Section, be forwarded to the sister of Dr. Ellis.

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SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

S. J. MIXTER, M. D., SECRETARY.

December 5, 1883. Dr. John Homans reported

TWO CASES OF ABDOMINAL SECTION TO DISCOVER THE CAUSE OF INTESTINAL OBSTRUCTION.[1]

Dr. Homans showed the strictured intestine removed at the autopsy in the second case.

Dr. J. C. Warren said that he had had no experience in abdominal section, but had performed lumbar colotomy several times. In one case, that of a newborn infant with imperforate rectum, the incision was made in the right side, following the directions of M. Huguier, who shows that the descending colon lies near that side in very young children. The child recovered from the operation, but died some weeks afterwards, steady progressive emaciation following the operation. This form of emaciation, followed by death, has been noticed by some writers where an artificial anus has been made in the ascending colon. In acute cases of obstruction the treatment recommended by Mr. Jonathan Hutchinson, namely, profound anæsthesia, kneading of the abdomen, and inversion of the body, is often successful. Dr. Warren mentioned a case of obstruction in a new-born infant, of unknown cause, and not due to imperforate rectum. After etherization there was a spontaneous discharge of a large amount of meconium, followed by complete recovery.

Dr. Buckingham had had no experience with ether in the acute cases referred to by Dr. Warren, but had had, within a few months, a case of probable intestinal obstruction in which full doses of opium failed to give more than temporary relief, but in which the persistent use of morphia on the fifth day, frequently repeated subcutaneously, and pushed to the limit of safety for twenty-four hours, was followed on the next day by passages of wind from the rectum, and three days later by several large dejections. He had previously reported a case successfully treated by opium.

He inquired of the reader whether in operating for acute obstruction he would, in view of the difficulty in exact diagnosis and of the dangers from the escape of fæces into the abdominal cavity, expect to get as good a series of results as in ovariotomy.

Dr. Homans replied that on account of the great distention of the intestines much more violent and prolonged handling of the abdominal contents was necessary in cases of obstruction than in an ordinary case of ovariotomy. Perhaps on this account it is better to open the first coil of intestine that presents itself. When a tumor has been for a long time growing in the abdominal cavity the recti and other muscles are relaxed, whereas in acute cases the muscles spring together, and it is very difficult to get a large enough opening in which to work. After operations of this nature it would seem that where the artificial opening is established in the upper part of the intestinal tract the danger of emaciation and starvation is greater than when the opening is near the rectum. Cases of artificial anus following abscess or strangulated hernia of the right side are, however, often seen where this condition has not been produced.

Dr. Gay spoke of the discussion on this subject at the last meeting of the British Medical Association, where Mr. Lawson Tait recommended abdominal section in all cases of severe obstruction, while others regarded the groin or lumbar region as a better site for incision. Spencer Wells operates on the right side, as the bowel is more easily reached than on the left. Wounds of the peritonæum, under the present system of operating, are not attended with as great risk as was formerly supposed to be the case. Dr. Gay spoke of a case seen in consultation where complete obstruction had existed for two weeks. There was severe vomiting, but as no tumor could be felt in either the abdomen or pelvis, it was decided to await further developments before operating, and in a few days the bowels moved spontaneously. The patient recovered, and is now alive, at the end of eighteen months.

Dr. Chadwick spoke of the prolonged manipulation of the abdominal contents often found necessary in complicated cases of ovarian and other tumors, and which, generally, is followed by no bad results, mentioning, as example, a difficult Battey's operation in which the abdominal cavity was open for two hours with no consequent ill effects. Aspiration of the intestinal coils, to relieve distention during operation, seems to be a somewhat hazardous proceeding, as it is liable to be followed by peritonitis.

Dr. Mixter mentioned the not infrequent occurrence of a meso-colon as being an additional reason for preferring laparotomy to colotomy. Whenever this condition exists, and it is impossible to diagnosticate its presence or absence before operation, the peritoneal cavity is necessarily opened, and under these circumstances the operation and after-treatment are much more simple when the wound is in the anterior abdominal wall. He had recently seen in the dissecting room a subject in which a broad meso-colon was present.

Dr. Cheever said that much more successful results could be looked for in cases of chronic obstruction than in cases of acute obstipation, especially in children, where the symptoms are very rapid, and valuable time is wasted in vain medication, and operative interference comes too late. In intussusception the intestine soon becomes adherent and perhaps gangrenous. In such cases everything depends on an early operation. A boy, seen by Dr. Cheever in consultation, had had complete obstipation for some days. The abdomen was opened, and a constricting band was found and divided. Immediately there was an immense discharge of gas and fæces. Unfortunately, acute peritonitis was already present, and the patient died the next day. Probably his life could have been saved by an earlier operation. Dr. Cheever had never seen peritonitis following aspiration. Even stabs of the abdomen, with protrusion of intestines and omentum, as often seen in hospital practice, almost always recover, as, for instance, the case of a child brought to the City Hospital with a coil of intestine lying on the outside of the abdomen, having probably been exposed for ten or twelve hours. The opening was enlarged, and the bowel returned, after being thoroughly washed and warmed. Recovery followed without a bad symptom. As bearing on the subject of starvation following openings of the upper part of the intestinal tract, Dr. Cheever spoke of a case of artificial anus, caused by pelvic abscess, and followed by progressive emaciation and death.

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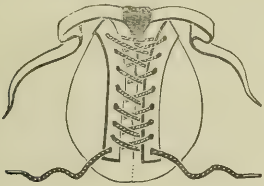
[1] See page 145 of this number of the Journal.

A SUBSTITUTE FOR STRAPPING THE TESTICLE AND THE TREATMENT OF HYDROCELE.

Dr. J. C. Warren showed a chamois-leather bag which he had devised for the purpose of exerting pressure on a small collection of fluid left in the tunica vaginalis remaining after an operation for radical cure. The bag can easily be applied by isolating that portion of the scrotum containing the testicle to be compressed and forming a pedicle, which is preserved by tightening the chamois-leather string. The bag is then laced from above downwards, and, if it has been made to fit snugly, exercises a gentle and equable pressure. If it is necessary to increase the pressure a few turns of a common narrow roller bandage around the equator of the globular mass are all that is necessary. This bag is free from the well-known discomforts of plaster, is easily made and applied, and can be removed and reapplied by the patient himself as often as is desirable, thus avoiding excoriation at constricting points. In the single case in which it was used the effusion promptly disappeared, and has not since returned at an interval of nine months.



Dr. Warren spoke of the advantages of Dr. Levis's method of treating hydrocele by the injection of one drachm of the liquefied crystals of carbolic acid. It appears to be specially adapted to the lighter forms of the disease, is almost painless, and produces very moderate reaction, so that the private patients he had operated upon on a Saturday were able to be about again on the following Monday. In but one case had he found any perceptible discoloration of the urine, although this symptom of carbolic absorption had been carefully looked for in all his cases. He recommended the substitution of the ordinary horse subcutaneous syringe, with a trocar attachment to one of the needles, instead of the ordinary trocar and Sims' ear syringe which Dr. Levis uses. In large hydroceles of long standing the acid does not produce any perceptible effect upon the disease. He spoke of the discomforts and comparatively long confinement attending the operation by incision, even under the most careful antiseptic precautions, as laid down by Volkmann. The constitutional disturbance and the local œdema, with occasionally sloughing of the connective tissue, even when the wound has been kept aseptic, make this an operation which should be reserved for those cases only which are not amenable to other modes of treatment.

Dr. Strong spoke of the difficulty of keeping a Lister dressing on the scrotum after operation. There is always less danger of œdema when the scrotum is kept raised.

Dr. Gavin, in injecting hydroceles, uses Delano's rubber bulb syringe, as being more convenient than the cylinder syringe.

Dr. Marcy had had abscess and sloughing follow the injection of a drachm of liquefied carbolic acid crystals. One half that amount has been found to be equally effectual in curing the hydrocele, and is not accompanied by so great danger of excessive inflammation.

Dr. Cheever never attempts a radical cure in old men, but advises them to be content with tappings repeated as often as necessary, as a low form of inflammatory œdema of the scrotum, ending in death, is described as peculiar to the aged.

FOREIGN BODIES REMOVED FROM THE ŒSOPHAGUS AND THE URETHRA.

Dr. Gay showed a large fragment of turkey bone removed the night before, by a bristle probang, from the œsophagus of an old lady; and also showed a black-headed steel bonnet pin, six inches long, removed from the urethra of a man seventy-five years old, who, "having nothing else to do," had introduced it head first, and had let it slip through his fingers.

MASSACHUSETTS MEDICAL SOCIETY.

COUNCILORS' MEETING.

A stated meeting of the Councilors was held at the Medical Library, Boston, on Wednesday, 6th inst.

The meeting was called to order at eleven A. M., by the President, **Dr. Alfred Hosmer**. Eighty-six Councilors indicated their presence by signing the roll.

APPOINTMENT OF DELEGATES AND COMMITTEES.

On nomination by the Chair the following delegates to other State Medical Societies were appointed: —

Maine: Drs. F. A. Howe, of Newburyport; J. T. G. Nichols, of Cambridge.

New Hampshire: Drs. G. M. Morse, of Clinton; G. W. Snow, of Newburyport.

Rhode Island: Drs. J. Dwelly, of Fall River; C. Howe, of Taunton.

Connecticut: Drs. G. W. Burdett, of Clinton; E. C. Richardson, of Ware.

New Jersey: Drs. H. M. Holmes, of Adams; S. W. Bowles, of Springfield.

Committees were appointed: —

To Audit the Treasurer's Accounts: Drs. C. C. Tower, J. O. Marble.

To Examine the Library: Drs. O. W. Doe, Z. B. Adams.

To Examine the By-Laws of District Societies: Drs. S. D. Presbrey, J. C. White, F. W. Chapin.

REPORT OF COMMITTEE ON DIPLOMAS.

Dr. W. L. Richardson, for the Committee on Medical Diplomas, presented the following: —

The Committee on Diplomas, to whom was referred the petition of the College of Physicians and Surgeons, of Boston, requesting to be placed on the list of colleges whose diplomas are recognized by the Massachusetts Medical Society, beg leave to submit the following Report: —

The Committee have devoted a great deal of time in ascertaining the facts on which their report is based. Much of the evidence which they obtained was of a confidential character and such as could not therefore properly be made public.

They have carefully considered the circumstances which led to the establishment of the college; the character and professional ability of the gentlemen who have, at one time or another, formed its corps of instructors; the facilities at the disposal of these teachers for giving clinical as well as didactic teaching; the requirements for a degree and the manner in which those requirements have been enforced; the nature of the examinations, and the character of the candidates at the time they were admitted to receive their degree. In accordance with instructions received from the Councilors, they have given the petitioners a hearing, at which the dean, registrar, and two other members of the Faculty were present. Subsequently the committee, in company with the gentlemen above mentioned, visited the rooms occupied by the college and inspected the facilities there shown for the didactic and clinical teaching of the students.

As the result of their investigation the committee were impressed with the fact that, while the origin of the School was, to say the least, questionable, yet certain members of the present Faculty were evidently endeavoring to so manage it as to furnish a fair medical education to such students as were unable to pay the fees charged by the best known schools in the country, and to give the degree of M. D. under such restrictions as would enforce the requirements contained in their annual announcements. The committee was also of the opinion that such has not always been the practice in this School.

Carefully weighing all the facts in their possession, the committee would report that they are unwilling to advise that the degree of M. D., heretofore given by this School, be recognized, and also, considering the effort now apparently being made by certain members of the Faculty to improve the character of the college, they are unwilling to pass judgment on its probable future.

They would, therefore, recommend that at the present time the petitioners have leave to withdraw.

William L. Richardson.
A. H. Cowdrey.
Edward J. Forster.

Boston, *February* 1, 1884.

Dr. Dudley said he was confident the committee had been misled to some extent in their investigation, though he doubted not they had performed their duty thoroughly. He moved that the subject be recommitted to the committee so far as the future male graduates of the college are concerned.

Dr. Richardson asked if the mover expected a report at the next meeting? It would be useless to recommit the matter if a report is to be made in the near future. He said this with no intention to "pigeon hole" the question if no time was fixed for the committee's report.

Dr. Dudley replied that he would not press the matter as to the time of the report.

The motion was then adopted.

Voted, on motion of **Dr. Dudley**, that the committee be instructed to give the college a hearing before making another report.

ROOMS.

The treasurer, **Dr. Draper**, called attention to the fact that the lease of rooms from the Medical Library Association will expire at the end of the present month.

Dr. Millet expressed the hope that a better place would be provided for the future meetings of the Council.

Voted, That the matter be referred to the officers of the Society with full powers.

AMENDMENT TO THE BY-LAWS.

Dr. Winsor offered the following: —

After the words "in writing," in the second line of the first paragraph of By-Law XXXIII., insert the words, "and may originate either in the Society or its Council."

A discussion ensued, followed by the rejection of the amendment — ten in the affirmative, forty in the negative.

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MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Seventy-Eighth Annual Meeting.

FIRST DAY, FEBRUARY 5TH. MORNING SESSION.

The Society convened in Geological Hall, Albany, and after prayer the President, **Dr. Alexander Hutchins**, of Brooklyn, read his inaugural address. Various committees were then appointed, after which communications were received from New York, Albany, Ontario, and Washington County Medical Societies.

Dr. W. M. Carpenter read a memoir of the late Dr. J. Marion Sims.

RESOLUTIONS, ETC.

Dr. A. Jacobi offered a resolution, which was unanimously adopted, urging that Congress should provide a fire-proof building for the Museum and Library of the Surgeon-General's Office, and calling for the prompt publication of the remainder of the Catalogue, and the further increase of the Library.

Dr. S. O. Vanderpoel called the attention of the members to the effort to raise a fund for the erection of a suitable memorial of the late Dr. J. Marion Sims in the city of New York, and commended the project to their favorable consideration.

Dr. T. F. Rochester, of Buffalo, from the Committee on Prize Essays, reported in favor of awarding the Merritt H. Cash prize to Dr. Ghislani Durant, of New York, for his essay on Tubercles of the Breast, and commending an essay on Consumption, author unknown, as worthy of publication.

The following papers were then read and discussed to some extent: Two Unusual Cases in Obstetrical Practice, by Dr. W. C. Wey, of Elmira; A Case of Double Harelip, by Dr. J. P. Creveling, of Auburn; Prophylaxis of Summer Complaint in Children, by Dr. D. Lane, of Rochester; Canalization as applied to Amputation of the Female Breast to assure Primary

Union under One Dressing, by Dr. A. G. Gerster, of New York; An Operation for correcting Deformity of the Auricle, by Dr. O. D. Pomeroy, of New York; and Poisoning by Potassium Chlorate, by Dr. George B. Fowler, of New York.

AFTERNOON SESSION.

The following papers were presented: The Establishment of Hospitals in Small Cities, by Dr. E. H. Parker, of Poughkeepsie; Congenital Lipoma, by Dr. A. Jacobi, of New York; The Value of Electricity in Diagnosis, by Dr. L. E. Felton, of Potsdam; A New Method of Partial Extirpation of the Cancerous Uterus, by Dr. E. Van de Warker, of Syracuse; Orbital Cellulitis, by Dr. T. R. Pooley, of New York; Operations for the Closure of the Hard and Soft Palate, with Results, by Dr. A. Vanderveer, of Albany; A Case of Sympathetic Serous Iritis, with Remarks, by Dr. David Webster, of New York; A Plea for the Pharmacopœia, by Dr. Laurence Johnson, of New York; and Horse-Hair Sutures, by Dr. Daniel Lewis, of New York.

The report of the Committee on Experimental Medicine was also read by **Dr. J. G. Curtis**, of New York, its secretary.

EVENING SESSION.

This session was devoted to the subject of

THE CODE OF ETHICS.

On motion of **Dr. Hodge** the communication of the Ontario County Society, which had been laid upon the table at the morning session, was taken up. It affirmed the allegiance of the Society to the National Code of Ethics, and directed its delegates to endeavor to secure the return of the State Society to the same.

On motion of **Dr. Piffard** it was ordered placed on file.

Dr. Baker presented a communication from the Niagara County Society protesting against the action of the State Society in adopting the New Code.

In the absence of Dr. Didama, **Dr. Moore**, of Rochester, moved that the resolution of the former, which had been laid upon the table last year, should be taken up and read. Carried. This provided for the repeal of the action of the Society in 1882, and left the National Code in force.

Dr. Rochester, of Buffalo, in moving the adoption of the resolution, remarked that he believed that such action would result in restoring unity and good feeling, and that it was the duty of the members to consider first the best interests of the profession, and afterwards those of the Society. This was now in rebellion to the American Medical Association, to which it ought to have appealed before adopting the New Code of Ethics.

Dr. Didama having entered made some extended remarks in advocacy of his resolution. Forty out of sixty county societies in the State, he said, disapproved of the action of the State Society, and the adherents of the New Code numbered less than one fifth of the regular profession in the State. He called, therefore, on the minority to give up their Code, and refer the matter to the American Medical Association for arbitration.

After remarks by **Drs. Roosa** and **Moore** the ayes and nays were called for on Dr. Didama's resolution, when it was found to be lost by a vote of 107 to 124.

A motion by **Dr. Jacobi** to abolish all codes was discussed, and finally withdrawn, after which the Society adjourned.

SECOND DAY, FEBRUARY 6TH. MORNING SESSION.

THE LICENSING OF MEDICAL PRACTITIONERS.

Reports from the treasurer and a number of committees having been received, the recommendation of the Committee on Legislation that the bill known as Assembly Bill No. 120 should receive the sanction of the Society, and that the committee should be authorized to urge its passage, was made the special order of the day. This bill provides that on or before the first day of June next the Governor shall appoint a medical faculty of the "University of the State of New York," to consist of nine members (six regulars, two homœopaths, and one eclectic), three of whom shall serve for three years, three for four years, and three for five years, whose duty it shall be to examine all applicants for license to practice medicine and surgery, to confer the degree of M. D., and to refuse or revoke licenses.

A motion by **Dr. Hopkins**, of Buffalo, to adopt the report, was discussed by **Drs. Loomis, Piffard, Jacobi** and **Hopkins**, and **Dr. Agnew** then offered as an amendment that the report be returned to the committee with instructions to draft and advocate the passage of a bill to regulate the licensing of medical practitioners in the State, and that four additional members be added to the committee for that purpose. After further discussion the amendment was laid on the table.

AFTERNOON SESSION.

The discussion of the same subject was continued, and **Dr. Joseph W. Howe**, of New York, offered an amendment to the effect in lieu of all proposed legislation on the subject of granting licenses, a committee of the State Society should be appointed to draft a plan for a commission to visit the medical colleges, superintend and inspect their methods of examination, and report to the Society at its annual meetings. After a lengthy debate, in which Drs. Dalton, Hopkins, Vanderpoel, Jacobi, Seymour, Roosa, Loomis, Wey, Rochester, Perkins, Baker, Campbell, Sturgis, Frazer, and Vanderpoel participated, it was finally resolved, on motion of **Dr. Piffard**, that the question should be referred to Drs. A. L. Loomis, A. Vanderveer, and J. G. Curtis, in conjunction with the Committee on Legislation, who should report to the Society next year a bill covering the subject under discussion.

The **President** announced as a committee to coöperate with the Society for the Prevention of Cruelty to Children, Drs. Jacobi, Vanderpoel, and Moore.

PRIZE ESSAYS.

Dr. Rochester, from the Committee on Prize Essays, announced that the committee wished to modify their report made at a previous session.

The minority report was then read by **Dr. W. W. Potter**, of Buffalo, and in this it was stated that the Merritt H. Cash prize was designed for an original essay, and that the essay on Tubercles of the Breast, which was fifty pages in length, contained but thirteen of original matter.

On motion of **Dr. Vanderpoel** the report was adopted, and no award of the prize was made.

The following papers were read: Foerster's Method of Ripening Cataract, by Dr. Mittendorf, of New York; House Sanitation, as it is, and as it should be, by Dr. Sheehan, of Rochester; Spontaneous Pyemia, by Dr. Todd, of Parish; the Care and Preservation of Medical

Pamphlets, by Dr. Fisher, of Sing Sing; Strangulated Hernia, by Dr. Chapman, of Medina; Note on the Treatment of the Derangements of the Digestive Organs, by Dr. Castle, of New York; Hay Fever, by Dr. Roe, of Rochester; Dysmenorrhœa and its Treatment by Dilatation, by Dr. Potter, of Buffalo; Primary Drainage and Secondary Drainage, by Dr. Fowler, of Brooklyn; the Mechanical Treatment of Hip-Joint Disease, by Dr. M. J. Roberts, of New York; Synovitis of the Knee and Ankle Joints, by Dr. Phelps, of Chateaugay; and Morbid Somnolence, by Dr. Dana, of New York.

EVENING SESSION.

The annual address was delivered by the President, **DR. HUTCHINS**, in the assembly chamber, on the subject,

THE RECIPROCAL ATTITUDE OF THE MEDICAL PROFESSION AND THE COMMUNITY.

In it he advocated the choice by the community, through its law-makers, of an acceptable judicious body to decide as to the fitness of all candidates to assume the responsibilities of the profession. At the close of the address the Society and its invited guests adjourned to the Delavan House, where the annual banquet was held, and the usual toasts responded to.

THIRD DAY, FEBRUARY 7TH. MORNING SESSION.

DR. PARTRIDGE, of New York, read a paper on Face Presentations, and **DR. JACOBI**, of New York, one on Arsenic and Digitalis in Phthisis.

ELECTION OF OFFICERS.

The report of the Nominating Committee was then made, and the following officers were elected for the ensuing year: President, Dr. B. F. Sherman, of Ogdensburg; Vice-President, Dr. P. R. H. Sawyer, of Bedford; Secretary, Dr. William M. Smith, of Syracuse; Treasurer, Dr. Charles H. Porter, of Albany; Censors, Southern District, Drs. F. A. Castle, G. H. Fox, David Webster; Eastern District, Drs. E. D. Ferguson, N. L. Snow, Le Roy McLean; Middle District, Drs. A. Churchill, J. K. Chamberlyne, Robert Frazier; Western District, Drs. T. F. Rochester, R. L. Hovey, T. Deman. The various committees were also elected, as well as a number of permanent members and the delegates to different State Medical Societies, the Canadian Medical Association, the British Medical Association, and the Ontario Medical Association. Drs. Vanderpoel, Phelps, Roe, Vanderveer, Creveling, Bailey, Hutchins, Jacobi, and Shrady were elected delegates to the International Medical Congress at Copenhagen, and Dr. W. G. Bronson, of Connecticut, was elected an honorary member of the Society. After the usual votes of thanks the Society then adjourned.

Recent Literature.

The Principles and Practice of Surgery. Vol. III. By D. HAYES AGNEW, M. D., LL. D. J. B. Lippincott & Co. Philadelphia: 1883.

This volume completes the System of Surgery upon which Dr. Agnew has been at work for the past five years.

It contains chapters upon Diseases of the Eye, the Ear, and other branches in which the general surgeon is being rapidly displaced by the specialist, and the thoroughness with which these subjects are treated shows the training of the old school, before medical practice underwent its modern subdivisions.

The comprehensiveness of this work will make it of especial value to the practitioner at a distance from cities and hospitals, who is thrown upon his own resources; and the suggestions for treatment are conservative and wise.

The chapters upon Syphilis and Tumors are carefully and concisely written, presenting their subjects in so condensed a form that a vast amount of information is given in a very small space. The illustrations of the tumors are particularly good.

When so much ground is covered, and the space is so limited, an accurate account of all surgical procedures is not of course possible; still, the chapter on Orthopædic Surgery is hardly complete with no account of osteoclasis, as applied either to bow legs or to cases of hip anchylosis with faulty position.

MacEwen's operation for knock-knee is figured as if a wedge-shaped piece of bone were removed from the femur, whereas the operation really consists in a simple section of the bone with a chisel.

As a guide to practice, Agnew's Surgery will take a high place, not upon the book-shelves, but in the estimation of practitioners. If, however, a complete investigation of a special subject is desired, it will not be found to compare with several of the modern encyclopædic works.

The Fourth Annual Report of the State Board of Health of South Carolina.

This report appears somewhat diminished in its material contents, with the following apology as an introduction: "Heretofore much space has been given to papers upon sanitary matters and preventive medicine; . . . but objections having arisen from those whose opinions are entitled to respect, to this mode of circulating what cannot but be deemed valuable information, and which is very generally adopted by the Boards of Health of other States, the Executive Committee has decided, in deference to the views of those who urge the objection, and who would have the report wear less 'the appearance of a medical journal,' to publish this year only such papers as have been supplied by the members of the committee, and by the county and town Boards of Health."

The Report contains the following papers: —

Report of the Secretary, with Details of the Quarterly Meetings of the Board.

Reports of Sub-Boards, each of which has Supervision of a County.

Report of Committee on the Medical Topography of South Carolina, containing Valuable Information as to the Climatic and Physical Features of Different Sections of the State, by Dr. F. F. Gary.

Brief Reports on Endemic and Epidemic Diseases, and also on Penal and Charitable Institutions, by Dr. J. F. Prioleau.

Report on Quarantine, by Dr. T. G. Simons.

On the Sanitary Regulation of Schools, by Dr. C. R. Taber.

— "The premature Brougham" is the suggestive expression by which a correspondent of an English journal refers to a common burden which weighs down the young practitioner.

Medical and Surgical Journal.

THURSDAY, FEBRUARY 14, 1884.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage*

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No. 4 Park Street, Boston, Mass.

TRANSITORY APHASIA IN TYPHOID FEVER.

Every clinical observer who may have had occasion to see a large number of cases is well aware of the numerous and varied complications attendant upon typhoid fever, complications arising largely from the changed state of the blood and tissues. Derangements of the mental faculties due to cerebral anæmia and functional torpor of the gray matter are sufficiently common to be the rule rather than the exception, but a genuine transitory aphasia attendant upon typhoid is very rare.

A case of this sort occurring in Professor Bäumler's clinic at Freiburg gave rise to an investigation of the literature of typhoid fever and the collection of twenty-seven other cases, the details of which in connection with nine more cases complicating other acute exanthemata — five in variola, two in measles, one in scarlet fever — and erysipelas is not devoid of interest.[1]

The disturbances of speech in these cases belonged to the amnesic or ataxic aphasias, or exhibited a mixture of the two classes, and a very large proportion, twenty-five out of twenty-eight of them, occurred in children, as might be anticipated from the greater impressionability of the nervous system in children. The majority, eighteen, of the patients were between seven and thirteen years of age, five were between three and six years, one was fourteen, and the age of one child was not fixed. Only ten of the cases were females.

When grouped according to the period at which the aphasia declared itself we find twenty cases developing during the course of the fever, and six during the stage of convalescence, the second and third weeks having been the period of election. In only one case is any paralysis reported, and that a right hemiplegia, in a boy, developing fourteen days after the appearance of the aphasia, and disappearing entirely in a short time, although in three other children a transitory paresis or incoördination of movements of the upper or lower extremities was manifested. In two cases deafness, a not very uncommon complication in adults, without aphasia, was observed.

In most of the cases the typhoid fever was of a severe type, as shown by other nervous symptoms; consciousness, however, was not lost in any, or, at the most, only dimmed for a short time. Only one case ended fatally, the others recovering entirely. In most of these patients the disturbance of speech lasted from three to six weeks, the shortest duration being two days, and the two longest four months and four years respectively. In general the power of speech returned almost as suddenly as it was lost, with the exception of some little hesitation at the beginning in finding the proper expression.

Of the cases of transitory aphasia reported as attendant upon the acute exanthemata, one, in variola, occurred during the prodromal stage; one, in scarlet fever, at the height of the disease; four, of which three accompanied variola and one measles, toward the end of the febrile stage; and two, one in measles and one in erysipelas, during convalescence. All of these cases, except two of small-pox, also ended in recovery. In proportion to the relative frequency of the diseases, aphasia would seem from this to be a less uncommon complication of variola than of typhoid.

Beyond a somewhat severe type of disease and more or less hyperpyrexia these cases exhibit no especial ætiological factor in common to account for the occurrence of the aphasia, and in the two cases followed by autopsies, one of typhoid and one of small-pox, with the exception of a moderate degree of œdema no macroscopic changes were detected in the brain.

ANOTHER UNITED STATES PHARMACOPŒIA. IS IT NEEDED?

The bill introduced into Congress last month by Mr. Randall, of Pennsylvania, providing for a national pharmacopœia, to be prepared under the auspices of army, navy, and marine hospital surgeons, seems, at first sight, one which ought to be favored by the medical and pharmaceutical professions throughout the country.

We suspect, however, that a certain proportion of the enthusiasm which such a proposition may awake would be due to ignorance of the position now held by the United States Pharmacopœia, which, although in no sense emanating from the government, has been adopted as a legal standard of strength and purity in several States, and by the Treasury Department of the United States, as shown by the following extract from the Customs Regulations, 1874: "Art. 450. All imported drugs, medicines, and medicinal preparations are to be tested in reference to strength and purity by the standard established by the United States, Edinburgh, London, French, and German Pharmacopœias and Dispensatories. If the articles . . . prove to conform in strength and purity to the pharmacopœia and dispensatory of the country of their origin they are exempt from the penalties of the law, but if produced, manufactured, or prepared in any other country than the last mentioned, they must conform to the United States Pharmacopœia and Dispensatory." The Dispensatory is mentioned in the preceding regulation because the United States Pharmacopœia of 1870 was very meagre in its details, and the Dispensatory alone gave much of that which is now, by the new revision of 1880, contained in the last Pharmacopœia. This Pharmacopœia has been compiled, arranged, and studied by delegates from all parts of the Union, and embodies special suggestions from many medical societies and specially skilled individuals.

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[1] Deutsch. Archiv klin. Med., page 56, 1883, Dr. Richard Kühn.

It must certainly be considered to fairly represent the wishes and opinions of all portions of the United States as fully as the one proposed is likely to do.

The result has been one of which we have no reason to be ashamed. The United States Pharmacopœia is admitted by competent authorities to be one of the best national pharmacopœias, if not the best, in the world, and, what is very much to the purpose, arrangements were made by the convention which framed it for maintaining it in its present high position and keeping it abreast of the progress of science. We cannot see what is to be gained by another. If the new one is worse than the old it certainly is not wanted. If it is equally as good we shall have the intolerable nuisance of two authorities, unless the government can compulsorily retire the present work, not on account of age or inefficiency, but on the lowest political ground of making room for somebody who wants the place and has a "claim."

The chances of a new pharmacopœia being distinctly better in the sense of being more scientific, more convenient, or more fully representing the wishes of the country as regards the selection of articles to fill its lists, cannot be considered very good when we remember that the gentlemen chosen from the three government corps (which corps, by the way, were fully represented in the last convention for revision) can hardly be considered experts, if, indeed, they be not almost amateurs, and the work must be largely done either by the men who have already given their best to the present Pharmacopœia, or by others not at all likely to be their superiors in knowledge, zeal, or experience; and, if current reports relative to the influences brought to bear upon the selection of officers for duty are true, the fear that political and social considerations may have more weight than scientific and professional ones is by no means an unfounded one.

If the United States want a more authoritative pharmacopœia they can easily give the existing one all the authority desired. May we be pardoned the surmise that disappointment at the control of the present Pharmacopœia being no longer almost exclusively vested in the "great medical centre" has something to do with this new move!

MEDICAL ATTENDANCE UPON SICK JURORS.

A recent decision of the Massachusetts Supreme Court concerning the attendance of a physician upon a sick juror has some interest. The defendant in a trial by jury, against whom a verdict was rendered, appealed to have it set aside, and a new trial granted on account of the acts of the officer having the jury in charge. It seems that the court was adjourned Friday afternoon until Monday morning, leaving the jury in charge of an officer, with instructions to discharge them if they did not agree by ten o'clock P. M. that evening, and if they agreed to have them seal up the verdict and return it to court on Monday morning. After the judge had left town the foreman of the jury told the officer that a juror was sick, had a chill, and required some brandy. The officer saw the juror, and thought him sick. He sent to a druggist and got a two-ounce vial of brandy, and passed it to the foreman. Afterwards another juror fell upon the floor in a fit, and the officer sent for a physician, and allowed him to administer to the juror in the fit, who recovered. Subsequently the jury agreed upon a verdict for the plaintiff, sealed it up, and were discharged, and returned the verdict to the court on Monday. The presiding judge in superior court was satisfied that the officer acted in entire good faith, and the defendant was in no way prejudiced by his acts.

Upon the motion for a new trial the court said: "We do not think that the rules of law imperatively require us to hold that it is a legal cause for us to set aside the verdict when a juror, who is seized with a sudden temporary indisposition, without the intervention or knowledge of either party to the suit, obtains and uses, merely for the relief of his disease or pain, a small quantity of spirits, and where it appears that he is not thereby disqualified for the due performance of his duty as a juror.

"The question of the effect of the introduction of the physician into the jury-room for the purpose of giving medical aid or relief to the juror who appears to have stood in pressing need thereof is not free from difficulty. It is, however, obvious that a merely temporary attack of sickness, though it may for the time being incapacitate the juror, is not a necessary ground for the discharge of the jury. It is proper, when the circumstances will admit, to await the result, and see if, within a reasonable time, he so far recovers as to enable the trial to proceed or a verdict to be returned. If such a sickness is brought to the attention of the court while the jury is deliberating on their verdict, and medical attendance appears to be necessary, the better way ordinarily would seem to be for the court to select a suitable physician, and to caution him in advance not to enter into any conversation with any of the jury upon the case, or upon any matter except such as may be directly connected with the needed relief for the disorder. In the present case the judge was not accessible at the time, but nothing appears to have been done differently from what might well have been ordered by him. There is no reason to suppose that either the officer or physician said anything to any juror which in any way bore upon the case, or that the course of substantial justice was to any extent perverted or disturbed by what occurred. This was a matter which was especially for the presiding justice to investigate. We cannot say, as a matter of law, that a new trial must necessarily be granted."

MEDICAL NOTES.

— A correspondent of *Science* reports a remarkable instance of protraction of life in a spider during complete deprivation of food. He says that on the

15th day of October, 1881, he inclosed a spider in a small paper box. From that day to the 7th day of May, 1882 (two hundred and four days), he carefully watched and daily inspected the prisoner, and can positively affirm that he partook of no food or water. The box in which the spider was confined was as clean and white as white paper could make it, and remained so while he continued to occupy it, except for the appearance of a few dark specks, which were supposed to be the droppings of the prisoner. He was carefully observed every day, and sometimes two or three times in a day, and no emaciation or symptoms of weakness, or even irritability of temper, were detected while he lived. He always appeared as active, and looked as plump and healthy, as he did the day he was dropped into the box, until within three days of his death, when it was first observed that when the box was tipped he would fall from his position.

NEW YORK.

— In consequence of the action of the State Medical Society in resolving to adhere to the New Code of Ethics, a number of members who are supporters of the National Code met at the Delavan House, Albany, February 6th, and formed a new State society, which is to be known as the New York State Medical Association. Sixty-five gentlemen from all parts of the State signed the roll, and much enthusiasm was displayed. The following officers were elected: President, Dr. H. D. Didama, of Onondaga County; Vice-Presidents, First District, Dr. J. Mortimer Craw, Jefferson County; Second District, Dr. Tabor B. Reynolds, Saratoga County; Fourth District, Dr. B. L. Hovey, Monroe County; Fifth District, Dr. N. C. Husted, Westchester County; Recording Secretary, Dr. Caleb Green, Cortland County; Corresponding Secretary, Dr. E. D. Ferguson, Rensselaer County; Treasurer, Dr. John H. Hinton, New York County; Advisory Council, Drs. John P. Gray, Conant Sawyer, J. W. Moore, Thomas Wilson, Ely Van de Warker, Frederick Hyde, M. W. Townsend, E. M. Moore, E. R. Squibb, Austin Flint, Jr., and J. W. S. Greeley. The Association will next meet in New York on the third Tuesday in November, 1884.

— The New York State Veterinary Association met at Cooper Institute, New York, on the 6th of February, and completed its organization by electing the following officers: President, Dr. Robert R. W. Finlay; Vice-President, Dr. L. V. Plageman; Secretary, Dr. Halloway; Treasurer, Dr. Middletown, of Fishkill. The object of the Society is the elevation of veterinary science, and its membership is now about sixty.

— The act prohibiting the manufacture of cigars in tenement houses (except on the ground floor), which went into force in October last, has been decided by the Court of Appeals to be unconstitutional. In the case in which its constitutionality was tested, it was claimed by counsel that on the face of the bill it was shown that the business was not considered by the Legislature to be detrimental to public health, because the law allowed it to be carried on upon the ground floor, and what was unhealthful up-stairs could not certainly be less so on the lower floor. In addition to the claim that the law was unconstitutional, it was urged that the making of cigars in tenement houses was not detrimental to the health even of those engaged in the business, and a resolution passed by the Board of Health in January, 1883, while the bill was before the Assembly, was presented, which stated that "it is the opinion of this board that the health of the tenement population is not jeopardized by the manufacture of cigars in such houses."

— At a meeting of the New York Anthropological Society, held February 6th, the subject of mesmerism was discussed, and Dr. Jarvis related a case in which he had successfully employed it as a means for producing anæsthesia while he performed a difficult and painful operation upon the subject.

— In his annual message Mayor Edson says, in regard to the new Croton Aqueduct, that it is a source of gratification and encouragement to the Commissioners that up to this time the modified route determined upon has met with very slight opposition or objection from property owners or others, and that as soon as the surveys are completed, and the requirements of the law can be fulfilled, the commissioners will take possession of the required lands and begin the work. He thinks this will be done early in the spring, and that the aqueduct will be completed within thirty months from the date of the commencement of construction. He praises the health department for its energy and efficiency, and expresses the opinion that the remarkable healthfulness of the city during the past year is in a great degree due to the constant watchfulness of the department and to the vigorous enforcement by its officers of the sanitary laws. The number of deaths occurring in the city during the year was 33,958, a decrease of 3966 as compared with the previous year. The death-rate, in comparison with that of other large cities, he thinks is not excessive, particularly when the special circumstances existing in New York are taken into consideration, namely, the absolute completeness of the records of deaths; the large tenement-house population, due to the insular position of the city; the great foreign immigration to this part, where many aged, weak, and sickly immigrants remain to die; the influx of sick and poor from the surrounding country and from interior cities, who seek the benefits of the treatment to be obtained in the hospitals; and the great number of visitors and temporary residents always in the city for medical treatment — all contributing to swell the mortality and increase the apparent death-rate.

The mayor calls attention to the notable decrease in the number of deaths from zymotic diseases, — the number from small-pox in 1883 being twelve, against 259 in 1882; from scarlatina, 745, against 2066 in 1882; and from diphtheria, 1010, against 1525 in 1882, — and then proceeds to give a synopsis of the work performed during the year by the Board of Health in its various departments.

— The eleventh annual Commencement of the Training School for Nurses attached to Bellevue Hospital was held on the 8th of January, when twenty-seven graduates received diplomas, and Prof. T. Gaillard Thomas made an address to the class, from which the following extract is taken: "The lady managers of this school have looked for and found in it a field which lay fallow at their very door, and yet a field as noble, as useful, and as consonant with woman's nature as any that civilization offers to mankind. The educated nurse is the lieutenant of the physician in the sick room, one who replaces him in his absence, watches for him the approach of danger, reports for him the progress of the case, and in time of sudden and dangerous emergencies acts for him to the best of her ability. Yet we ask you, nurses, whether this position is not a sufficiently lofty one, a sufficiently responsible one, to satisfy the ambition of any woman? Could any greater trust be imposed upon you, any greater confidence placed in you, if you were sculptor, actress, prima donna, lawyer, or physician?" The following is a summary of the annual report, which was read by Dr. Murray: The school was opened, in 1873, by thirteen women, to whom was intrusted the nursing of four wards in Bellevue Hospital. It now numbers sixty-four pupils, and has charge of 258 beds in fourteen medical and surgical wards, the Sturgis and Marquand Pavilions, and the Emergency Hospital attached to Bellevue. The school also nursed 125 private cases last year. Since its opening 105 nurses have been graduated, of whom twenty-five are engaged in hospital work, and 137 in private nursing. There were 813 calls for private nurses last year, of which 184 had to be declined, all the nurses being engaged at the time of application. Over 300 applications for entrance to the school were received, but only forty of the applicants were accepted. The expenses exceeded the receipts by $3,500, but two friends supplied the deficit. About a year ago the school was asked to furnish recruits for an association of trained nurses to be established in Rome, Italy, and on this occasion letters were read from there praising the work of the graduates sent.

Correspondence.

TREATMENT OF DISEASES OF THE EAR.

Vienna, *January* 12, 1884.

Mr. Editor, — Perhaps a few words concerning the treatment of diseases of the ear at the Vienna clinics may be of interest to some of your readers, and I will endeavor to mention some of the more interesting points in regard to it.

At all the clinics for simple otitis media purulenta uncomplicated by profuse granulations or polypi, after syringing and carefully drying the ear, very finely powdered boracic acid is blown in. This powder is allowed to remain until it becomes moist, when it is immediately syringed out, the ear is again carefully dried, and more powder is blown in. This should also be done by the patient at home as often as is necessary. As soon as the powder remains dry in the ear all treatment is stopped, and the powder gradually works its way out without the use of the syringe.

This treatment by means of powdered boracic acid has entirely superseded the use of astringent solutions, such as sulphate of zinc, alum, etc., which are now only used in exceptional cases where boracic acid has failed to check the otorrhœa. The results obtained seem to be very good indeed, and it is claimed that boracic acid is less irritating than the astringents, and that when properly prepared, that is to say, very finely powdered, it never forms hard masses in the ear which will act as foreign bodies, and so have to be removed. The best method of obtaining boracic acid of the proper quality is by precipitating it from a solution.

For cases complicated by granulations which are too small to be removed by the snare, and in the cases of children or adults who are frightened at the idea of being operated upon, spiritus vini rectificatissimi is used. The ear is to be filled with this fluid three times a day, and the alcohol is allowed to remain for from twenty minutes to half an hour, the patient in the mean time lying with his head upon a pillow. If alcohol in its full strength causes pain it should be diluted at first, and its strength increased gradually. Alcohol may be combined with the boracic acid treatment or it may be used after the removal of polypi by the snare. Larger granulations and polypi are removed by means of the snare, the sharp ring, or are touched with caustic.

Ferrum sesquichloridum is recommended as a caustic at all the clinics. It is better than nitrate of silver as it causes less pain and penetrates deeper into the tissues to be removed, and so accomplishes its object more quickly.

Urbantschitsch considers chromic acid, in its most concentrated form, the *very best caustic* to use for polypi or granulations, but it must always be applied through a speculum, and must not come in contact with healthy tissue, as when it does so it causes great pain. If granulations bleed after being touched with chromic acid a tampon of cotton wool must immediately be inserted in order to keep the acid from coming in contact with the walls of the external canal.

For tough fibrous polypi Urbantschitsch uses the galvano-caustic snare.

For both acute and chronic catarrh of the middle ear, besides the use of the air douche, catheter, etc., if the calibre of the Eustachian tube is diminished, bougies are passed through a catheter to the isthmus tubæ, and the canal is dilated up to the size of one and one third millimetres. In some cases these bougies are allowed to remain twelve hours in a ten per cent. solution of nitrate of silver, and then dried before being used. The ordinary bougies remain in the Eustachian tube about three minutes; those which have been soaked in nitrate of silver from a half a minute to a minute; but in any case if they cause sharp pain they are immediately withdrawn. Besides dilating the Eustachian tube they often act favorably in removing troublesome tinnitus, and it is not uncommon to find that after their use in one ear tinnitus of both ears is improved or ceases altogether. By reflex irritation of the acousticus through their use the hearing is also often improved, but it is doubtful how permanent this improvement is.

Another method employed to mitigate tinnitus, which is often so annoying, is the use of electricity. The constant current is at first tried, and if this fails to accomplish the desired end the induced current is used.

The anode (copper pole) is placed upon the tragus, and the kathode (zinc pole) is brought in contact with some other part of the body, usually the side of the neck, or the hand. A very weak current is at first applied, and its strength is gradually increased, until the patient feels a sharp stabbing pain in the ear, or has severe tinnitus; the strength of the current is then gradually diminished, until it is once more at zero, *before removing the poles.*

The improvement due to electricity is sometimes permanent, — often only temporary, — and in some cases it has no effect upon the tinnitus.

But even in these last cases it often relieves the dull, stupid feeling in the head, loss of memory, etc., complained of by these patients; and in this way greatly improves their condition.

Electricity is also very often used by Urbantschitsch for otalgia, and gives very good, and in many cases permanent, results. For all recent cases of deafness due to labyrinthine disturbances, whatever the primary cause may have been, Politzer tries the subcutaneous injection of a two per cent. solution of the muriate of pilocarpine. He injects four drops at first, and gradually increases the dose to ten drops daily. He gets fairly good results in about one half of the cases.

I have seen three cases of persons totally deaf, who, after being treated in this way, could hear and understand loud speech spoken at the distance of a few inches from the ear; and Politzer has had one case of perfect recovery of the hearing after it had been absent for three years, and several other very satisfactory results, following the use of this drug. He is about to publish the results of his experiments, with the history of some of the cases. It is not known how pilocarpine acts in these cases, but the benefit derived from its use is certainly great in some of them.

It is considered here a part of the otologist's duty to examine and treat the nose and pharynx, to remove adenoid vegetations if they are present from the posterior nares, to cauterize the mouth of the Eustachian tube, etc.

For nasal polypi the ordinary snare, or the galvano-caustic snare, is used. For adenoid vegetations at the posterior nares the galvano-caustic snare, or Stoerk's snare constructed for this purpose, is employed to remove the growths, or else they are repeatedly touched with nitrate of silver, burned with the galvano-cautery, pulled off with forceps, or scratched out with the finger nail. In every case where the nose is found to be diseased, it is treated at the same time with the ear, and this is considered a very important aid to the treatment of the ear itself.

It is of course impossible within the limits of a letter, to do more than mention a few points in the treatment of diseases of the ear, and I hope that these may prove of interest to those of your readers who are otologists.

I remain, very truly yours,

H. L. Morse, M. D.

"PRECAUTIONS AGAINST CHOLERA."

Mr. Editor, — As an earnest inquirer, permit me to seek through the columns of the Journal answers to one or two questions suggested by a paragraph now going the rounds of the newspapers, entitled, "Precautions against Cholera."

(1.) Was there ever an authenticated case of cholera unmistakably introduced into this country by rags brought from abroad for manufacturing purposes?

Before the appearance here of cholera, half a century ago, and since, our best physicians preached and taught that it was non-contagious, and greatly calmed the fears of the people by their doctrines. "The history of cholera in our country," says one of the ablest of them, "has confirmed the correctness of these views." At any rate cordons have not been resorted to; segregation of the sick not insisted on. Instances there have been where the well have mingled with those attacked, even to the occupying the same bed with the dying, or one from which the dead had but just been taken. Often the clothing of the affected has been used promiscuously, without cleansing, by the family or the attendants. The dead have been buried, not hurriedly, in secret, but openly as usual; occasionally with public ceremonies in church, exposed there to the unrestrained view of friends and curious spectators, numbers of physicians standing by, and unconcernedly looking on. If any harm ever resulted from such procedures it has not been brought to light, or put any restraint on the free intercourse of the people.

(2.) If rags can carry cholera from one country to another, is there any known method, application, or process, whereby this baneful property when once acquired can be destroyed, — a *known*, not a theoretical, method?

Last year there was cholera in Egypt; and Egyptian ("cholera") rags brought to this neighborhood were unloaded in Boston Harbor, watered down with a medicated liquid, and then returned to the owners. What was the material so potential that applied superficially, penetrated and permeated the compressed bales, and deprived them of baneful power?

(3.) Apparently, however, not content with last year's methods, the government, according to the newspapers, proposes to carry on a cleansing process on its own account in Egypt itself, and the Boston Board of Health readily yields and gives the "action contemplated" its "hearty welcome." The Board says: "The rags being subjected to the boiling proposed (the newspapers do not tell what the "boiling proposed" may be), or to the action of confined sulphuric (sulphurous?) acid gas for six nours, burning one and a half to two pounds of roll brimstone in each one thousand cubic feet of space, with the rags well scattered upon racks, will be satisfactory to us."

Well, suppose all this practicable, ignorant people not unnaturally ask whether disease can be boiled out, and whether there is, in fact, any infection-destroying power in the fumes of burning brimstone? Moreover, if infection previously pervaded the rags, why may it not return to them when the pestilent air of Egypt, through and by which they originally acquired this infection, is again let in upon them before they are sufficiently dried or prepared to be baled up for transportation?

There would seem, Mr. Editor, to be a good deal of mistiness, if not of mistery, in such "precautions," as if coming *dark ages* cast their shadows before, and were already spreading their nebulous edges over the land. But outsiders should hold their peace until better informed. In the hope of further enlightenment the foregoing questions are tentatively asked.

Inquirer.

— In Vienna, in 1882, there were 16,605 births in wedlock, and 12,657 illigitimate.

Miscellany.

A NEW METHOD FOR THE DETECTION OF THE BACILLUS TUBERCULOSIS.

Dr. Hartzell, in the *Philadelphia Medical Times* (January 26th) describes a new method for discovering the bacillus, which he claims has advantages over most of those hitherto in use. It is as follows: —

A small quantity of sputum is spread as thinly and evenly as possible upon an ordinary glass slide; it is allowed to dry, which takes but a minute or two, and is then passed slowly several times through the flame of an alcohol lamp or Bunsen burner. One or two drops of the fuchsin solution, recommended by Gradle, and prepared as follows, — carbolic acid, fifteen minims; distilled water, one half fluid ounce; dissolve, and add saturated alcoholic solution of fuchsin, one half fluid drachm, — are placed upon the sputum thus prepared, and allowed to remain from three to five minutes. The slide is now washed thoroughly with distilled water, to remove the excess of fuchsin, and the stained sputum completely decolorized by means of a saturated solution of oxalic acid. It is again thoroughly washed in distilled water, after the decolorization, and allowed to dry; it is now ready to be mounted in glycerine or balsam for examination. With a power of five hundred or six hundred diameters the bacilli will appear as brilliant red rods, no staining of the background being necessary.

One chief advantage claimed over other methods is that in the latter the decolorizing agent employed is dilute nitric acid; but this, besides being disagreeable to handle because of its corrosive and staining properties, is apt to remove the color from the bacilli too, unless great care is taken. Oxalic acid, however, seems to leave the dye untouched in them.

THE LATE DR. CALVIN ELLIS.

At a meeting of the Medical Faculty of Harvard University, held February 2, 1884, the Dean, Dr. H. P. Bowditch, presented the following tribute to the memory of the late Dr. Calvin Ellis, prepared at the request of the Faculty by Dr. O. W. Holmes, and it was voted to enter the same on the records of the Faculty, and to transmit copies to the sister of the deceased, and to the editor of *The Boston Medical and Surgical Journal* for publication: —

For nearly a quarter of a century Dr. Calvin Ellis has been connected with the Medical School of Harvard University. He had been recognized while a student as a young man of great promise, endowed not only with superior abilities but with the sterling elements of character which enable those who know the student to predict his future success with no misgivings.

He began early his professional life, giving his especial attention to the subject of morbid anatomy, following in the steps which had marked the long and patient career of our lamented friend, the late Dr. James Jackson. This branch of science involves great labor and self-sacrifice, and repays them with an exact knowledge of the nature and course of disease not to be obtained by any easier method of study. His devotion to this arduous pursuit laid the foundation in science of the skill which he carried into the art of healing, and of his success as a teacher of pathology and of clinical medicine.

Dr. Ellis took an active and never flagging interest in all that related to the administration of the Medical School of the University. He had a special care for the microscopic department, which was largely developed under his influence, and for the use of which he made a gift in 1872 of five hundred dollars. From 1869 to 1883 he was dean of the Medical Faculty, and discharged all the duties of that office with the fidelity which he carried into whatever he undertook. It is now several years since he began to suffer from the disease which caused his death. Even after this disease had greatly impaired his active powers he would still attend the meetings of the Faculty, and when at length he was missed from his usual place those who knew him felt that he was doomed, for no less than some imperative hindrance could keep him from being with them.

His long period of suffering bravely borne has at last come to an end, and he has left us to mourn the loss of a precious life cut off in the midst of its usefulness. Of that diligent, faithful, honorable life this Faculty has reaped some of the best fruits. His memory will always be gratefully cherished by those who have been associated with him in the work of medical education, and they leave on record for those who come after them this affectionate tribute to the virtues and talents of their able, upright, noble-hearted colleague and friend.

SOME SURGICAL USES OF COLLODION.

Mr. Sampson Gamgee, in the *Birmingham Medical Review* (January, 1884), mentions some uses of this therapeutic agent which he thinks is not in general sufficiently appreciated or utilized. He remarks, that being composed of ether, gun-cotton, and spirit, collodion is a powerful anti-putrescent; and, by ready evaporation and contraction, it exercises the dual antiphlogistic power of refrigeration and compression.

In acute orchitis he knows no plan of treatment so simple, rapid, and satisfactory, as coating the cord and scrotum with layers of collodion, by the aid of a camel-hair brush previously dipped into it. The sensation is momentarily sharp, the shrinkage rapid, and so is the subsidence of the inflammatory process.

To swollen parts which cannot well be bandaged, collodion is especially applicable for the compression attending its contraction. The author was consulted in the case of a good looking boy considerably disfigured by a red and swollen nose, which became very pale and visibly contracted just after being painted with successive layers of collodion. The application was repeated three times in the succeeding fortnight, with the effect of producing shrinkage of the organ to its natural size and color.

When the nasal bones are fractured, Mr. Gamgee recommends as a very effective mould for keeping them immovable, after adjusting them with the fingers, the following: Place over the nose a thin layer of absorbent cotton soaked in collodion; as it dries another layer of cotton and more collodion, taking care that the application extends sufficiently on each side to give buttress and support. The patient compares the feeling to the application of a firm bandage on the nose, and the bones consolidate effectively under the shield, which may be renewed as it cracks and peels off.

In the dressing of fresh wounds, the author speaks highly of the same agent, to be applied after thoroughly drying the surface. Its effect is also good when applied in other than fresh wounds, as in a case cited where a man had suffered for ten days from a wound of the shin inflicted by a carriage-step. Water dressing had been applied continuously, and the surface of the sore had suppurated, and its edges for some distance around were red and tender. The limb was raised to empty it of blood, dried with an absorbent, and painted with collodion, then bandaged, and cicatrization was perfect in four days, the patient having sustained no interruption of his use of the leg.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 2, 1884.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diphtheria and Croup.	Typhoid Fever.	Scarlet Fever.
New York	1,206,590	584	210	14.28	16.32	4.76	.68	2.22
Philadelphia	846,984	463	166	19.58	14.96	4.18	3.96	7.48
Brooklyn	566,689	220	77	13.65	21.37	4.10	4.55	2.77
Chicago	503,304	200	82	18.30	12.20	3.00	6.50	3.50
Boston	362,535	172	52	17.40	13.34	3.48	1.74	5.22
St. Louis	350,522	157	62	23.68	10.88	12.80	1.28	1.28
Baltimore	332,190	160	62	12.60	16.38	7.56	1.89	.63
Cincinnati	255,708	97	28	14.42	13.39	2.06	5.15	—
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	113	43	20.24	20.24	3.52	—	4.44
Pittsburg (1883)	175,000	59	20	18.59	18.59	6.96	5.07	1.69
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	32	15	25.04	6.26	9.39	3.13	9.39
Providence (1883)	116,755	29	10	24.15	3.45	17.25	3.45	—
New Haven (1883)	73,000	30	7	16.66	16.66	3.33	3.33	3.33
Charleston	49,999	29	8	13.80	13.80	—	6.90	—
Nashville	43,461	19	9	5.26	—	—	5.26	—
Lowell	59,485	29	11	24.15	3.45	10.35	3.45	3.45
Worcester	58,295	25	10	20.00	4.00	8.00	—	—
Cambridge	52,740	21	9	9.52	19.04	4.76	—	—
Fall River	49,006	16	5	26.66	13.33	12.50	—	—
Lawrence	39,178	15	4	20.00	20.00	—	6.66	—
Lynn	38,284	14	4	—	14.28	—	—	—
Springfield	33,340	13	1	15.38	15.38	7.69	—	—
Salem	27,598	14	3	—	21.42	—	—	—
New Bedford	26,875	13	4	—	23.07	—	—	—
Somerville	24,985	8	1	—	14.28	—	—	—
Holyoke	21,851	10	3	10.00	—	10.00	—	—
Chelsea	21,785	5	1	—	40.00	—	—	—
Taunton	21,213	7	0	—	28.56	—	—	—
Gloucester	19,329	2	1	—	—	—	—	—
Haverhill	18,475	—	—	—	—	—	—	—
Newton	16,995	2	1	—	50.00	—	—	—
Brockton	13,608	4	2	—	25.00	25.00	—	—
Newburyport	13,537	4	1	—	—	—	—	—
Fitchburg	12,405	3	0	—	33.33	—	—	—
Malden	12,017	4	1	—	25.00	—	—	—
Seventy-four Massachusetts towns	311,864	51	9	9.80	31.36	9.80	—	—

Deaths reported 2624 (no reports from New Orleans and Buffalo): under five years of age, 922: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 388, lung diseases 455, consumption 405, diphtheria and croup 141, typhoid fever 54, scarlet fever 44, measles 40, diarrhœal diseases 25, erysipelas 23, cerebro-spinal meningitis 17, malarial fevers 13, puerperal fever 15, whooping-cough 13, small-pox two, typhus fever one. From *measles*, New York 13, Philadelphia 10, District of Columbia nine, Brooklyn seven, Boston one. From *diarrhœal diseases*, New York six, Boston four, Philadelphia and Brooklyn three each, St. Louis, Cincinnati, and New Haven two each, Baltimore, District of Columbia, and Milwaukee one each. From *erysipelas*, New York seven, Philadelphia, and Boston three each, Brooklyn, Chicago, St. Louis, Cincinnati, and Charleston two each, District of Columbia one. From *cerebro-spinal meningitis*, Worcester three, New York, Chicago, Cincinnati, and Lowell two each, Boston, Fall River, Springfield, Salem, Holyoke, and Brockton one each. From *malarial fever*, New York and St. Louis four each, Brooklyn and Baltimore two each, Chicago one. From *puerperal fever*, New York, Chicago, and St. Louis three each, Boston two, Providence, Cambridge, and Philadelphia, one each. From *whooping-cough*, New York four, District of Columbia three, Chicago two, Brooklyn, Boston, St. Louis, and Fall River one each. From *small-pox*, St. Louis and Cincinnati one each. From *typhus fever*, Philadelphia one.

Seven cases of small-pox were reported in St. Louis; scarlet fever 47, diphtheria 30, typhoid fever four, and measles three in Boston; scarlet fever seven and diphtheria three in Milwaukee.

In 92 cities and towns of Massachusetts, with an estimated population of 1,319,769 (estimated population of the State 1,922,530), the total death-rate for the week was 16.59 against 17.78 and 20.00 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 19th, the death-rate was 20.7. Deaths reported 3479: acute diseases of the respiratory organs (London) 395, whooping-cough 117, scarlet fever 108, measles 100, fevers 61, diphtheria 28, diarrhœa 27, small-pox (Sunderland six, London five, Birmingham and Liverpool four each) 19. The death-rates ranged from 11.3 in Wolverhampton to 26.7 in Manchester; Bradford 17.2; Nottingham 18.8; Newcastle-on-Tyne 19.3; Leeds 19.8; Birmingham 20.3; London 20.5; Liverpool 20.7; Leicester 22.8; Sunderland 23.3; Sheffield 25. In Edinburgh 20.3; Glasgow 26.1; Dublin 26.9.

The meteorological record for the week ending February 2d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Jan.–Feb., 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min	Amount in inches.
Sun., 27	30.627	18	24	13	82	66	70	72	NW	NW	NW	16	6	5	C	C	F	—	—
Mon., 28	30.437	21	26	13	71	76	88	78	NW	NW	N	4	6	24	O	O	O	—	—
Tues., 29	30.276	23	28	15	91	82	93	88	NW	NW	NW	8	7	3	O	S	O	—	—
Wed., 30	29.928	32	38	20	54	100	100	84	NW	SW	S	4	8	18	H	O	R	—	—
Thurs., 31	29.551	41	45.5	37	94	87	93	91	SW	S	SW	14	6	8	O	O	O	—	—
Fri., 1	29.779	30	42	17	100	58	70	76	SW	NW	NW	4	24	12	R	F	C	—	—
Sat., 2	30.121	25	32	14	83	56	67	68	NW	SW	SW	1	10	9	F	O	C	—	—
Mean, the Week.	30.104	27	45 5	13				80										40.25	.68

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., Lt. snow; R., rain; T., threatening.

RESOLUTIONS ON THE LATE DR. GEORGE C. LAWRENCE.

THE following resolutions were unanimously adopted at the meeting of the Berkshire District Medical Society, held at Pittsfield, January 30, 1884: —

Whereas, It has seemed best to the Supreme Ruler to remove from our midst our brother, George C. Lawrence, of North Adams.

Resolved, That while we bow with submission to the Divine will, we still in the death of our beloved brother deplore the loss of an earnest and faithful physician, temperate and true in his professional obligations, towards his brethren courteous and honorable, while progressive, not radical, thoroughly loyal and sincere in his professional work.

Resolved, That we tender to his family our sincere sympathy in their sudden loss of a kind and faithful husband and father, and to the community in which he practiced of a laborious, studious, and self-sacrificing physician.

Resolved, That a copy of these resolutions be sent by the Secretary of this Society to the family of our deceased brother, and to the papers of North Adams, *The Boston Medical and Surgical Journal*, and also be placed on the records of this Society.

A. M. SMITH, Williamstown,
H. M. HOLMES, Adams,
H. J. MILLARD, No. Adams,
N. S. BABBITT, No. Adams,
A. M. SMITH, Pittsfield.
} *Committee.*

DEATHS.

DIED, in Pittsfield, Mass., February 6th, Almon N. Allen, M. D., aged sixty-three. He was a native of Petersburg, N. H., a graduate of the Albany Medical College, and had practiced in Pittsfield over thirty years. He was a member of the Massachusetts Medical Society since 1861. He leaves a widow, and a son, who is a physician in Brooklyn.

Died, in Great Barrington, Mass., February 5, 1884, Noble Bennett Pickett, M. D., M. M. S. S., aged eighty-three years.

A BILL TO PREPARE AND PUBLISH A NATIONAL PHARMACOPŒIA FOR THE UNITED STATES.

IN the House of Representatives, January 8, 1884, Mr. Randall introduced a bill, as follows, to prepare and publish a national pharmacopœia for the United States, which was referred to the Committee on Ways and Means. —

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, —

That the Secretary of the Treasury shall, as soon as practicable, detail two officers of the Marine Hospital Service, and the Secretary of War shall detail two officers of the Medical Staff of the Army, and the Secretary of the Navy shall detail two officers of the Medical Staff of the Navy, for the purpose of compiling and preparing a pharmacopœia, which shall be known as the National Pharmacopœia of the United States of America, and shall be held and accepted as the standard for the purveying, compounding, and dispensing of drugs or medicinal agents, and shall be taken as authority in the Treasury Department on all questions arising under the tariff laws of the United States with regard to the nomenclature, description, and purity of drugs or remedial agents, and shall further be received as evidence in the United States courts. And the matters contained in the said pharmacopœia shall be free for use by all authors and commentators for the benefit of the medical and pharmaceutical professions and of the community at large; and it shall not be lawful for any one to reprint and publish the said pharmacopœia as a whole.

SECT. II. That the medical officers detailed as above provided shall invite the American Medical Association and the American Pharmaceutical Association, at their next annual meetings, to form committees of not more than three members from each of the said Associations, which committees, if so appointed, may coöperate with the above-named medical officers in the preparation of the said pharmacopœia, forming a board which shall have power from time to time to add to its number as may in its judgment be necessary, and which shall elect a chairman and a secretary, and adopt such rules as it shall see fit for the expediting and perfecting of the said pharmacopœia, which, when completed, shall be printed under the supervision of the said board; and an edition of not less than five thousand copies shall be printed for use in the several departments of the government of the United States; and copies may be furnished to private persons in accordance with the provisions of section thirty-eight hundred and nine of the Revised Statutes.

SECT. III. That for the purpose of defraying the necessary expenses of preparing the said pharmacopœia the sum of five thousand dollars is hereby appropriated out of any moneys in the treasury not otherwise appropriated, and the same shall be disbursed under regulations to be prescribed by the Secretary of the Treasury.

SECT. IV. That the said pharmacopœia shall be revised once in ten years, upon the plan embodied in this Act.

THE WINTER CLIMATE OF NEWPORT.

AT a regular meeting of the Newport Medical Society, held February 5th, at which twelve members were present, it was

Resolved, That the Newport Medical Society indorses the opinion advanced by Dr. H. R. Storer, that the winter climate of Newport is preferable to that of the rest of New England for certain forms of pulmonary diseases, and for general invalids, provided that when here the patients are under proper hygienic conditions as regards location, etc.

THATCHER GODDARD, M. D., *Secretary.*

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING FEBRUARY 9, 1884.

VAN REYPEN, W. K., surgeon, from the U. S. S. Powhatan, to the Navy Department as assistant to the Bureau of Medicine and Surgery, and acting chief of that Bureau.

HOEHLING, A. A., surgeon, from special duty at Washington to the Powhatan.

Original Articles.

ON THE TREATMENT OF ACUTE PNEUMONIA.[1]

BY FRANCIS MINOT, M. D.

NOTWITHSTANDING the great improvement which has gradually taken place in the treatment of acute pneumonia during the last thirty years, I think it is not yet so perfect as our knowledge of the pathology and course of the disease should lead us to expect. Although the belief that it is essentially an inflammatory disease is fast disappearing, the traces of the mode of treatment founded on that theory still remain. It is true, we do not often bleed our patients, nor give them tartar emetic, nor purge them actively; but it is not uncommon to see extensive blisters applied to the chest, and aconite, veratrum, and other sedatives are given with a view of diminishing the rate of the pulse, and thereby, it is argued, of reducing the inflammation, while, strange to say, nourishment and stimulants are freely given at the same time to support the strength. It is only recently that the notion of the infectious nature of pneumonia, first maintained, I believe, by Juergensen, of Tübingen, began to be accepted by well educated and experienced physicians, and it is natural that the traditions of a former generation, which believed in its essentially inflammatory character, should still prevail among us. If it were more generally known that the disease is self-limited and infectious, as much so as measles or variola, and that it is rarely if ever fatal in healthy subjects, a more rational treatment would be substituted for the complicated and frequently contradictory one so often seen employed.

For the sake of convenience I will divide the subject of the treatment of pneumonia into three sections. The first section relates to cases occurring in healthy persons, without distinction of ages. The disease is almost never fatal, and rarely attacks both lungs. The initial stage of the fever occupies from twenty-four to forty-eight hours; the fastigium, during which the temperature does not rise above 104° F., usually lasts seven days, at the end of which time the temperature suddenly falls to the normal point, or a little below it, the crisis occupying one, two, or rarely three days. (See the Charts Nos. 4, 5, and 6.) The ratio between the rate of the respiration and that of the pulse (normally, one to four and a half) is not greater than one to three. There is but little appetite, and in young children usually none. An experience of many years in hospital and private practice has convinced me that these cases always do well without any special treatment, medicinal or dietetic. Sometimes an anodyne (Dover's powder or morphia) or a sedative (bromide or chloral) is useful to relieve pain or restlessness, or the solution of the acetate of ammonia may be given if the skin be hot and dry. As much water, not iced, should be allowed as the patient desires for drink. External applications are not needed, and all irritating epithems should be avoided, since counter-irritation only adds to the patient's suffering without modifying the self-limited process usually considered as "inflammation" of the lung. I am decidedly opposed to the application of poultices to the chest, especially "jacket" poultices. The fatigue and exposure caused by their frequent changing, and by their removal for the purpose of auscultation and percussion, are injurious; they are uncleanly, and possess no advantage, in my opinion, over a woolen jacket or waistcoat, or still better, one extemporized out of a sheet of wadding (not batting), to satisfy the prejudices of the patient's friends, who are too often, as in other cases, unconsciously his enemies. I would plead for little children, who like nothing so well as to be left undisturbed by officious ministration, requiring no nourishment beyond a little milk, with water at discretion. When the crisis comes food is readily taken.

If possible, the patient should lie on a single bed, so as to be easily handled by the nurse and physician. His clothing should be no heavier than is agreeable to him. Fresh air should be constantly admitted to the room, and a fire should be kept burning in the fireplace day and night, except when the weather is warm enough for open windows.

As to diet, the patient should not be urged to take more food than he likes. It is a common idea that he is in danger of sinking from exhaustion, and must be sustained by being constantly crammed with beef tea, milk, gruel, etc. In reality very little food is necessary during the short period of the acute stage, and nature declines to digest more than a small quantity, frequently rejecting from the stomach what has been swallowed. In the case of children, particularly, I have observed that there is a strong objection to taking nourishment, and that when this instinct is respected the patient does perfectly well; as soon as the temperature falls he asks for food. But I find great difficulty in making parents and nurses believe this, owing to a natural application of the modern supporting treatment, so useful in typhoid fever and other exhausting diseases, to acute and transient affections.

The second class of cases of pneumonia include those occurring in healthy subjects who are debilitated from various causes, such as old age, overwork, previous illness, etc. They are free from cachexia, and under appropriate treatment the majority recover, but the prognosis is much more doubtful than in the preceding class. The disease is apt to extend from one lung to the other (though this is by no means always fatal), the temperature falls more gradually than in uncomplicated cases, and convalescence is often more prolonged. The treatment should not, in my opinion, differ materially from that just described, except that alcohol is usually required, and digitalis is necessary if there should be signs of pulmonary obstruction from failure of the heart's action. Champagne usually agrees very well, but any other stimulant, if preferred by the patient, will answer. Brandy and carbonate of ammonia must be given when there is much exhaustion.

The third class of cases comprise those which occur in cachectic individuals. The great majority of the patients die, whatever treatment be adopted. They are generally intemperate, or are victims of chronic renal disease, or they are tuberculous; but patients already prostrated by grave acute disease, such as typhoid fever, variola, bronchitis, etc., although otherwise previously healthy, when attacked by pneumonia may also be unable to resist the intercurrent disease. The stage of hepatization is succeeded by purulent infiltration, and sometimes by gangrene, and death follows from asphyxia and exhaustion, usually with very high temperature, though sometimes without much elevation, as happened in two of the cases which I shall report. (See the Charts No. 7 and No. 9.) In these cases stimulants should be freely given; large doses of brandy are easily borne, and sometimes appear to save life. Nourishment in liquid form is also required, but seems less important than alcohol. External applications, those at least which require frequent changing, should be avoided, as the patient has no strength to spare.

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[1] Read before the Boston Society for Medical Improvement, February 10, 1884.

The following cases, appended in illustration of the above remarks, were treated by me in the Massachusetts General Hospital, during the latter part of the winter and spring of 1883: —

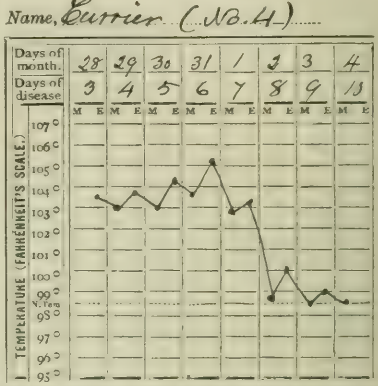
Case I. Ellen Egan, forty-six, single, domestic. She had had rheumatic fever eighteen and ten years previously; otherwise her health was good. Entered January 2, 1883. Two days previously she had a chill, followed by pain in the left side, cough, and brownish expectoration. There was considerable dyspnœa. Temperature 103.5° F., pulse 110, respiration 40; adhesive, rusty-colored sputa; no cardiac murmur; signs of solidification in lower portion of left lung. On the third day after entrance physical examination showed almost complete solidification of the left lung; respiration 52, and labored; face dusky, cheeks deeply flushed; pulse 124. The temperature, however, was only 102° F. (Carbonate of ammonia, brandy.) From this time the symptoms gradually improved, and on January 13th, eleven days after entrance, and thirteen from the beginning of the attack, she was convalescent. Discharged January 31st, four weeks after entrance. This case would come under the second class. The patient was of a healthy constitution, but was probably exhausted by hard work and the unfavorable hygienic conditions to which domestics are often subjected. The pulmonary congestion was relieved by stimulants, and she recovered after an illness of moderate duration.

Case II. Tim. Murphy, twenty-nine, good general health and family history. Pneumonic seizure six days before entrance. Entered January 4, 1883; pulse 94, temperature 101° F., respiration 30. Cough; rusty, adhesive sputa. On the third day after entrance temperature was 103.4° F.; the next day 99.8° F., and it gradually fell till the eighth day after entrance, when it became normal. Repeated examinations of the chest were made, but nothing abnormal was ever found. The urine showed a trace of albumen. He took no stimulants, and no medicine, except a little of the solution of acetate of ammonia. He was discharged, well, January 26th, twenty-two days after entrance. This case was one of the mildest sort. The disease was probably central, and so escaped observation by physical signs, but the history, the temperature, the expectoration, etc., were enough to establish the diagnosis. No treatment was required or given.

Case III. J. Avery, forty-one years, mariner, entered January 17, 1883. General health and family history good. Two days before entrance he had a chill, followed by pain in left side and back, increased by long breath, cough without expectoration, headache, and pain in limbs. Temperature 103° F., pulse 112, respiration 32. No râles and no friction sounds were heard. Two days after entrance the temperature was normal, there was a little bloody expectoration, and evidence of consolidation at the left apex. On the 23d he had an attack of tonsillitis, lasting a few days, but on the 31st all his symptoms disappeared, and he was discharged, well, fourteen days from his entrance.

It is not certain whether this really was a case of pneumonia, though so entered on the hospital books. There was evidently a pleuritic complication, and possibly a tubercular deposit in the left apex. The treatment consisted in fomentations to the chest, Dover's powder, and spirit of nitrous ether. For the tonsillitis cold applications to the throat, with an astringent gargle, were ordered.

Case IV. William Currier, twenty-six years, horse-car conductor, American. One sister died of consumption.



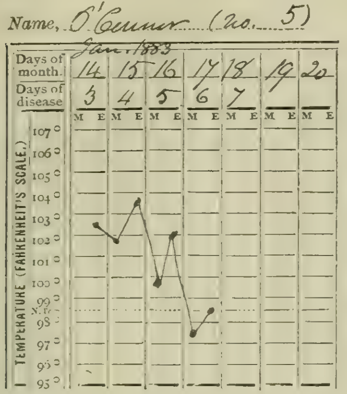
He had always been well, and had had no unusual exposure to cold or wet. Entered January 28, 1883. Two days previously he had a chill, with pain in every part of the body, but especially in the right side of the chest, where it was increased by deep inspiration or cough. There was dyspnœa, cough, reddish, sticky, expectoration, a little nausea and vomiting, and debility. Temperature 103.4° F., pulse 130, respiration 28. Dullness and fine crepitation in lower part of right chest, behind and at the side. The temperature fell to normal between the evening of February 1st and the morning of February 3d, — six and one half degrees. He then improved rapidly, and was discharged, well, February 9th, twelve days after entrance, and on the fourteenth day of the disease.

The temperature curve (Chart No. 4) will be seen to be typical. For treatment he had at first hot fomentations, with Dover's powder. February 1st he was ordered four drops of tincture of aconite every four hours with an ounce of whiskey. I do not think I could have been responsible for this strange combination, which may have been directed through inadvertence by the house pupil. The aconite evidently did no harm, but probably no good either.

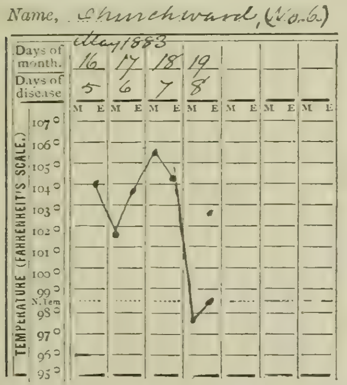
Case V. Michael O'Connor, twenty years, laborer, landed in Boston, from Ireland, May 6, 1883, well. On the 9th he had headache, vomiting, cough, and dyspnœa, but there was no definite history of chill. He entered the hospital May 11th, with a temperature of 102.2° F., pulse 100, respiration 32. Face flushed, dullness, and bronchial respiration in lower third of left lung, and a limited area of fine crepitant râle. Sputa orange colored, tenacious, and scanty. The following evening the temperature rose to 103.4° F., the highest point; then, in forty-eight hours, it fell to 97.5° F., and convalescence began. He was discharged, well, June 2d, nine days after entrance, and twenty-four days from the first symptoms. The treatment consisted in

Dover's powder, an occasional opiate for his cough, and whiskey.

This patient entered just at the end of the second stage, the most fortunate moment for a favorite remedy, for the change was sure to follow whatever should be given, or, as in this case, if nothing were given.

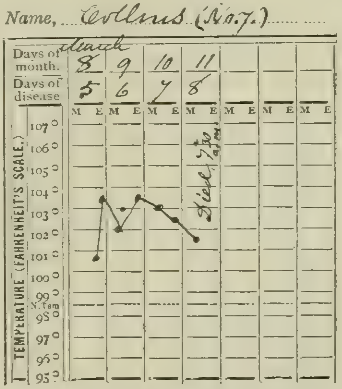


Case VI. James Churchward, born in the Isle of Jersey, thirty-two years, married, coachman. One brother died of consumption. Health always good; habits good. May 11th, after exposure to wind while driving, chilly sensations; next day sharp pain in left side, increased by drawing long breath, slight cough, and bloody expectoration. He entered May 16, 1883; temperature 104° F., pulse 106, respiration 36. There was a soft, direct aortic murmur, propagated into the carotid; also a soft diastolic murmur, in the same place, extending downward and across towards apex. Dullness in lower half of left back, with abundant fine crepitant râle. Expectoration brownish, adhesive, and scanty. On the 18th the temperature was 105.2° F. In twenty-four hours it fell to 97.8° F., a difference of 7.4° F., and convalescence began. Abundant friction sounds were heard in the left back and side after the pneumonic resolution. On the 17th the urine contained a slight trace of albumen, but no casts; chlorides diminished. June 1st he was discharged, well, sixteen days after entrance, and twenty-one days from the first symptoms. He took Dover's powder, a little morphia, the solution of the acetate of ammonia, and tincture of cinchona.



This patient entered just before the crisis, and consequently his rapid recovery might easily have been attributed to any treatment which happened to be employed. It is interesting to note that neither the condition of aortic insufficiency, perfectly compensated, indeed, nor a family history of consumption, had any unfavorable effect upon the course of his disease, which was typical. He was at first somewhat concerned because a "jacket poultice" was not applied, which he had always heard was the legitimate treatment for pneumonia. But he admitted that he was very comfortable, and on his departure expressed much gratitude for the relief he had obtained.

Case VII. Tim Collins, sixty years, longshoreman, widower. Family history said to be good. He had chills and fever several years ago, "typhoid fever" twelve years ago, and pleurisy of the left side eight years ago. Dyspnœa on exertion, debility, and loss of appetite for a year past, but he had kept on working. March 3d and 5th, respectively, he "vomited blood," but had no other gastric symptom. He had cough for two weeks, especially at night, which increased since the 5th. No chill. Entered March 8, 1883. Temperature 100.8° F., pulse 112, respiration 30. Face flushed; heart sounds very faint. Dullness in right side, with abundant dry crepitation; slight crepitation also below left nipple; no bronchial respiration heard; copious, adhesive, orange-colored sputa. The patient was too much prostrated to bear much examination. He failed rapidly, and died early in the morning of the 11th, three days after entrance. The temperature rose to 103.8° F. on the evening of the 9th. At the time of his death it had fallen to 101.6° F. The treatment consisted in stimulants and nourishment. The autopsy showed almost complete solidification of the right lung, a small amount of hepatization in the upper front of the left lung, the lower lobe œdematous and injected, with evidence of old pleurisy of the same side. The rectus abdominalis and numerous other muscles were infested with calcified trichinæ.

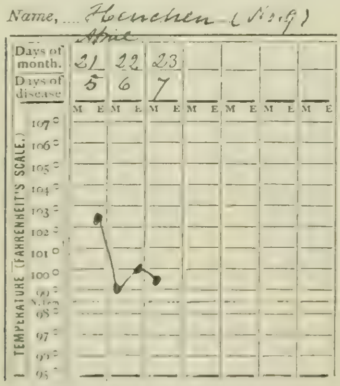


The discovery of calcified trichinæ in the muscles is interesting in connection with the history of "typhoid fever" twelve years previously, which had been evidently mistaken for the parasitic disease. The patient, like many of his occupation, was probably intemperate, and broken down by previous disease, and the case comes under the head of pneumonia in cachectic individuals. The only hope lay in active stimulation. As is not very unusual in such cases, the temperature was moderate, at least while he was under observation.

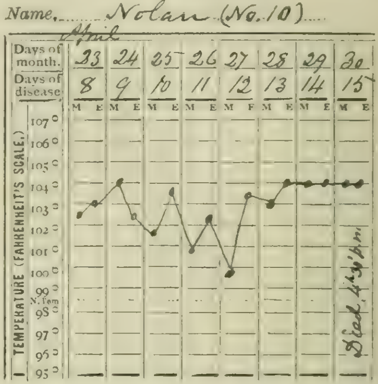
CASE VIII. McKeon, forty-four years, laborer; of good family history; said to have been a moderate drinker. No history of previous lung trouble. April 9, 1883, he fell into a cellar, injuring his left side. Twenty-four hours later he had a chill, cough, dyspnœa, pain in the left side, and diarrhœa. Entered April 15th, having walked half a mile to the hospital. Temperature 100° F., pulse 100, respiration 50. He was cyanotic, and could not breathe lying down. There was consolidation of lower part of left lung, with coarse moist râles over both backs and fronts. Tenderness in left hypochondrium. Sputa abundant, and of a dirty-chocolate color. His condition improved somewhat after whiskey and pilocarpine were given, but a few hours after entrance he suddenly became more cyanotic, and died.

This case belongs to the same category as the last.

CASE IX. Henchy, fifty years, laborer, phthisical family history, intemperate habits. No previous lung trouble. Five days before entrance general symptoms, with pain in the side, cough, rusty-colored sputa; no chill. Entered April 21, 1883; temperature 102.5° F., pulse 100, respiration 50. Subsultus, rapid and labored breathing, and small pulse; abundant, frothy, dark-brown sputa. Consolidation of lower lobe of left lung. The next day the temperature fell to 99° F., but the general condition was decidedly worse, and in spite of the free administration of stimulants he gradually failed, and died April 23d, the third day after entrance, and eighth of disease. (Same class as the preceding case.)



CASE X. Matthew Nolan, thirty-six years, teamster, married, said to be of intemperate habits. Entered April 23, 1883, having had a chill six days before, followed by pain in the left side, with cough and yellowish expectoration. He was much prostrated, and somewhat delirious. Temperature 102° F., pulse 96, respiration 59. Dullness, with bronchial respiration, in left front, from top to seventh rib. In upper part, also, coarse râles, and in lower fine dry râles. Corresponding signs in left upper back. Urine contained a trace of albumen; chlorides diminished; no casts. The delirium and prostration increased, and he tried to get out of bed. The temperature, which rose to 103.7° F. the day after entrance, fell gradually to 99.8° F. on the morning of the 27th (fifth day after entrance and eleventh of disease). The same evening it rose to 103.5° F., and on the following evening to 104° F., where it remained till his death, at 4.30 P. M. of the 30th, eighth day after entrance and fourteenth of disease. The treatment consisted in stimulants, opiates, and nourishment.



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"INFECTIOUS" PNEUMONIA, GANGRENE OF LUNG, FETID EMPYEMA. RECOVERY.[1]

BY HENRY W. BROUGHTON, M. D. (HARV.), OF JAMAICA PLAIN.

ANYTHING which can throw light upon the vexed question of the causation of disease is important. The following case seems to have been modified by, if indeed, it did not have its origin in, defective drainage.

Mrs. S., aged twenty-nine, the mother of several children, was at time of present illness a healthy, stout woman, with a good history. She had complained for a week of a slight cold accompanied by backache and malaise. On the afternoon of January 19, 1882, she was seized with a sharp chill with subsequent fever and sweating. This was followed by a second chill during the evening, a third equally severe on the following morning, and again a fourth on the next day. Her cough meanwhile increased, while sharp pain was felt in right side, aggravated by respiration. When first seen, on third day of illness, she was in bed, breathing with difficulty because of pain. Tongue covered with pasty coat. She had a short cough, with slight, whitish expectoration. Pulse 120; temperature 102.4° F. A physical examination disclosed dullness at base of right lung behind, with explosions of fine crepitant râles at end of inspiration. No friction sounds were heard. During the following two weeks the patient experienced a severe attack of acute croupous pneumonia, which involved the middle and lower lobes of right lung. In the first and second stage, the disease was apparently typical, with the exception of the frequent rigors at the outset. One trying and dangerous episode occurred on the fifth day, to which I ought to allude, as it nearly terminated the case. Pain in the side was a distressing and prominent symptom.

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[1] Read before the Norfolk District Medical Society, December 20, 1883.

A mixture containing tr. verat. viridis, tr. opii and nitre failed to control pain. I therefore felt obliged to order morph. sulphat., one fourth grain, in pill, to be repeated in three hours if there was no relief. On the next morning I found that the nurse, usually efficient and intelligent, had continued the morphia until one and one fourth grain had been taken. The patient was consequently in extreme peril. She was only rescued from lapsing into a fatal coma by vigorous effort. Brandy was administered subcutaneously, with whiskey and strong black coffee by mouth. Atropia sulphat., one thirtieth grain, was also given. After five hours of great anxiety on my part, she was out of danger as far as the morphia was concerned. The patient bore this ordeal well. Nothing abnormal was observed in the further progress of the pneumonia until the third stage was reached. It then became apparent that normal resolution of the solidified lung was not to occur. Upon the eighteenth day of illness the expectoration, which had been rusty and free, began to have a distinctly fetid odor, and a day or two later it became dark, like prune juice, with an extreme fetor. This unwelcome sign was accompanied by a recurrence of chills, an increase of fever, and marked asthenia. Coarse, moist râles were heard over the right back. For a week or ten days this condition continued. Expectoration was at intervals dark in color, almost black, and intensely fetid. At other times it was simply rusty or white with slight fetor, and occasionally tinged with bright red blood. In spite of free stimulation and the use of tonics and a generous diet, she was losing ground. It seemed probable, therefore, that there was somewhere in the affected lung a circumscribed gangrene.

There had thus far been no evidence of pleurisy, but on the fortieth day (February 28, 1882) there was positive evidence of an effusion into the pleural sac of the affected side (right). Chills again recurred with fever. The expectoration became more profuse, being still intensely fetid and dark colored. Sweet breath was also observed.

We therefore had to contend with a partially solidified lung, a portion of which was gangrenous, and a suppurative pleuritis, with a decomposition of the contained pus. The patient was rapidly sinking.

After consulting with Dr. Henry I. Bowditch and Dr. F. H. Williams I performed paracentesis. Twenty-two ounces of very thick, fetid pus were withdrawn. The fluid was at first gelatinous and mixed with bubbles of gas. Her strength at once began to improve, and in three or four days, when the chest gave evidence of refilling, a permanent opening was made, under strict antiseptic precautions, by Dr. A. T. Cabot, Drs. Bowditch, Williams, and myself assisting. This occurred on March 5, 1882, the forty-fifth day of illness. From fifteen to twenty ounces of thick, fetid pus were washed away. In two weeks the tube was removed, and a few days later the opening was healed. The patient's condition was now a hopeful one. The lung was beginning to expand, and a rapid convalescence seemed probable. Two events, however, occurred to retard this convalescence. The first was the sudden death of her father, which occasioned an intense mental shock. Secondly, after she had begun to sit up, and had even walked a few steps, she was suddenly startled by the crash of a falling lamp in the kitchen on the same floor. In great terror, and without aid, she ran to the scene to rescue her children. This effort utterly prostrated her. For more than a year she was unable to walk a step alone. Eight months after her illness, while still a cripple, she became pregnant, and in due time gave birth to a puny child who lived but a few days. From that date to this she has steadily improved in health, being now able to walk alone, and is making rapid progress.

In looking at the case in retrospect we remember that a young and healthy woman is attacked with pneumonia. The disease instead of pursuing a normal course presents several peculiarities. (1.) We recall that the onset, instead of being ushered in with the usual initial chill, is attended by several successive and severe rigors. (2.) We observe that the stage of resolution, instead of taking the normal course of ordinary pneumonia, is modified. Slight fetor of breath and of expectoration is noticed upon the eighteenth day, which is soon intensified, giving evidence of a circumscribed gangrene within the affected lung. (3.) After three weeks more a purulent effusion is found in the pleuritic cavity. Chills and rise of temperature indicate the decomposition of the contained fluid. The patient is sinking rapidly but is rescued by the operation for permanent opening.

In a discussion of this rare case many interesting and important questions might arise. We will, however, consider but one, namely, the ætiology. It would naturally be asked if there were not a discoverable cause for this abnormal and exceptional modification of simple acute pneumonia.

In order to answer this inquiry it will be necessary for us to investigate certain circumstances attending the illness. The family to which my patient belonged consisted of nine persons: a father, two daughters with their husbands and children. From October 17, 1881, to April 2, 1882, a period of six months, seven cases of sickness successively appeared in this family. With the exception of the first, I attended them all. Of these seven cases, four were ill with what, for convenience, I call febricula. They closely resembled one another both in the number and sequence of symptoms. The differences were those of degree or intensity. They were all preceded by headache or malaise, perfectly well marked, which constituted a prodromic stage. The attack in each of these four cases was ushered in by a distinct rigor, or by chilly sensations at least. Pyrexia followed with the nervous symptoms of pain in the back and head, nausea, etc. It is important to note that during the attacks there was a somewhat unusual constitutional depression, suggesting systemic blood-poisoning. Lastly, in each of these cases of febricula, there was a tardy convalescence, debility, and more or less anæmia persisting for several weeks, and in one case for a year (Case VII.). This is the familiar phenomenon after diphtheria and other infectious diseases. In addition to these four cases of febricula a girl, aged fourteen, was seized, on November 13, 1881, with what was reported by the physician in attendance to be typhoid fever. I saw the case just before death. The disease ran a rapid course and resulted fatally in five days. Next in the series was the case of pneumonia with gangrene and empyema; and six weeks later the father of the family, an old man, was taken ill with phlegmonous erysipelas. This began in the subcutaneous connective tissue of the back of the neck. The disease commenced with a chill, and soon a diffuse and severe inflammation involved the whole posterior aspect of the neck and shoulders. The temperature reached 104° F. The patient rapidly became delirious, then comatose, and died on the third day, before suppuration had become established, succumbing to the septic influences of the inflammation.

Case I.	Oct. 17, 1881.	Febricula.	Three days	Recovery.
Case II.	Nov. 13, 1881.	Typhoid fever.	Five days.	Death.
Case III.	Jan. 19, 1882.	Pneum., gang., empy.	Two years.	Recovery.
Case IV.	March 14, 1882	Phlegmon, erysipelas	Three days.	Death.
Case V.	March 15, 1882	Febricula.	Two days.	Recovery.
Case VI.	March 27, 1882	Febricula.	Five days.	Recovery.
Case VII.	April 2, 1882.	Febricula.	Four days.	Recovery.

In this series one important point should not be forgotten. The only members of the family who were exempted from illness were the two males, whose avocations kept them almost all day out of doors. This, with the other facts just mentioned, points suggestively toward some deleterious influence at home. The water used in the house was the Cochituate, and as sickness from its use was not noticed elsewhere, we cannot look to this as having an influence. Nor could I suspect the milk used, as other families were employing the same milkman without harm. Let me say, too, that the family where the sickness occurred is a respectable and industrious one, of neat and orderly habits, and not addicted to any of the common vices. They occupied a suite of rooms in a large and apparently modern building of good appearance. At my early visits in the family I did not notice any especial hygienic defect. There was not then observed any bad odor, and I had no suspicions as to the condition of the house. After the complications of gangrene and empyema arose, and the case of phlegmonous erysipelas followed, I was convinced that the drainage was defective. The Board of Health was notified, and courteously gave me the following entry from the books: "There is a defective drain where waste pipes enter the cellar. A joint is loose, bad odors escape. There are no traps whatever to the sinks in the house. There is no furnace. The soil pipes are not ventilated. Offensive odors from want of traps noticed."

A burning question in the pathology of to-day is, Is pneumonia an infectious disease, or is it a simple inflammation?

As is well known, Jürgensen, in the first edition of Ziemssen's Cyclopædia, expressed himself in favor of the infectious theory. In the second edition, not yet translated into English, we are aware that he has avowed himself a vigorous advocate of this view.

It is doubtless true that Jürgensen's theory has found many adherents in this country and abroad. Latterly much interest has been shown in a class of cases known as, "asthenic, adynamic, typhoid, contagious, epidemic, endemic," and the like. In this connection we recall various reports of what has been called "sewer-gas pneumonia." All are familiar with the epidemic mentioned in the Supplement to Ziemssen. This had its origin in the opening of the parish sewer located in the road nearly opposite a boys' school near London. The rooms facing the road were filled with foul-smelling sewer air. On the following morning a boy sleeping in one of these rooms was taken seriously ill with pneumonia. Others quickly followed, and one of the servants ultimately died. It is interesting to note that Sir William Jenner, whose son attended this school, predicted the attack of pneumonia as likely to follow the escape of sewer gas.

In the *American Journal for Medical Sciences* for January, 1876, Rodman describes most graphically a similar epidemic in a prison in Kentucky. In the course of a year one hundred and eighteen cases of pneumonia occurred, ninety-eight of which ran a peculiar course. This epidemic was plainly attributable to foul odors arising from hygienic defect. Ziemssen's Supplement also mentions Kühn's report of outbreaks in a jail in Hanover. Pneumonia here was also of a peculiar type. This important addition is made to his report: "There were also," he says, "numerous cases of an ill-defined febrile affection, the onset of which was preceded by pain in the head and back, and malaise. They ran a mild course with sudden defervescence about the tenth day, and were followed by a tedious convalescence." I was not aware of this report when I first made my conclusions, but they sound strikingly like the cases of febricula mentioned in my series.

Finally, in the absence of other known cause, is it not fair to infer from this combination of circumstances that sewer gas was the cause of, or at least an important modifying factor in, the case reported in this paper? Whether pneumonia is always an infectious disease is of course an open question. May not the conclusion in the Supplement to Ziemssen be, at least for the present, a safe working theory? "*Pneumonia is often simply an inflammatory disease, but it may depend on various miasmatic influences and then present decided variations in its course and symptoms.*"

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RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASE.

BY FREDERICK C. SHATTUCK, M. D.

INCISION OF THE PERICARDIUM.

SINCE the case of Rosenstein[1] three others have been reported. Partzevsky[2] communicated to the Moscow Physico-Medical Society the case of a man of twenty-three who, four years previously, had gone through an attack of right pleurisy with obliteration of the cavity, partial atelectasis of the right lung, chronic inflammation of its apex, and contraction of the right summit of the chest. He entered the hospital with the signs of left pleuritic and pericardial effusion of recent origin, and absorption soon began, progressing rather more rapidly in the pericardium than in the pleura, indeed, within six weeks all traces of pericarditis disappeared. In the seventh week, however, it was evident that the fluid was reaccumulating about the heart, although absorption was still progressing in the pleura. On the sixty-third day after admission the pleural effusion was gone, but the area of cardiac dullness extended from the right nipple to the left axillary line and upwards as far as the second rib; the cardiac region bulged outwards; the apex beat had disappeared,

[1] This Journal, 1882, vol. cvi., p. 158.

[2] London Medical Record, February 15, 1883.

the heart sounds were almost inaudible, and the pulse could scarcely be felt; respiration 52; there were extreme cyanosis and general weakness; swallowing was almost impossible. Under these urgent circumstances the author decided to remove pressure on the heart by tapping, and after an exploratory puncture with a hypodermic syringe an aspirator needle was inserted in the fourth [left?] interspace, within two inches of the sternum, and about two and one half pounds of brownish, turbid, serous fluid were drawn off. This was immediately followed by great relief (pulse full, regular, 96; respiration 36; decrease of cyanosis; easier deglutition), which, however, lasted only three days. On the fourth day the patient had a chill and a morning temperature of 102.7° F., and on the sixth the pericardium was again greatly distended. The symptoms of incipient pulmonary œdema led to a second aspiration on the eleventh day, but only three ounces of pus were obtained. On the following day, the condition of the patient growing worse, an incision was made in the fourth interspace, and two drainage tubes were inserted, through which an enormous quantity of pus escaped. The pericardial cavity was washed out with a salicylic solution (one to three hundred), and Lister's dressing was applied. During the next ten or fifteen hours the patient felt much better, but a sleepless night had utterly broken his remaining strength, and he died in a state of collapse about thirty hours after the operation.

The autopsy showed that the pericardium, which contained three ounces of pus, was greatly thickened and covered with false membrane, that the right ventricle was hypertrophied, and the cardiac muscle fattily degenerated. Both pleural cavities were obliterated, and the lungs atelectatic and œdematous. The liver was pushed up to the fourth rib, and fixed there by adhesions to the diaphragm.

Of the author's conclusions we have space only for the fourth: "In cases of purulent pericarditis it is perfectly justifiable to try an early operation in order to prevent dilatation and fatty degeneration of the heart, which generally supervene here very rapidly."

The second case was reported by Dr. West[1] to the Royal Medical and Chirurgical Society. A boy, aged sixteen, had a large pericardial effusion. The symptoms became so urgent that paracentesis was performed. Pus was obtained. Three days later paracentesis was again performed, and subsequently the pericardium was laid freely open, evacuated, washed out, and a drainage tube inserted. The temperature never rose, and the boy recovered entirely in five weeks, the only feature of interest being an attack of general urticaria, which came on a week after the operation, and lasted three or four days. The following points of special clinical interest were emphasized: (1.) The absence of any special signs to indicate the nature of the effusion. There was no friction to be heard before the operation, or mill-wheel sound characteristic of hydropneumo-pericardium after the free incision. (2.) The place selected for puncture and incision was the fourth interspace immediately below the left nipple. (3.) Fourteen ounces were removed by the first tapping, two quarts by the free incision. (4.) A peculiar epigastric prominence noticed before paracentesis disappeared after operation. (5.) An attack of urticaria. (6.) The pulsus paradoxus, which was constant up to the time of the free incision, disappeared immediately after.

The discussion which followed the reading of the paper was an interesting one, but we can only notice the remarks of Mr. Hulke, who advised the very cautious use of the trocar or needle, and careful dissection down to the pericardium in cases of free incision. He had himself, after medical consultation, in a case which was believed to be one of pericardial effusion, once inserted a trocar and canula somewhat boldly, and the withdrawal of the trocar had been followed by a jet of blood, which gave him great anxiety, but, happily, relieved the patient. A subsequent post-mortem examination showed him that he had punctured the right ventricle, and that the case was one of universally adherent pericardium.

The third case was reported to the Pathological Society of London, also by Dr. West.[2] The patient was a boy of fourteen who, ten days after a severe fall, developed an abscess in the left shoulder, which was incised, and subsequently counter-opened. In addition to pyrexia there were cyanosis and dyspnœa with the signs of pneumonia of the left base. Some days later a few ounces of serum were removed from the left pleura. A second puncture a little later revealed no fresh fluid. The pericardium was felt to be full of fluid by the finger inserted into the side wound, and was incised, with the removal of twenty-four ounces of pus. The patient was relieved for the time, but the dyspnœa and cyanosis continued, and the patient subsequently died in the ninth week from the accident. The autopsy showed a large abscess in the left thigh, and inflammation of the left ankle-joint. There was extensive thickening of the mediastinal tissues, the arteries being deeply imbedded in it. The left pleura was divided by adhesions into three parts, each containing serous fluid. The pericardium was in great part obliterated except at the apex; there was no obstruction of any of the vessels. Dr. West drew attention to the fact that in this case incision had entirely relieved the pericardium, which was rapidly tending towards obliteration fourteen days after the operation, and that death appeared to be due rather to the other lesions present. Dr. West held that surgical interference with the pericardium is not more dangerous than, if, indeed, so dangerous as, that with the pleura or peritonæum.

[Of the four recorded cases in which the pericardium has been incised two were uncomplicated and recovered, two were complicated and died, though apparently in spite, rather than in consequence, of the operation. In West's case the cause of death was pyæmia. In Partzevsky's there would seem to be a possibility that the patient might have recovered if the operation had been done earlier. These facts justify the measure, and indicate that it is likely to become a generally recognized method of treatment. As far as we know the experiments of Dr. Rotch, of this city, which tend to show that the fifth *right* interspace near the sternum is the safest place for aspiration in pericardial effusion, have not yet been put to the crucial test in the living subject. Whether this be the place of election for tapping or not, it is obvious that a free incision into the pericardium should be made in the left side. — Rep.]

AN ELASTIC RESPIRATOR AS A MEANS OF TREATMENT FOR EMPHYSEMA.[3]

The shortness of breath which characterizes this disease is largely due to the inability to expel enough air from the chest to make room for a fresh supply, the elasticity of the lungs being lost, and the thorax becoming fixed in the position of full inspiration. The idea of aiding expiration by artificial means is no new one, but pneumatic cabinets and Waldenburg machines for compressing and rarefying air are not portable, a fact which greatly limits the real service these methods, and especially expiration into rarefied air, may be made to render. Impressed with the desirability of having at command some comparatively simple means for exerting a more constant expiratory force in emphysema, M. Féris conceived the ingenious plan of applying a sort of truss to the chest much like that in use for double inguinal hernia. A pad is fitted to the spine with a spring extending from either side across the axillæ to the front of the chest, where the springs terminate in pads like those of a common truss, but larger and less thick. The two anterior pads are fastened together by a strap, and further held in place by straps over the shoulders. The author asserts that the apparatus, when well constructed, can be worn under the clothes without betraying its presence. That it may fit the chest so accurately as neither to be uncomfortable or unsightly, and not to embarrass the respiration it should be made to order for each patient. The pressure should, moreover, be applied where the emphysema is most marked, though those parts are generally the infra-clavicular regions. The action of the apparatus as an aid to expiration is readily understood; of course in inspiration the force of the spring must be counteracted, but this is practically no drawback as in these cases the inspiratory forces are usually increased by exercise.

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[1] British Medical Journal, 1883, i, 814.

[2] Lancet, 1883, ii., 991.

[3] Féris, Bulletin Gén. de Therapeutique, 1883, vol. cv., p. 104.

M. Féris says: "I have used the elastic respirator in thirteen cases of emphysema. From the moment that the apparatus is fitted respiration is established, and forthwith the patient exclaims that his oppression is gone. He can then walk, go up stairs, and sometimes even run, with less fatigue." A patient entered the hospital at Brest for advanced emphysema, and with the aid of a double inguinal truss, improvised temporarily as a respirator, went about the house with comparative comfort. He soon asked permission to go about the town, but the truss caused such an apparent deformity of his person that he did not venture to wear it in the street. He therefore went without it, but after going three hundred yards or so was so oppressed for breath that he was obliged to invoke the aid of a nurse to return. He then put on his chest truss, sallied forth, and remained seven hours.

Stethographic observations show that the respiratory movements are enlarged and diminished in frequency while the apparatus is worn. It is claimed, moreover, that the invention has also the following merits: —

After being worn for eight or ten days the prominence of the chest in the emphysematous regions disappears, and it becomes very difficult to determine by inspection alone the seat of the changes. Furthermore, asthmatic attacks are lessened in degree and frequency, a result not to be wondered at when it is remembered that inspiratory spasm is the characteristic of such attacks. Again, the tendency of emphysema to spread is checked, and it seems probable that the impediment to the pulmonary circulation resulting in engorgement of the right heart is diminished.

As for contra-indications, the author thinks that none really exist. A little time is needed for the patient to grow accustomed to the presence of his truss. The maximum benefits are to be looked for in subjects under middle life with emphysema of the upper lobes. Still the apparatus is worth a trial as a palliative in general emphysema, or in that form which is met with in old people whose costal cartilages are ossified. In one patient who had attacks of hæmoptysis before using the apparatus they were certainly not aggravated by it.

PULSATING EMPYEMA.[1]

The writer has collected twenty-seven cases of this rare and interesting condition, four of which have been under his own observation. In three of these four careful post-mortem examinations were made, and their results were so nearly identical that M. Comby is led to think the following physical condition necessary for the production of pulsating general empyema: the left lung, namely, must be thoroughly compressed and also adherent to the pericardium, in order that the cardiac movement may be transmitted through it to the fluid in the pleura. In ordinary cases of large effusion the lung is compressed toward its root, and the heart is forced independently toward the side opposite to the fluid, but in ordinary cases the fluid never pulsates; this can only occur when the pericardium and lung are adherent. The pulsation sometimes extends over a large area in the lower portions of the affected side, and is sometimes limited to a local swelling which has no constant position in the thorax. Cases are recorded in which the pus burrowed downwards and formed a pulsating tumor in the lumbar region.

With regard to diagnosis, the only affections which can well be mistaken for that under consideration are pulsating pneumonia, which is extremely rare, pulsating cancer of the lung, and aneurism of the aorta. As an aid which may be of service for the differential diagnosis in doubtful cases it may be mentioned that a murmur, so often heard over aneurisms, and not unknown over soft cancers, has never been observed over pulsating empyema. One would think there should be no great difficulties in the distinction between these diseases, and yet in several cases the abscess was allowed to open itself for fear that it might be an aneurism. One of these merits brief notice. A woman received a blow, and six months later began to complain of pain in the side; after a time a hemispherical tumor appeared at the left border of the sternum, between the third and fourth ribs, pulsating synchronously with the heart, and transmitting the heart sounds. An abscess was thought of, but aneurism being feared the patient was kept in bed for three years, the tumor growing all the time in size. The skin finally inflamed, and the pus began to discharge, but a fistulous opening persisted for a long time, and six years after the pains in the side came on the patient was sufficiently recovered to resume her occupation as a washerwoman.

The prognosis as regards recovery is very unfavorable. The existence of pulsation shows that the disease is of long standing, and that the left lung has consequently contracted such adhesions that it cannot be expanded. Little can then be hoped from incision and drainage unless, perhaps, generous resection of the ribs be also practiced. The few instances in which good results have been obtained seem to have been examples of circumscribed empyema near the heart and transmitting its pulsation. "Although the prognosis is fatal it is not the same for all cases; some remain long stationary, and tolerate their effusion and pulsation for several years, the right lung preserving its integrity, but if the right lung is diseased or the seat of tubercles the end comes in some months or weeks."

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[1] Les Pleurésies Pulsatiles (empyème pulsatile), Comby, Archives Gén. de Méd., 1883, November and December.

To sum up, pulsating pleural effusions occur only on the left side, are always purulent, indicate hopeless compression of the lung, and are incurable.

ANTISEPTIC INHALATIONS IN THE TREATMENT OF PHTHISIS.

English and German journals have of late years contained a number of articles advocating the more or less continuous inhalation of carbolic acid and other volatile antiseptics in phthisis, a method of treatment which is not unlikely to come more into vogue with the development of the doctrine of the bacillus tuberculosis. It is found that pure carbolic acid can be inhaled for hours from an oro-nasal respirator without causing irritation of the air-passages, and some observers, prominent among whom are Burney Yeo, Curschmann, and Fraentzel, are favorably impressed with the results. Dr. Hassall,[1] of London and San Remo, has published several articles which tend to show that the application of volatile antiseptics to the respiratory tract by means of respirators and atomizers is inefficient. One of the methods pursued in his investigations was to charge a respirator with a known quantity of the agent, allow it to be worn for a fixed time, and then determine by quantitative analysis the amount of loss of the antiseptic in the form of vapor. The loss after periods of one and two hours was found to be comparatively trifling, and the sputum raised after the respirator had been worn never had the least smell of carbolic acid. He found, however, that when the agent is used on a series of cotton screens suspended in a room at a temperature of about 70° F. it is almost entirely volatilized. Acting on these experiments he has constructed at San Remo an inhalation chamber with a cubic capacity of 1170 feet, one door and one window, no chimney or fire-place, but a register communicating with a small furnace. With the desire that this method of inhalation may be fairly tested Dr. Hassall will allow its use to medical men of all nationalities in San Remo, so that any of their patients may make use of it under the observation and guidance of their own attendant.

ENDEMIC HÆMOPTYSIS APPARENTLY DUE TO A PULMONARY PARASITE.

Dr. Manson,[2] of Amoy, China, read a very interesting paper on this subject to the Medical Society of London. He finds that the expectoration of blood, generally in small quantities and very frequently, and bloody mucus is a common affection in Formosa and Japan, and on examining the sputum from some of these cases under the microscope he discovered the constant presence of peculiar ova, one two hundredth to one five hundredth of an inch in diameter, and containing no trace of embryos. After cultivating the ova in water with proper precautions for four to six weeks he was rewarded by seeing in nearly every ovum the development of active ciliated embryos closely resembling those of Bilharzia and other distoms. Soon after this period the embryo succeeds in breaking through its investment, and rushes through the water, assuming various shapes, with its cilia in constant motion, apparently in eager search of its intermediary host. Through a fortunate train of circumstances, for the detail of which we have here no space, Dr. Manson obtained a specimen of the parent worm, which after having been some time in spirit measured half an inch in length by a sixth of an inch in breadth, and a third of an inch in thickness. It was sent to Dr. Cobbold, who pronounced it a new species, and named it, after the discoverer, Distoma Ringeri. It seems probable that the parasite is communicated from one person to another in some way by means of water, and the affection appears to be a counterpart of endemic hæmaturia. China, as far as is known, is free from the disease, which is a very chronic one. Dr. Manson thinks that the constant or repeated small bleedings cannot fail in certain cases to produce, in time, a state of intense anæmia, rendering the subjects of it very liable to attacks of dangerous forms of other diseases. Two patients were sent him from Formosa, and he kept them in his house for some time for purposes of study, treating them by inhalations of atomized solutions and infusions containing quassia, kousso, santonin, turpentine, and sulphurous acid. By these means one patient was apparently cured, but the other was not benefited.

NITRITE OF SODIUM IN ANGINA PECTORIS.

We now know that other nitrites besides that of amyl dilate the smaller arteries and lower the blood tension. It has been found that nitro-glycerine is a valuable remedy in angina pectoris, while Reichert and Weir Mitchell have used nitrite of potassium for epilepsy, and shown that it has effects which are almost identical with those of amyl. Dr. Hay[3] has used nitrite of sodium in one case of angina with marked good effect, complete relief following within two or three minutes after administration. In the same patient amyl gave only partial relief, and nitro-glycerine, though equally efficacious with the sodium compound, produced disagreeable throbbing in the head, which the latter did not. The effects of the sodium were also more lasting than those of the amyl. Of the pure drug one grain is probably as much as it is safe to give at first, but the pure drug is not easy to obtain. Dr. Hay found that a specimen obtained from a London manufacturing firm of the highest eminence did not contain more than thirty-three per cent. of the ni*trite*, the rest being ni*trate*. This fact should be borne in mind, and allowed for in case small doses prove useless. The drug is freely soluble in water. [It may be well to repeat a caution which has already appeared in print. In the last edition, namely, of Ringer's Therapeutics the dose of sodium nitrite is inferentially stated as *twenty* grains, an amount which might produce disastrous effects if the sample were pure. Drs. Ringer and Murrell[4] gave fifteen-grain doses of the impure drug to hospital out-patients, and reported the cases briefly, stating the disagreeable sensations produced in some patients. An outcry was made in the daily papers, and severe strictures were passed upon physicians experimenting on patients with drugs the properties of which are unknown. It was thought best to bring the matter to the notice of the government of the hospital, which formally exonerated Drs. Ringer and Murrell from all blame. — Rep.]

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[1] Lancet, 1883, i., 765. British Medical Journal, 1883, ii., 869. Lancet, October 6, 1883. Lancet, 1884, i., 106.

[2] Lancet, 1883, i., 532.

[3] Practitioner, 1883, i., 179.

[4] Lancet, 1883, ii., 766 and 880.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

STATED meeting, February 7th. The President, DR. FORDYCE BARKER, in the chair.

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER.

The special order of the evening was the discussion of the paper of Dr. T. Gaillard Thomas, on the above subject, read before the Academy December 6, 1883.

The discussion was opened by a paper by the PRESIDENT which was read for him by DR. GASPAR GRISWOLD. He said that the more eminent the authority from which they emanated, and the more admirable the method of their expression, the more dangerous to the profession and the community were erroneous views like those of Dr. Thomas, and the more necessary was it to refute them. Some of the points on pathology had never before been advanced by any other author, as far as he was aware, and he thought the whole tone of the paper was misleading because it was so thoroughly saturated with the idea of septic infection. He had adopted the view that puerperal fever was puerperal septicæmia, and it mattered not whether it assumed the form of metritis, phlebitis, cellulitis, peritonitis, or lymphangitis, the essence of the disorder was a poison, which was absorbed into the blood through some solution of continuity. The tendency to this pathology, which was the result of studying the disease in hospitals, had been rapidly growing in the last few years, especially among the German authorities; but he (Dr. Barker) had seen no reason to change the views which he had expressed in his work on the Puerperal Diseases, and he could not but state his conviction that in private practice, where septic influences rarely prevailed, twenty cases of puerperal fever, which were due merely to local inflammation, occurred to any one that was the result of septicæmia. Dr. Thomas had contended that the lochial discharge was a poisonous fluid, liable to infect the system through abrasions of the genital tract, and the prophylactic measures which he recommended were based on this theory. In his own opinion, however, this was a complete mistake, and in epidemics of puerperal fever (which sometimes broke out in rural districts after a long period of immunity) the disease differed altogether from septicæmia in its origin, modes of attack, symptoms, and anatomical lesions. In hospitals, where the epidemics were so frequent and fatal, he believed it to be due to nosocomial malaria. Dr. Barker then gave an account of an epidemic which occurred in the best portions and among the higher classes of the city, in New York, in 1873. That Dr. Thomas's views as to the dangerous character of the lochia were founded wholly on theory was proved, he thought, by the following quotation from his paper: —

"In every case the offensive fluid, called lochia, poisons these freshly made, unprotected wounds, and yet what are the usual results? Recovery uniformly, I might say universally, unless some unusual occurrence manifests itself to prevent this happy consummation. Theorizing about the matter, one would suppose that the mortality resulting from such a state of things must be excessive. . . . And yet the facts are these: only about one or two in every one hundred parturient women ordinarily die, when properly cared for during labor, even in public hospitals."

If, in the language of Dr. Thomas, she who was about to bring forth must be treated as one about to go through the perils of a capital operation, and if in every case of confinement the same preparations and precautions were to be made, as the surgeon insisted on in cases of ovariotomy, it seemed to him that it was the imperative duty of the State to make child-bearing a penal offense, except in those with sufficient means to enable them to carry out all the elaborate measures required. In this connection Dr. Barker quoted a letter recently published in the *Medical Record*, in which the writer said that after reading the reports of some of the late meetings of the New York societies, at which the extreme difficulty of preventing puerperal septicæmia was set forth, he would respectfully suggest to the Academy of Medicine the propriety of appointing a committee to devise means for requiring the fair sex (and if necessary enforcing the measure by law) to wear over the genitals from the appearance of the catamenia to the menopause an antiseptic pad, which should never be removed except under proper antiseptic precautions, such as the use of the carbolic spray. In Dr. Barker's opinion, when septicæmia was present in puerperal fever, it was simply as the result of antecedent trouble; the disease as a rule being due to other causes. In private practice occult atmospheric influences were, no doubt, often responsible for it; while in hospitals, as had been said, the trouble was apt to originate in nosocomial malaria.

In speaking of antiseptic injections, he said that while they were sometimes of service, their use was liable to interfere with the cicatrization of lesions resulting from labor. As long ago as fifteen years since he had employed intra-uterine injections, as would be found on page 320 of his Puerperal Diseases. While refrigeration might also be useful in certain instances, his experience with the method, as a rule, had not been favorable, and he then related several cases treated under his care at Bellevue Hospital, in which serious pulmonary symptoms had been occasioned by it. On page 476 of his work he had stated his creed, and unless some new facts could be educed to convince him of the correctness of Dr. Thomas's views on puerperal fever he expected to die impenitent.

At the conclusion of the paper DR. BARKER made a few additional remarks, in which he said that nearly thirty years ago he had used vaginal injections, of Talanague's solution, for a week after labor, and later had used carbolic acid in place of it. This practice he had habitually followed until within the last three years. By some observations made by Mr. Thomas Keith, of Edinburgh, during the International Medical Congress in London, in 1881, he was induced to reduce the strength of the carbolic acid injections one half, and during the past two years he had given up their use altogether. He did this with the less reluctance because he believed it to be a fact that the strength of any carbolic acid solution that could be used was not sufficiently great to destroy deleterious micro-organisms, if any were present; and he had been abundantly satisfied with the result, since during the last two years neither himself or his colleague, Dr. A. A. Smith, had had a single case in which there had occurred the slightest interruption to perfect convalescence after parturition, or in which anything more than the ordinary attendance was required, namely, one daily visit for nine days.

Dr. W. M. Chamberlain made some remarks in regard to the advantages of the tube which he had devised, and stated that he had anticipated one of the modifications of its construction which Dr. Thomas had suggested, namely, bringing the holes nearer the extremity.

Dr. H. T. Hanks spoke of the prevalence of puerperal fever in the country as well as the city, and gave some statistics of the disease in New York, from which it appeared that during 1883 262 patients had died from it, while during the past five years there had been 1005 deaths. From his own experience it was clear to him that no hypothesis could satisfactorily explain the phenomena met with in it except septicæmia, and, consequently, he agreed in the main with Dr. Thomas's plan of prophylaxis and treatment. The ante-partum injections, however, he thought unnecessary, and the use of ergot three times a day for a week seemed to him unjustifiable and harmful, except in cases where the uterus did not contract well. After more remarks on the primary operation for lacerated perinæum, he spoke of the treatment of puerperal septicæmia, and begged to add two suggestions: The first was in reference to the use of aromatic spirits of ammonia, which he advised to be given in half-teaspoonful doses every two hours, and the second was, that a bed-pan should be used when making intra-uterine injections, instead of moving the patient to the edge of the bed. He had devised one of block tin, upon which the patient could lie with perfect comfort, and he now exhibited this to the Academy. In conclusion, he said there were four assistants upon which he relied in every case of confinement which he was called upon to attend, and these were: Pure air, absolute quiet, judicious diet, and appropriate antiseptic precautions.

Dr. W. T. Lusk expressed the opinion that puerperal fever and surgical fever were absolutely identical, and that certain apparent differences were due simply to the anatomical differences between a clean cut wound and the condition of the genital tract after parturition, in regard to which it was necessary to take into consideration especially the capacity for rapid absorption and the nearness of the parts to the peritonæum. A great deal of difficulty and difference of opinion had originated, he thought, in not recognizing the distinction between putrid intoxication and septicæmia. This difference depended on the presence or non-presence in a decomposing fluid of special micro-organisms; and the treatment that was appropriate for one condition was not at all adapted to the other. The rod bacteria were not absorbed in the human subject, and the putridity of any discharge was not the source of septicæmia proper. It was only the warning that round bacteria, which were capable of being readily absorbed, multiplied, and distributed to various parts of the system, were likely to be generated.

In regard to the matter of prophylaxis he thought that too much of a burden in the way of detail should not be placed upon the practitioner, and, for one thing, he did not believe that the antiseptic washing of the walls and furniture would be of any service, as he had done this faithfully in the lying-in wards of Bellevue Hospital, and it had never had the slightest effect. If in any house, however, in which a woman was to be confined, there had been a case of scarlet fever, diphtheria, or other infectious disease, he would advise that the room should be fumigated with sulphurous acid, if this had not already been done. He would also advise that patients should never be confined in rooms adjoining water-closets, as the puerperal woman was peculiarly susceptible to sewer-gas poisoning.

After an ordinary labor there was not likely to be primary decomposition in the cavity of the uterus, since the air was excluded from it. In the vagina, however, where there were heat, moisture, and air, the conditions were somewhat different, but if vaginal injections were made as soon as any bad symptoms appeared, all difficulty would be avoided. In labors in which it was necessary to introduce the hand or instruments into the uterus, those conditions were left which would be likely to result in putrid intoxication, and in every such case it was the duty of the accoucheur to thoroughly wash out the uterus at the time of the labor. In any case of puerperal fever where there was not a "puddle" in the uterus, there was not the slightest use in washing it out (though perhaps one injection might be made by way of precaution), as the septicæmia from which the patient was suffering was entirely beyond the reach of any such means of treatment as this. When last summer he had visited a number of the principal lying-in hospitals of Europe, he had found that it was universally the practice to wash out the uterus only in cases where air had been admitted to its cavity during labor. In Vienna they now used a suppository of iodoform with gum tragacanth, and while, up to a recent period, the mortality had been five or six per cent., during the last year there was only an average of one death in two hundred confinements. In Prague (where, however, the iodoform suppositories were not used) there had been 1100 cases of confinement without a single death, but it was only since the indiscriminate use of injections had been given up that these good results had been obtained. They were now never resorted to except where well-defined indications were present.

Dr. P. F. Mundé related his experience with the disease, and said that while, as a rule, puerperal fever and puerperal septicæmia were undoubtedly the same thing, there were certain cases in which he agreed with Dr. Barker, that sepsis was not the prime cause. In speaking of the treatment, he dwelt upon the dangers connected with the use of the intra-uterine tube, and said he agreed with Dr. Lusk, that it should only be employed to meet certain well-defined indications. Even then the injections should be discontinued at as early a period as possible.

The Chair now asked Dr. Thomas to close the discussion. In commencing his remarks he spoke of a murder trial at which he had been present when a lad, in which the counsel for the prisoner, when called upon to speak after the prosecuting attorney, simply said, "May it please your honor, the case is closed — I rest it here. The gentleman on the other side has made so able a speech in favor of my client that I rely upon it for his acquittal," and the prisoner was acquitted. Dr. Thomas said that he felt very much in this way in regard to Dr. Barker's paper; but as discussions such as this could not fail to do good, he thought it would be well to say a few words in self-defense. After mentioning his regret that the President had seen fit to use against him a two-edged sword like ridicule, which was, however, the poorest of arguments, and which only indicated the weakness of his position, he said that Dr. Barker's attack called for no rebuttal and demanded no argument on his part, as he was perfectly willing to stand by the position of his paper of December 6th, in which he had said all that he had to say on the subject under discussion. There were, however, one or two points upon which he felt it necessary to touch in order to avoid misrepresentation.

Dr. Barker appeared to object to the fact that in his pathology he had not stuck closely to the dicta of the text-books, and hugged to his soul the tenets of a bygone time, as he himself had done; but if he had had no opinions of his own, founded upon thirty years' practice in a large metropolis and experience in great hospitals, he would not have appeared before the Academy at all. In accordance with the recent views of pathologists on this subject, however, it was his antagonist's opinions that were effete, and not his own that were jejune. As far as he could gather anything certain from Dr. Barker's discursive paper, the pivotal idea of his attack seemed based upon the belief that he (Dr. Thomas) regarded the lochial discharge as a poisonous fluid, which, by absorption by abrasions in the genital tract, gave rise to puerperal septicæmia. Such an absurd idea had never entered his mind. What he did state was, that the lochial discharge was a material ready to take on those alterations which were effected by micro-organisms of bad character, and which, changing its nature, rendered it poisonous to the abraded tissues. He believed that it would be found that the pathology which he had offered in his paper was merely abreast with the views of the advanced pathologists of Germany, France, and Great Britain. As to the pathology of his adversary, Dr. John Thorburne, of Manchester, England, very justly expressed concerning it, he thought, the accepted view of the profession, when, in a foot-note to an article upon Metria, in the *British Medical Journal* of August 11, 1883, he said: "It would be inexcusable not to make some reference to the very able papers of Dr. Napier in the *Obstetrical Journal* for 1880, on Puerperal Fever. He, along with Fordyce Barker, defends the old position of a specific puerperal fever *sui generis*. . . . I can only say that his invaluable collection of facts produces in me an opinion diametrically opposed to his own."

As to the want of thoroughness and sketchiness of detail with reference to his description of symptoms with which his critic had upbraided him, Dr. Thomas remarked that he had intentionally assumed this style, as his paper was distinctly announced to be one upon The Prevention and Treatment of Puerperal Septicæmia, and upon nothing else. The subject of that paper was the only legitimate one before the Academy at this time, and he hoped that those who had entered into the discussion to-night would pardon him for saying that we had heard a great deal in the way of repetition as to pathology, a great deal about tubes and the number of holes which should be made in them, and diverse opinions as to whether or not a suppository of idioform should be put into the vagina, and small doses of ergot given for a week or so post partum; but these were non-essentials, and hardly worth the valuable time which had been given to them, when so much of greater importance remained to be considered. The clinical questions which were before the Academy to-night were these: (1.) Are we to look upon puerperal septicæmia as a poison due to the development of micro-organisms, and are we by every means in our power to guard against the contact of these with the genitals of the puerperal woman? and, (2.) When the disorder is developed, is it best for us to keep our patient semi-narcotized and quinineized while the distended abdomen is covered with stupes of turpentine or poultices, and then await the result, as has been formerly done, or are we to seek to destroy the septic germ which has invaded the genital tract by means of local applications? These were the great questions. The other points were not essential.

Dr. Thomas then went rapidly over the suggestions which he gave in his paper for the management of ordinary confinement cases. In regard to the first, as to cleansing the lying-in chamber and applying antiseptic solutions to its walls and floors before labor set in, this seemed to appear to some like one of the labors of Hercules, but there was really no difficulty about the matter. He then described how simply it might be accomplished, and went on to say that although, as Dr. Lusk had seemed to find, it might not be of much benefit, he had never seen it do any harm, and until he did so he should feel that it was safe to resort to it. But at the same time he did not regard this cleansing of the chamber by any means essential. If, however, he needed any defense for having pressed the claims of cleanliness in this regard he hoped it would be found that he who offered rules for a system must aim high, and not low; that, aim as high as he might, many would fall below the standard, and that if a low level were assumed no one would go above it and take a higher. Dr. Thomas dwelt for a short time on his second and third suggestions for prevention, which are as follows: (2.) "The nurse and physician should take care that all their clothing, both under and upper, be clean and free from exposure to the effluvia of any septic affection. Should either of them have been exposed within a fortnight to the effluvia of such affections as scarlet fever, typhus, erysipelas, septicæmia, or the like, they should change every article of clothing, and bathe the entire body, especially the hair and beard, with a reliable antiseptic solution. That which I prefer for this purpose is a saturated solution of boracic acid." (3.) "As labor sets in the nurse, having thoroughly washed her hands, cleansed her nails with a stiff nail-brush, and soaked them in antiseptic fluid, should administer to the patient a warm vaginal injection of antiseptic character, bathe the vulva and surrounding parts freely with the same, repeat this every four hours during labor, and keep a napkin, wrung out of the warm antiseptic fluid, over the genital organs until the birth of the child." His fourth suggestion, he said, merely related to cleanliness of the hands on the part of doctor and nurse. And no one, he thought, would quarrel with the fifth, which merely required the physician to attend intelligently and faithfully to the performance of the third stage of labor, and the examination for and closure of wounds about the vagina and ostium vaginæ. In regard to the seventh suggestion, the use of vaginal injections every eight hours, beginning eight hours after delivery, he said that the arguments which had been brought up against this practice since he had read his paper had had great weight with him, and that he had to confess that he felt less firm in his convictions upon this point than he did. In the future, therefore, he would examine the question carefully before he determined to adhere to his plan. The rest of the rules would be so certainly agreed in that he could not question the concurrence of all, even of the eminent authority, the President of the Academy, who regarded his efforts as so hurtful to progress and so dangerous to the community.

Passing to the means which he had suggested as to treatment, Dr. Thomas stated that with reference to his present views upon the use of cutaneous refrigeration for the controlling of high temperature, however produced, and occurring in the course of whatever disease, he could only say, after a very extensive experience, that were the laws of the country to prohibit a resort to this method he would be unwilling to continue the practice of his profession, for then he could not do so without relinquishing what he sincerely believed to be one of the most valuable therapeutic resources at the disposal of the physician. In regard to intra-uterine injections, he said that if he had expressed himself in such a way as to allow it to appear that he resorted to them with very little provocation, and upon all occasions when hyper-pyrexia supervened after childbirth, no impression could be more erroneous. No one could have striven more than he had done to keep within proper bounds the indiscriminate use of this valuable but dangerous resource. He hoped that Dr. Barker would here allow him to offer a most full and sincere apology for not having accorded to him in his paper the credit which was his due in connection with the introduction of intra-uterine injections into obstetric practice, as the omission was due to ignorance of the facts which he had stated, and not to any intentional neglect.

He had not been surprised, he went on to say, to notice, among other criticisms of the preventive measures which he had suggested, a tendency on the part of some to ignore the necessity for them, especially in private practice, and he had come here prepared to use some statistics which would invalidate this position. He would not use these, however, but employ in their stead some which had been offered by the speakers of this evening. Dr. Hanks declared that more than 250 women died from puerperal septicæmia in this city last year; that was 250 to 1,000,000 inhabitants. The United States probably contained, in round numbers, 40,000,000 inhabitants, which would give us 10,000 deaths in one year, and in twenty years, which was about the average child-bearing time of women, 200,000 deaths. Surely this looked as if something ought to be done to lessen the mortality of this disease. That the plan which he had suggested would accomplish this result he thought was proved by the statements of Dr. Lusk, who had just told them of the remarkable results obtained in Prague since the adoption of a similar plan. Some might object that these were the statistics of hospitals, and that the disease was certainly rare in private practice. Such was not the case, however, for in the two months that had elapsed since he had read his paper he had been called to no less than five cases of puerperal septicæmia, all of which were of the most desperate character. Dr. Thomas mentioned the different practitioners with whom he had seen these cases in order to show, as he said, that instances of the disease occurred even under the most favorable circumstances as to social surroundings and medical care, and then concluded his remarks in the following words: "I feel very sure, gentlemen, that you will give full credence to two statements which I make in bidding you good night. First, that I have no wish to be dogmatic and uncompromising in reference to the rules which I have suggested for the prevention and treatment of puerperal septicæmia. Second, that if venom has seemed to flow from my tongue it has not reached it from my heart, which has been entirely free from it, and that if I have seemed to strike too trenchant blows at the honored head of our President I have struck purely in self-defense at one for whom I would yield to no man in respect, admiration, and affectionate regard."

ESSEX NORTH DISTRICT MEDICAL SOCIETY

QUARTERLY MEETING, WEDNESDAY, JANUARY 23, 1884.

REPORTED BY E. P. HURD, M. D., CORRESPONDING SECRETARY.

A quarterly meeting of the Essex North District Medical Society was held in Lawrence, January 23d ult., at the house of Dr. C. N. Chamberlain, President.

An interesting paper was read by **Dr. Leslie**, of Amesbury, on Ovarian Pain. Several illustrative cases were reported by the reader.

Dr. Howe, of Lawrence, read a paper on

ADDISON'S DISEASE,

reporting one case.

A year and a half ago Dr. Howe was called to attend A. B., female, unmarried, aged twenty-four years. Of naturally fair complexion, she suddenly became bronzed; face and neck, hands, arms, and thighs of a dark-brown color; bronzing less marked over chest and back; dark areola around nipple. The discoloration even invaded the gums and mucous membranes. Patient rapidly lost strength, and in one month died in collapse. No autopsy. The reader gave a brief history of Addison's disease, regarding it as a chronic inflammation of the supra-renal capsules, terminating in caseous degeneration of the inflammatory products and of the elements of the tissues themselves. The cause of the bronzing is unknown.

Dr. Hosmer, of Watertown, President of the State Society, who was present by invitation, gave an oral report of three cases which had come under his observation. In one of these cases, a patient of fifty-three, phthisical, and ill for some months, the autopsy disclosed supra-renal capsules enlarged and transformed to cysts containing liquid. A prominent symptom in this case was palpitations, coming on without any known cause, due probably to some fault of innervation.

In all of Dr. Hosmer's cases excessive prostration with irregular action of the heart, headache, etc., accompanied the tanned appearance of the skin, characteristic of the affection. Patients of naturally fair complexion become so bronzed as to resemble mulattoes.

Dr. Howe, of Newburyport, reported two similar cases occurring in his own practice, in which the bronzing was accompanied by anæmia and debility. In one case where the patient died suddenly an autopsy was held which revealed atrophic degeneration of the capsules. All treatment seems unavailing in these cases.

Dr. G. M. Garland, of Boston, gave an interesting discourse on

THE TREATMENT OF GLEET AND GONORRHŒAL STRICTURES BY OTIS'S METHOD,

illustrating his remarks by citing results from his own private and hospital practice. Formerly it was taught that strictures were the consequence of prolonged gonorrhœal irritation. Otis, of New York, has revolutionized the theory of the location of strictures. There are certain places in the urethra with physiological narrowing which back up the secretion, so causing irritation, inflammation, and granulation of the mucous membrane and inflammatory submucous thickening and stricture. The first of these is from one half to one inch from the meatus. A case having a slight stricture here (24 French, while the urethra behind was 34) was operated on three weeks ago, and the gleet is now entirely well.

Otis shows that the ratio between the size of the urethra and circumference of the flaccid penis is physiologically constant. A penis with a circumference of three inches should admit a sound of No. 30 French. One of four inches a No. 40 French. No. 38 French is frequently used, after cutting slight strictures, with no pain at all. Any stiff instrument below 15 in size is dangerous to use in these cases, and a soft catheter should be employed rather than a stiff one.

In searching for strictures a large sound stretches them, and gives no satisfactory evidence. Hence a full set of acorn bulbs or one of Otis's urethrometers should be used, which has a gauge for the size of its bulb from 12 French upwards. Pass this instrument deep into the urethra and distend till it causes discomfort, then begin to draw back easily without force till it brings up at a stricture. Now read off its distance from the meatus, and relax the bulb till it passes through, noting the size of the stricture by the reading of the gauge. Then distend again, and repeat as before. In one case five strictures were distinctly located between the ligament and the meatus. There had been here a gleet of twenty years' standing. These strictures vary from 19 to 28 or even 35 French. The next step is to cut them. Otis's method can limit the cutting with a scientific exactness. All other methods trust more to luck.

In divulsion there is no control or knowledge of the amount of injury. The urethra is made tense by Otis instrument, and cuts of exact locality, length, and depth are made. The instrument is removed and bulbs passed, and if any trace of stricture remains the operation is repeated.

Otis, now, never does the operation in the membranous portion of the urethra. Here slow, careful stretching is alone allowable.

One case of Dr. Garland's had penile strictures allowing only a No. 9 bulb. These were cut up to No. 34, and then the membranous portion was still closed and it was impossible to get into the bladder. But after healing from the operation, a No. 12 was passed, and by two sittings this was increased to No. 18 French, and the patient was back at work.

If membranous strictures cannot be cured by slow dilatation, the only resort is perineal section. The preparation for the operation should include dosing with liquor potassæ for a day before, and the urine should be kept alkaline through the healing stage.

As a rule give quinine; keep the bowels empty. Ether is advisable for deeper strictures, but not for those at meatus.

As a rule, do not operate till the acute inflammation has subsided, though this need not deter in urgent cases. Cut on the upper surface of the urethra in deep strictures, but below in those near the meatus. Let the patient alone for forty-eight hours, without catheter, as urine will be passed without harm.

An attendant ought to be by for twenty-four hours, as there is danger of secondary hæmorrhage, especially if an erection occurs during sleep. Especially is this to be feared in about eight or ten hours after the operation. In forty-eight hours pass the catheter every other day, and distend gradually with the sound, until by the eighth or ninth day the passage should be fully distended, as it heals quickly about this time and a serious contraction may otherwise occur. Generally keep the patient in bed a week. If the cuts open the urethra to No. 36 French, it would be expected to heal, allowing passage of No. 33.

While the operation is simple it still necessitates great care. The danger from hæmorrhage is slight, as it is always easily controlled. Some patients lost only three or four drops of blood. A temperature above 100° F. is rare.

Dr. Garland's oral discourse was followed by a brief discussion, in which several of the members related their unsatisfactory experience in the treatment of urethral strictures with the older methods of gradual dilatation and divulsion.

The meeting ended with a sumptuous entertainment provided by Dr. Chamberlain.

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ANNUAL MEETING OF THE MASSACHUSETTS MEDICO-LEGAL SOCIETY.

W. H. TAYLOR, M. D., SECRETARY.

NEW MEMBERS. PUBLICATIONS. COMMITTEES. ETC.

February 6, 1884. The meeting was called to order at 12.15 p. m., by President **Presbrey**. Present, twenty-one members. Records of the last meeting were read and approved.

The nomination of Medical Examiner J. M. Crocker, of Provincetown, as a regular member of this Society, was referred to the Executive Committee, with instructions to report at this meeting.

The **President** announced that Clark Bell, Esq., President of the New York Medico-Legal Society, had made certain propositions to the Society regarding publication of the transactions, and representation in the *New York Medico-Legal Journal.*

On motion of Medical Examiner **Pinkham**, the papers were referred, without being read, to the Standing Committee, with power to act in the matter.

The Executive Committee having reported favorably upon the nomination of Medical Examiner Crocker, he was unanimously elected to regular membership.

Theodore M. Osborn, Esq., of Peabody, was unanimously elected an associate member of the Society.

Corresponding Secretary **Pinkham** made a partial report of the work of medical examiners, and gave his views upon methods of making returns, which elicited some discussion.

Medical Examiner **Tower** read an obituary notice of Medical Examiner W. M. Parker, of Milford, at the time of his death a regular member of this Society.

Upon motion of Medical Examiner **Tower**, voted to note the fact of such reading upon the records of the Society.

Voted, upon motion of Medical Examiner **Draper**, that the Standing Committee be authorized to select cases from the files of the Society for publication in *The Boston Medical and Surgical Journal.*

Upon motion of Medical Examiner **Tower**, voted to appoint a committee of three to consider the law of medical examiners as to its defects and needs, with a view to changes therein, the committee to report at the next meeting of the Society. The President appointed Medical Examiners Tower, Draper, and Hosmer such committee.

Medical Examiner **FISH** read a valuable paper on External Appearances of Pistol-Shot Wounds, which was received with applause by the Society, and led to considerable discussion.

◆

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

FEBRUARY 11, 1884, the President, DR. CHARLES D. HOMANS, in the chair.

DR. F. C. SHATTUCK exhibited a patient with

MULTIPLE SARCOMA OF THE SKIN,

under treatment by hypodermic injections of Fowler's solution, from four to six minims once daily.

DR. FRANCIS MINOT read a paper on

THE TREATMENT OF ACUTE PNEUMONIA,

which may be found on page 169 of this number of the JOURNAL.

DR. C. E. STEDMAN spoke of the untrustworthiness of statistics of the disease. Grouping a number of cases, subjected to the same treatment, but necessarily omitting to note their severity, is of no value. Trousseau's statistics omitted the cases that would have recovered at any rate, and gave him a mortality of eighteen per cent. Grisolle's, also leaving out light cases, sixteen per cent. Wurmb and Caspar twelve and fifty-five hundredths per cent., treated with bleeding and drugs. The homœopathic hospital in Leopoldstadt ten and a half per cent. The readings of papers like Dr. Minot's is of far more value to students than the study of statistics.

The speaker referred to the importance of rest. He mentioned a patient with single pneumonia doing well, who on the seventh day was moved on to a lounge by officious friends, anxious to make the bed, and who died three days later in consequence, as he believed, of being moved about. He was pleased to hear the jacket-poultice disapproved of. It is dirty, and it is no light thing for a patient to raise two or three pounds of mush forty times a minute. Flannels wrung out in warm water will amuse busy attendants as well. He supposes every one cautions patients against talking. It is of the greatest importance. Examinations of the chest are of course necessary until the diagnosis is made. After that they should be as seldom as possible. Dr. Stedman spoke of the striking effect of a change of position. He once had a lady propped up in bed, intending to bleed her for an access of dyspnœa, but getting her up relieved her so much that he left her unbled. She remained propped up all night, and finally recovered. He thinks that the pulse is the indicator for stimulants. A patient with a pulse of 115 or lower always does well unless there is some fresh warning.

DR. J. B. AYER had rarely known the discomfort of a jacket-poultice to be complained of. If the front and back are separate the back need not be often changed.

DR. MINOT, in answer to the last speaker, said that he never gave quinine as a sedative.

DR. H. W. WILLIAMS asked the reader what is the incubation period of pneumonia.

DR. MINOT answered that it is probably a short one. It is hard to settle the question.

DR. WILLIAMS said that homœopathic statistics had been referred to. When he was in Vienna he had been to the homœopathic hospital to see if anything of value could be picked up, and had seen numbers of cases called pneumonia, but not having so far as he could see symptoms warranting the name. On asking the reason for the diagnosis he was told by an attending physician that these patients would have pneumonia if it were not broken up.

DR. MINOT, to a question of Dr. H. C. Haven's, said that he thought a nursing child with the disease would continue to nurse. He, however, rarely sees the disease in children under a year, though often between one and three years. Bailly and Legrange show that many cases of atelectasis pass for pneumonia, giving rise to another variety of statistics. When a student at Paris in 1845–1847 tartar emetic was given at the *Enfants Malades*. Many died.

DR. R. H. FITZ asked if there is evidence of contagion.

DR. MINOT answered no. We often have more than one case in one house. The disease is not communicated to other patients in hospital wards, so far as he knew.

DR. C. E. STEDMAN said that during the late war pneumonio was supposed to be contagious on the receiving ship Ohio. She was greatly crowded in cold wet weather, and there was excessive mortality. He was himself on medical duty at the yard, and knew the opinion of the medical officers of the ship.

DR. F. C. SHATTUCK alluded to the report of an apparently similar outbreak which took place on some English war vessels in the Mediterranean. A very recent number of the *Zeitschrift für klinische Médecine* contains an article by Mendelssohn on the infectious nature of pneumonia. This writer has made a pretty full collection of the literature bearing practically on the infectiousness and contagiousness of this disease, and has also availed himself of the discovery of an organism peculiar to it by Klebs, Koch, Friedländer, Leyden, and others. The latter has found the parasite in the material which he withdrew from the solidified lung of a living patient by a hypodermic syringe. Mendelssohn's article is not fair in some respects. He speaks, for instance, of some very interesting prison epidemics, notably those reported by Rodman and Kühn, as if they were of pneumonia pure and simple. Any one who takes the trouble to consult the original articles will see that the cases differed widely from the common lung fever, which, as Dr. Minot remarks, has always until of late been classed among the local inflammations. It is true that in these prison epidemics there was pneumonia, but there were also albuminuria, swelling of the spleen, pericarditis, and other indications of septic infection in a very large proportion of the cases. There seems to be no reasonable doubt that over-crowding and defective sanitation played a very important rôle in these epidemics.

DR. F. GORDON MORRILL referred to experiments when the sputa was injected into each of seventeen rabbits. The five rabbits who survived five days were then killed, and found to have hepatized lungs.

DR. F. H. WILLIAMS spoke of cases in which the peculiar ratio of pulse to respiration does not occur. He had seen a patient whose respirations are commonly ten or twelve, but were increased to sixteen or eighteen during pneumonia, the pulse becoming one hundred and twenty to one hundred and thirty.

Dr. H. C. Haven showed a specimen from a case of

CEPHALHÆMATOMA.

Dr. Fitz mentioned the condition of the specimen as it appeared soon after the death of the infant. The unusually small quantity of blood present, considering the area of detachment, was specially noticeable, and permitted a relatively close contact between membrane and bone. Osseous scales were to be found in the detached periosteum as well as the bony ring at the attached margin, both giving evidence of the rapidity of bone growth at this early period of life.

The sudden disappearance of the larger part of the contents of these tumors was, to the best of his recollection, a very unusual event in their history. Although a discoloration of the skin might well result from the rapid absorption of large quantities of blood-coloring matter, he thought it unlikely that such absorption should give rise to disturbance of nutrition. As a rule weeks and months elapse before the contents of these tumors are removed without operative interference, and most physicians would be pleased to see a more rapid disappearance. A septic poisoning as a result of opening the sac has often arisen, but he was unaware of any instance of injurious effects from the absorption of the contents of a cephalhæmatoma which had not been tampered with.

The usual and most satisfactory explanation of the origin of these tumors was the mechanical theory. According to this the act of expulsion of the fœtus caused a partial detachment of the dura, and the hæmorrhage from the ruptured vessels took place after the birth of the child. This view was supported by the absence of any evidence of pathological causes acting during intra-uterine life, and was not satisfactorily opposed by the occurrence of the tumor in cases of rapid delivery or of breech-presentation.

Recent Literature.

Elements of Human Physiology. By Henry Power, M. B. Lond., F. R. C. S. Illustrated with Forty-Seven Engravings. Philadelphia: Henry C. Lea's Son & Co. 1884. Small 8vo. 389 pages.

This handy little book is a companion volume to Klein's Histology, which was recently noticed in this journal. As other complementary volumes treat of Clinical Chemistry, Physical Physiology, and Comparative Anatomy and Physiology, much that the student requires is omitted in the volume before us. At the same time not a little is apparently retained which ought to have fuller treatment, and perhaps gets it elsewhere. The result is a convenient and pleasant aid to the intelligent pupil cramming for an examination. The defects of the book are those common to all small physiologies which are not really elementary.

Power's Physiology may also be recommended as an agreeable syllabus to a good course of lectures which should correct some of the views presented that are incorrect or only historically interesting. It suffices here to note in this connection: the ozone theory of the blood-gases (page 22), the influence of a change of one per cent. in the oxygen of the air (page 69), and the antizymotic properties of potassium sulpho-cyanide (page 103). The account of the localization of brain function (pages 260–263) will mislead the trusting reader.

The printing is excellently done, and there is a pretty full index. In this we miss "Sleep" (page 267), and note that curare is indexed as "Woorara," although the former name is preferred in the text. The chief misprint which has attracted attention is "quarrversuch" (page 233). Here, too, the suggestion may perhaps be permitted that it is high time to substitute "katelectrotonus" for the carelessly formed "catheleetrotonus."

In the account of muscular contraction (page 194) our author remarks: "There is no short term in English to designate the sudden, short, and transient shortening which is termed by the French a *sécousse*, or shock, and by the Germans a *zuckung*, or convulsion." Amory's translation of Küss's Physiology has "jerk" for this phenomenon, but the word is not altogether a happy one. Some years ago Dr. C. S. Minot, in his Experiments on Tetanus,[1] proposed and used "twitch" as an exact equivalent of "zuckung." This has always seemed to us a most felicitous suggestion and worthy of general adoption.

In the chapter on Food we are informed (page 86) that alcohol "in small quantities and in a diluted condition probably does little or no harm, but taken in excess it causes exhaustion and leads to poverty, and vice, and misery." This, as well as the remark on masturbation (page 328), does not, we submit, belong to the proper Elements of Human Physiology.

In a word, the book before us is a good one, — almost a very good one. Whoever reads it with care will learn *multa* if not *multum*.

The Australasian Medical Directory and Hand-Book. Edited and Compiled by Ludwig Bruck. First Year of Publication. Sydney: Published at Australasian Medical Gazette Office. London: Baillière, Tindall & Cox. 1883.

This Directory and Hand-Book furnishes a great deal of information concerning the field it professes to cover. Besides a list of nearly 1700 legally qualified medical practitioners, resident in the colonies, their names and addresses, qualifications, past and present appointments, it contains a general gazetteer of 1000 post towns, together with all particulars that may be useful to a medical man, combined with a local directory of all resident physicians, surgeons, veterinary surgeons, and dentists, as well as a list of benevolent and similar institutions. It also contains an abstract of all the principal laws affecting the medical profession throughout Australasia, an intercolonial official medical directory, a list of medical and other scientific societies, the regulations and by-laws of colonial universities, a list of coroners, a recognized scale of medical and surgical fees, a short history of 130 universities in all parts of the world, a list of upwards of 200 periodicals devoted to medicine, surgery, and allied sciences that are published in the English language throughout the world, an obituary, and many other features, the mere enumeration of which would fill a column. We understand the book is not only full but accurate.

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[1] Journal of Anatomy and Physiology, vol. xii.

Medical and Surgical Journal.

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"TRANCE" AS A SYMPTOM OF HYSTERIA.

One of the most interesting cases of continued lethargy or "trance" yet reported is that which came recently under the observation of Professor Gairdner, of Glasgow.[1] The case, briefly stated, was that of a woman who, after childbirth, showed a hysterical tendency, which culminated after eleven weeks in a lethargic sleep, which became gradually so profound that the most powerful external stimuli failed to produce the least sign of consciousness. The limbs lay flaccid without sign of cataleptic rigidity, the evacuations were passed in bed, the flesh wasted away, and the patient was preserved from inanition only by continued feeding with the stomach tube. This condition lasted nearly three months, and after recovery the patient professed entire unconsciousness of the events occurring during her protracted sleep.

The report of the case and the comments of Professor Gairdner upon it well illustrate the encroachment of science upon the domain of popular superstition. In earlier times hysterical and epileptic convulsions were considered due to the possession of the patient by devils, while their cessation was generally attributed to miraculous interposition. If such every-day phenomena as these have been in times past referred to supernatural agencies, who can wonder that the word "trance" is even now surrounded with uncanny associations, and that the popular mind, ever on the alert for the marvelous, should still cling to the idea that nature has in this case at least suspended her laws, and that spirits from some less tangible world have taken possession of the sleeper. The tendency of scientific research is to show that miracles do not exist, and the observer, trained by such research, is led to attribute the phenomena not yet understood to some law or laws not yet discovered, and the non-scientific world seems to be tending gradually towards the adoption of the same view.

Not many centuries ago multitudes of insane and epileptic patients flocked to the little town of Gheel, in Belgium, to be treated by the priests, whose exorcisms and prayers had gained a wide reputation for their potency over demoniacal possession. The priest has now retired in favor of the physician, and the town has become one vast lunatic asylum, with its headquarters in a new brick building with modern improvements, while in the comparatively deserted old chapel are still shown the chains once used to confine the restless "possessed" while awaiting their turn at the altar.

Convulsions, paralyses, and other symptoms occurring in epilepsy, insanity, and other *comparatively* tangible forms of disease, have been now long recognized as arising from definite disturbance, organic or functional, in the nervous system; and however obscure and difficult of analysis that disturbance may be, no intelligent medical man would throw doubt upon its existence. With hysteria the advance has been slower, and until a comparatively recent date the medical world has contented itself with substituting for the objective devil of the ancients a subjective devil, called variously "imagination" and "desire to be interesting." These and similar terms, implying either self-deception or the deception of others on the part of the patients, have long been supposed not only to represent the state of mind of the sufferer but also the origin of the whole trouble; and efforts to unravel the skein of symptoms, and to discover the laws in accordance with which they appear, have until recently generally met with indifference if not with ridicule on the part of the profession at large.

It cannot be denied that many if not most hysterical patients exhibit mental and moral obliquity, and that among the evidences of this obliquity appear not infrequently attempts at deceit and signs of disordered imagination; but the tendency of recent investigation is to show that these mental states, instead of causing the whole trouble, are merely symptoms (like, for example, the paralyses and the convulsions) of a disorder in the central nervous system not less real than that of epilepsy, although its exact pathology, like that of epilepsy, is still a matter of conjecture. Certainly some force other than simulation is required to explain such a symptom as persistent cramp holding a young girl's hand or foot for months in a position which the strongest man could not maintain for half an hour, while the absolute recovery of such a hand or foot forces us to class the case under hysteria rather than any organic disease. Such symptoms, as well as the lethargic and cataleptic states, to which hysterical patients are prone, seem, on careful study, to result from the same forceseas obtain in health, and to work under the same laws, the difference being one of degree, not kind. For example, the convulsions of hysteria may in a general way be safely regarded as the exaggeration of the lower (cerebral and spinal) reflexes, combined, perhaps, with the depression of the higher cerebral control.

The phenomena of so-called magnetism have long been imposed upon the credulous public, but science has deprived them of much of their mystery, by showing that the same results may be brought about by a single individual upon himself. It has been found, for example, that fixing the sight and attention for some time upon a shining object may produce, in the comparatively healthy individual, a state of catalepsy which will persist after the withdrawal of the object of contemplation. Whatever may be the exact nature of this phenomenon, there can be no doubt that it is entirely a subjective one; and perhaps we should not fall far from the truth in assuming that continued fixation of the mind on any object is capable of suspending, to a varying degree, the inhibition which the higher cerebral centres exert in health over the lower reflexes directly associated with the movements of the body.

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[1] Lancet, December 22, 1883, January 5, 12, 1884.

In the case of persons in this state, the change from catalepsy to lethargy, or again to somnambulism, may be brought about by the application of various stimuli; and experiment has shown that the same general laws apply to all "magnetized" subjects in various parts of the world. The degree of susceptibility to these influences varies among healthy individuals, but among hysterical patients this susceptibility is generally marked. A hystero-epileptic may often be thrown into a cataleptic state by the application of a tuning-fork to the forehead or by the sound of a gong.

Rude as the revelation may be to the sensitive believer in the supernatural, it seems probable that most of the mysterious sleepers, whose histories have been handed down to us surrounded by tender associations, religious and sentimental, were simply highly susceptible and sometimes hysterical persons, subject to attacks of prolonged catalepsy or lethargy, the histories of which, translated into medical language of the present day, would be similar to that of the case reported by Professor Gairdner.

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ENDOWMENT OF MEDICAL SCHOOLS: BEQUEST OF THE LATE DR. CALVIN ELLIS TO THE HARVARD SCHOOL.

THERE are no institutions in the country in regard to which the question of endowment has more importance than medical schools, and there are none for which less has been done by communities in general or which have been less the recipients of the bounty of individuals.

It is quite generally recognized now, even in our commercial age and country, that a purely commercial basis is not a suitable one upon which to build up the higher branches of learning and teaching; the necessary spur of competition which it supplies can be otherwise provided by better motives; and the day is evidently remote where a stagnating ease and content will be fostered in our medical schools by the large revenues of invested funds. The Medical School of Harvard University and that of the University of Pennsylvania are the only two prominent schools which occur to our mind as owing their buildings and their revenues in any degree to public or private benefactions, and to these the Johns Hopkins School with its hospital will soon be added. It is in these schools that an effort is being made to elevate the system and standard of our medical education. But in each case the possession of a fine, commodious building brings with it not only increased facilities but increased expectations from friends and increased expenditures; and unless accompanied by endowments the erection of buildings, even when representing the generosity of benefactors, may prove a burden rather than an aid to higher aspirations.

It is, therefore, with very great pleasure that we submit to our readers the text of that portion of the will of the late lamented Dr. Calvin Ellis by which Harvard University will, under certain contingencies, as residuary legatee, become trustee for its Medical School of a sum of not less than $150,000. The clauses of the will referred to are as follows: —

"All the residue and remainder of the said trust property my trustees, in the event aforesaid, shall convey in fee-simple, transfer, and pay over to the said President and Fellows to hold the same as a permanent fund, and apply the net rents and income thereof and of all substituted property; in every year, after first deducting and accumulating in every year five per centum of such net income as an increase of the fund towards paying the salary of a professor of pathological anatomy. Provided, however, that if such professor would receive in any one year, if the whole of the said net income remaining after such deduction of five per centum were paid to him, a salary of more than $5000 for such year, arising from gifts, legacies, and other permanent endowments (including the income of this legacy), then, and in every such year, the amount paid him from the income of this legacy shall be reduced so that the total income from such sources shall be $5000 and no more. And if the income from gifts, legacies, and other permanent endowments, exclusive of the income of this legacy, shall amount in any year to $5000, then, and in every such year, the income from this legacy shall be withheld altogether from such professor. The amount so withheld, whether it be the whole or a part of the net income, after deducting five per centum, shall be applied to the salary of the professor of physiology, with the same provisions and limitations as those herein declared touching the salary of the professor of pathological anatomy. And any amount in every such year still remaining unapplied shall next be applied to the salary of the professor of anatomy with the same provisions and limitations as are herein declared touching the salary of the two professors first named. And if the whole or any part of such income still remains unexpended in any year, the same shall be expended in such year for such other purposes in the Medical Department of the said college as the said President and Fellows shall deem most useful."

By the eventual execution of these provisions Dr. Ellis's name would become associated through the succeeding years with the best fruits of the work of a school whose highest interests it was his aim during his life to aid in advancing. Moreover, at the same time that the Harvard Medical School profits by a really handsome and useful endowment, the community at large gains in more ways than one, not the least of these being an example which others not directly connected with our profession should be easily tempted to imitate. In no way can money be made to yield a better interest than in securing for those who seek to enter the medical service of a community all facilities for the best possible training, for "sooner or later most persons must call upon medical art, for themselves or others, in one of those moments when the physician or surgeon is looked to as an earthly savior." And again we may emphasize what has been said by quoting other words from a communication of Dr. O. W. Holmes to the *Boston Advertiser*, two years since, upon this very subject: —

"A school which depends for its existence on the number of its students cannot be expected to commit suicide in order to satisfy an ideal demand for perfection. Any institution which is essentially dependent on the number of paying students it can draw must be tempted to sacrifice its higher aims to popularity. No high standard can be reached under such circumstances, and the only way to insure the independent action of a school which aims at teaching the whole country by example is to endow its professorships, so that the very best and highest grade of instruction, and not that which is popular, because it is easy and superficial, may always be given from its chairs, whether the classes be large or small. A small number of thoroughly accomplished medical graduates, their knowledge based on sound scientific acquirements, and made practical by assiduous clinical observation and teaching, will be worth more to the country than twice or thrice the number of half-taught, hastily-taught, practitioners. A series of such classes will, in the course of a single generation, elevate the whole professional standard as they go forth, year after year, missionaries in the cause of health, soldiers, and, if need be, martyrs, in the unending battle with disease and its causes."

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A NEW ENGLAND CREMATION SOCIETY.

The New England Cremation Society was organized in Boston on the 11th instant, an act of incorporation having been granted not long since. By-laws were adopted and officers chosen. The fee for membership, $1.50 per month, or $12 in one annual payment, insures each member cremation, the only other cost being the delivery of the remains to the crematory. The Society in this city was organized under the clause whereby societies "religious, scientifical, and medical," can issue stock at $25 per share. The capital stock of the company is to be $20,000, and it is the intention to establish a crematory at the earliest opportunity. A site had already been determined on in the suburbs of the city, and situated in most attractive surroundings. Some four acres of land will be, it is understood, taken for the purpose, and will be laid out in a becoming manner. A handsome building will be constructed, containing a chapel, where religious exercises may be held while the body is being incinerated in the retort below. The plan also contemplates a room for autopsies, and others for the keeping of bodies a certain length of time. This latter provision is with the view of easing the minds of those who might wish cremation, but who have a dread of either being buried or burned alive. The Society and its crematory will be open to all classes, irrespective of creed or color, and any services at the chapel will be in accordance with the wishes of the relatives, but free of expense to the Society. The crematory will be the fourth (?) in the world, and it is understood that use will be made of the most advanced ideas already embodied in similar institutions at Gotha, Milan, and in Washington, Penn. As the Society represents New England at large, it is possible that the anticipations of its founders for a fair and growing support may be realized.

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RESTRAINT AT THE UTICA INSANE ASYLUM.

In the case of Evan D. Hughes, a patient in the State Insane Asylum at Utica (of which Dr. John P. Gray is the medical superintendent), who died there on the 1st of February, the coroner's jury rendered a verdict to the effect that he came to his death by reason of injuries inflicted on him by three attendants, while engaged in restraining the patient, who was in a state of frenzy, and that the acts of the attendants were in violation of the rules of the institution, and without excuse or justification. In consequence of this verdict the three attendants have each been held in $1000 bail on a charge of manslaughter in the second degree. A member of the coroner's jury makes the statement, however, that a majority of the jurors were of the opinion that the attendants acted in self-defense, and signed the verdict only on the assurance of the District Attorney that it would not hold the defendants. The case has also resulted in the appointment from the State Legislature of a special committee of members of the Assembly to make an investigation of the Utica Asylum and its management.

If such investigation is thought desirable under these circumstances, we hope it may be conducted so as to exclude, as far as possible, the sensational element which has been already too much "worked" in the discussion of asylum management.

◆

MEDICAL NOTES.

— The housemaids are threatened with being deprived of their ancient right of nominal association with bursitis patellæ. Those who have observed how the scrub-woman of the present day does her office have had reason to fear that these leisurely wielders of the long-handled mop would ere long have to abdicate their traditional position in surgical nosology. And now we find that their successors are, of all people, — the clergy! In these days of modern conveniences one can hardly see how the upholstered *priedieu* and tufted hassock can allow the most genuflexionary clerical to develop a hygroma. We have it, however, on the authority of a correspondent of the *Lancet*, who is the attendant of a French Jesuit college in Ireland, that inflammation of the patellar bursa is not at all uncommon. He says that there are about one hundred members of the college, the majority of these being students varying from eighteen to twenty-two years of age, and the average number of cases of affections of the bursa patellæ has been about five per annum.

— The *Medical and Surgical Reporter* contains the following formula for home-made koumyss, furnished by a druggist, who claims that it is more convenient than any other for domestic purposes: Take of milk one quart, one fourth of a teaspoonful of bicarbonate of soda, one ninth of a cake of compressed yeast, two tablespoonfuls white sugar, three tablespoonfuls glycerine. Rub the yeast up smoothly with a small portion of the milk, and mix all together in a quart bottle, cork tightly, and keep in a temperature from 80° to 100° F. for six hours, then in ice-box for twelve hours, and use.

NEW YORK.

— Mr. and Mrs. Percy R. Pyne, of New York, have presented $100,000 in cash to the Trustees of the Moses Taylor Hospital at Scranton, Penn., to be added to the fund bequeathed for the erection and endowment of the institution. Mrs. Pyne is a daughter of the late Mr. Taylor, who devised $250,000 for the purpose, and this additional gift of $100,000 will enable the managers to carry out the design of the founder, in which there has been a delay on account of the fact that the fund was found insufficient for the completion of the plans adopted.

— The late Dr. Beverley Livingston, a graduate of the Sheffield Scientific School in 1874, requested before his death, last year, that his scientific collections, consisting of a large number of microscopic slides and other specimens, together with the sum of $3000, should be presented to that institution, and his wishes have now been carried out by his father.

— The monthly meeting of the Medico-Legal Society of February 13th was principally devoted to a discussion of a paper recently read before the Society by Dr. J. G. Johnson, on Concussion of the Spine in Railway Injuries.

— At the meeting of the Society of Medical Jurisprudence and State Medicine, held February 14th, Prof. Jarvis S. Wight, of the Long Island College Hospital, read a paper entitled, A Plea for the Just Treatment of Criminals.

— At the annual meeting of the Kings County Pharmaceutical Society, held in Brooklyn, February 13th, a committee was appointed to confer with the authorities of the Long Island College Hospital in reference to the establishment of a school of pharmacy at that institution.

— The Trustees of the College of Physicians and Surgeons have elected Dr. John C. Dalton, for so many years Professor of Physiology, President of the College, in place of Dr. Alonzo Clark, who has resigned. Dr. John G. Curtis now holds the chair of Physiology.

— On the occasion of the fourteenth annual dinner of Bowdoin College Alumni Association of New York, held at Delmonico's February 14th, Dr. Fordyce Barker was reëlected President.

— The turf surrounding the mansion of Mrs. A. T. Stewart, on Fifth Avenue, is said to have been taken from the grounds of the old New York Hospital, at Broadway and Pearl Street, and to be about one hundred years old. When the hospital buildings were torn down some years ago, Mr. Stewart purchased the sod from the Governors, and had it relaid about his new house, which was then in course of erection.

PHILADELPHIA.

— The County Medical Society has for several meetings devoted considerable time to the discussion of the clinical relations of the bacillus tuberculosis. The subject was introduced by a paper read by Dr. H. F. Formad, who spent some time last summer in Koch's laboratory investigating the bacillus theory of consumption. In this communication he admitted the frequent existence of a bacillus in tubercular diseases, but denied that it acted as the sole cause of consumption; in a person already predisposed to tuberculosis, or susceptible to the disease, the bacillus may act as an irritant, and hence in such a case would be the exciting cause of the disease. He contended that consumption is a disease which may be excited by various irritants, of which the bacillus is simply one; for the production of the disease there is required (1) a definite soil, (2) an indefinite irritant. Tubercle he defined as an inflammatory new formation in a special individual or tissue. Testing the theory by clinical experience, he claimed that consumption was neither specific nor contagious; that no cases of well-authenticated contagion which would bear scientific analysis had been reported. As the rule, the predisposition to tuberculosis consists in a peculiar arrangement of the lymph spaces which is met with in certain individuals, and in certain animals, forming what is known as the strumous diathesis; the exception is an inflammation of a serous membrane, which may give rise to tubercle directly, possibly by the establishing of an artificial scrofulous anatomy by blocking up the lymph spaces by fibrine and molecular débris; this, then, would be a mechanical and not an infective process.

In the discussion Dr. E. O. Shakespeare, who will also discuss the subject at the next meeting of the American Medical Association, defended Koch's views, and stated that Dr. Formad had confounded the predisposing with the exciting cause of phthisis; he dissented entirely from the views expressed by the lecturer. Dr. Longstreth believed that too much stress had been laid upon the bacillus, which he could not accept as the sole and sufficient cause of consumption. A number of others expressed just as discordant opinions, which succeeded in establishing at least one fact, that is, the question is still in a thoroughly unsettled condition, and will require time and further observation for its solution.

— Several new societies have been started with more or less promise of a successful career with the beginning of the year. Prof. S. D. Gross presided at a meeting to organize a society for the study of forensic medicine: about fifty physicians and thirty members of the Philadelphia Bar Association have signified their intention of joining the Society, which held a meeting for the election of officers on the third Tuesday of February. A Neurological Association has just been formed, with Dr. S. Weir Mitchell as president.

— The reception given to Dr. Theophilus Parvin by the Alumni Association of the Jefferson Medical College, on January 28th, was attended by many of the resident graduates of the school and a number of invited guests. It was a very successful and thoroughly enjoyable affair, and gave many an opportunity of making the acquaintance of the recent acquisition to the Faculty, who has already made many friends.

— The annual meeting of the Alumni Association of the Medical Department of the University of Pennsylvania was held January 31st, when Dr. William Hunt, President of the Association, delivered an address abounding in wit and practical wisdom, and full of wise saws and modern instances.

— Philadelphians are subscribing to the Sims memorial. After this fund is complete it would be a very becoming thing for some New York gentleman to suggest that we erect a monument to Isaac Ray and to Thomas S. Kirkbride, or to Washington L. Atlee, or Joseph Pancoast. Are there greater names than these to be found in the annals of American medicine?

— At the last meeting of the College of Physicians Dr. Horatio C. Wood read a paper on the Clinical Aspects of Brain Syphilis, Dr. Wilson contributed a Further Note on the Specific Treatment of Typhoid Fever, and Dr. Harrison Allen described a New Method of Studying the Motions of the Soft Palate.

Correspondence.

RENEWED REQUEST FOR EMBRYOLOGICAL MATERIAL.

Mr. Editor, — Last autumn you kindly published a request for me, stating that I desired to obtain a large embryological material, and I have since received a number of specimens from various gentlemen, to whom I take pleasure in now publicly offering my thanks. Will you not permit me to again renew my request for embryos of all ages, and to add thereto the statement that those which are received in a fresh state within a few hours after the delivery are by far the most valuable, as only by the immediate preservation of the parts is it possible to obtain the nervous and epithelial tissues in a condition suitable for microscopic examination. I believe I can assure the contributors to my collection of fœtuses that all the specimens received will be thoroughly utilized, and be of great value not only to myself but to a large and increasing number of students also. I am preparing a treatise on human embryology, and desire to base the work as far as possible upon original observations on *human* development. Hitherto embryologists have worked principally upon animals.

I shall be very glad to meet any expenses incurred in sending specimens. Where it is impossible to send them in the fresh state it is best to place them in alcohol diluted with one third of its bulk of water.

Yours very truly,
Charles Sedgwick Minot.

Harvard Medical School, *February* 14, 1884.

Miscellany.

THE ORTHOPÆDIC SURGEON AS A MECHANICAL ENGINEER.

Dr. Newton M. Shaffer, in a recent paper on the present status of orthopædic surgery (*New York Medical Journal*, January 26, 1884), takes strong ground as to the necessity for the practitioner of this specialty to furnish specific details of every appliance which he requires, and if necessary to be able to make it, at least to *know how* to make it. He claims that every scientific orthopædist, competent to give to his patients the skill which they have a right to demand, should become responsible for everything pertaining to the manufacture of the instruments to be used. On this point he says: —

"In order to satisfactorily carry out the system of prescribing apparatus for deformities, the instrument maker should be placed in the same category as the pharmacist, and should supply apparatus for deformities only upon a prescription, — that is, a carefully executed diagram of the apparatus needed. But how is an educated orthopædic surgeon to execute this plan? While orthopædic surgery has advanced to the dignity of a well-recognized place in general surgery, the facilities for filling a mechanical prescription are in some respects no better than they were fifty years ago. As a rule, the instrument maker who now fills the prescription of the orthopædic or general surgeon is not unwilling to treat deformity himself, and it not infrequently occurs that he makes suggestions to the patients that are sent to him. There is, I regret to say, some excuse for this, for it has sometimes happened that the instrument maker has a better idea of what is needed than the surgeon who sent the patient to him, for the reason that orthopædic surgery is not, as a rule, taught in our medical schools, and the generally lax way in which chronic deformities are referred to leaves the newly-fledged graduate utterly unprepared to treat them, especially in a mechanical sense. Nor is it at all unusual for the instrument maker to be called in a kind of a consultation by the surgeon, to devise some sort of apparatus to accomplish an ill-defined end in a given case of deformity or disease. Still further, there are scattered throughout the country various agents of the prominent instrument-making firms, druggists, for example, who prescribe for the most serious cases in orthopædic surgery and order an apparatus from a distance about which they know little or nothing, except that gained from the catalogues."

As a contrast to this method of treatment and to the practice of those surgeons who, after making a diagnosis, turn the case over to a mechanic, as if there were something degrading and unprofessional in attending personally to the details of the mechanical department of orthopædic work, he describes the method pursued in the New York Orthopædic Dispensary. Here there is, in direct connection with the institution, a fully equipped mechanical room in which four or five men are constantly employed making apparatus directly under the instructions of the surgeons; no apparatus is made without a drawing, and careful measurements accompanied by actual outlines, when necessary, are given with every order; no repairs are made except by personal instruction of the surgeons, accompanied by drawings if necessary. A similar shop, supplied with steam power, has been established in connection with the University Hospital at Philadelphia, where apparatus is made after drawings by the surgeons and under their supervision. We are informed that the entire cost of the shop did not exceed $2000, which includes a building erected for the purpose, and that it is now nearly self-sustaining, actual cost of production only being charged to those patients who are able to pay it.

RECENT METHODS OF TREATING COLD ABSCESSES.

Professor Billroth thus writes on the above subject (*Medical Press and Circular*, January 16, 1884): When we turn our thoughts to a cold abscess we must first of all place before ourselves the questions, Why is not the contained fluid absorbed? and why are we compelled either to await its opening or open it ourselves?

Exudations that arise in the course of acute inflammations, or transitory disturbances of circulation, are indeed usually absorbed; if the general condition of the body is in other ways normal, the absorption of the fluid is the ordinary process. If you have a clear conception of the arrangement of the lymphatic vascular system you will comprehend this, for the lymphatic vascular system sucks up all these exudation products like a sponge, and carries them all back into the blood channels. Under what conditions, then, does this resorption fail to take place? (1.) You may say first that absence of open lymph vessels is a very important cause, and that is just the case with the capsule that in the course of time forms around these abscesses. The walls of the veins can, it is true, take up some of the fluid, but it is the open lymph vessels that are most concerned in such absorption. But even when such open lymph courses are present, they may become closed under certain circumstances, as by an exudation that becomes clotted, in which fibrine forms quickly, and in which the clotting may be continued into the lymph vessels, or into the interstitial structural interspaces. This is the case to a great extent in croupous and diphtheritic exudations. (2.) The resorption is dependent on the degree of concentration of the fluid. If the fluid is to be resorbed, its concentration must be less than that of the blood. That is not the case in cold abscesses. Moreover the various regions of the body show great differences in their power of resorption; the pelvis is the most favorable for resorption; the most unfavorable is the pleural cavity. How can we overcome these difficulties therapeutically? (1.) The first method would be the removal of the fluid; but experience teaches that the fluid may be removed for the moment, but that the exudative property of the structure does not cease; on the contrary, the cavity refills with uncommon rapidity with pus, this refilling being principally caused by the fact that by removal of the fluid the vessels in the abscess walls are subjected to a greatly reduced pressure. (2.) Is it possible by certain irritating agents to excite a greater vascularity in the walls of the abscess? With this object in view tincture of iodine has been injected, for the purpose of exciting an inflammation, whereby an exudation is certainly set up, but which, in consequence of the higher vascularity thus induced, is readily absorbed, with the result that the cavity shrinks up. (3.) This method was succeeded by the opening of the abscess under strict antiseptic precautions. Not only is the pus evacuated, but the abscess cavity is carefully scraped with the sharp spoon, after which an antiseptic dressing is applied. In this way the walls of the abscess, which consist of a mass of soft granulations, are removed as far as the healthy tissues, whereby, by means of a light compress, healing by first intention has been achieved. Indeed, by this method good results have been obtained in many cases, but it is one that requires to be carried out with great accuracy. Since the introduction of iodoform we have strewn the scraped-out cavity with iodoform in powder, and brought the edges together with the exception of the openings left for drainage. By means of iodoform sepsis is to a great extent avoided, and under certain circumstances granulations may spring up under which healing rapidly takes place. (4.) Quite recently we have attempted another method, namely, puncture of the abscess, and subsequent injection of an emulsion of iodoform consisting of ten parts of iodoform to 100 parts of glycerine. The emulsion must be well shaken up before using, and then, according to the size of the abscess, twenty to thirty grammes are to be injected. In most of the cases in which this method has been attempted the course has been free from reaction, only moderate swelling has taken place, and but little pain has been present. This, however, would only indicate that the treatment has done no harm; it is also desirable that it should bring about the shrinking of the abscess, and that the fluid remaining in the cavity should be absorbed. As a matter of fact, the results in some cases were exceedingly favorable, but further experience is necessary to show whether the iodoform emulsion is still to be continued. Generally speaking, I should advise you, unless there should be some reason for it, not to open the cold abscess, but to allow it to open spontaneously, especially if you cannot watch over your patients closely. You can then calculate with certainty that the pus will escape without fever and without further reaction, whilst at the same time the entrance of air is completely avoided. In such cases the mechanical relations are extremely favorable, even wonderfully so, without our being able to give an explanation of them, for it happens, for example, that an abscess bursts into the bladder or rectum, and in such cases I have never seen urine or intestinal gases enter the abscess cavity. Under strict antiseptic precautions, and under your constant supervision, you may open the abscess, especially if you suspect with some certainty that you can easily reach the bone from which the abscess springs, or if it causes by its great expansion compression of the neighboring structures, and in consequence of this gives rise to various difficulties.

THE SACRED WHITE ELEPHANT.

The Siamese minister in London announces, *apropos* of Mr. Barnum's white sacred elephant from his country, that the existence of sacred elephants, white or black, is altogether unknown in Siam. The dermatologists of London, on the other hand, say that such pretensions — and they are limited — as the beast can make to being white are based on a disease, leucoderma. Robbed of the attributes of sacredness and whiteness it becomes simply an elephant with a disordered skin.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 9, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diphtheria and Croup.	Typhoid Fever.	Scarlet Fever.
New York	1,340,114	627	252	17.60	13.60	6.38	.32	2.72
Philadelphia	927,995	397	150	14.75	12.50	.75	3.00	4.50
Brooklyn	644,526	214	93	14.40	15.75	7.20	—	1.80
Chicago	632,100	195	92	17.85	8.67	5.12	2.56	2.04
Boston	423,800	204	67	15.68	18.13	4.21	2.45	2.94
Baltimore	408,520	170	63	41.16	11.76	8.82	1.17	2.94
St. Louis	400,000	156	61	21.12	14.72	8.96	1.92	2.56
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	157	30	21.66	14.01	1.27	5.73	.64
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	100	34	17.00	19.00	—	1.00	9.00
Pittsburg	180,000	51	19	17.64	11.76	3.92	9.80	3.92
Milwaukee	142,400	42	25	14.40	7.20	7.20	—	4.80
Providence	119,405	40	16	12.50	5.00	5.00	2.50	2.50
New Haven	62,882	25	3	16.00	16.00	4.00	—	8.00
Nashville	54,400	24	9	16.64	12.48	—	4.16	—
Charleston	52,286	32	10	9.39	25.04	—	—	—
Lowell	71,447	24	11	—	12.48	—	—	—
Worcester	69,442	22	9	18.20	18.20	12.66	—	—
Fall River	62,674	22	7	12.66	25.33	9.11	4.55	—
Cambridge	60,995	23	8	17.40	21.75	13.05	4.35	—
Lawrence	45,516	16	8	25.00	12.50	12.50	—	—
Lynn	44,895	12	2	8.33	25.00	—	—	—
Springfield	38,090	9	2	33.33	22.22	22.22	11.11	—
Somerville	31,350	6	1	—	16.66	—	—	—
Holyoke	30,515	7	3	—	—	—	—	—
New Bedford	30,144	12	2	16.66	—	—	16.66	—
Salem	29,503	17	4	17.66	5.88	5.88	5.88	—
Chelsea	24,347	9	2	22.22	11.11	22.22	—	—
Taunton	22,693	5	1	40.00	—	40.00	—	—
Gloucester	21,400	9	3	22.22	33.33	11.11	—	—
Haverhill	20,905	6	3	50 00	16.66	16.66	—	16.66
Newton	19,421	7	1	14.28	14.28	—	—	—
Brockton	18,323	4	2	25.00	—	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	2	—	—	—	—	—
Fitchburg	13,433	3	0	—	33.33	—	—	—
Seventy-six Massachusetts towns	258,799	77	14	5.19	21.76	5.19	—	—

Deaths reported 2725 (no reports from Cincinnati and Buffalo): under five years of age, 1007: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 466, consumption 434, lung diseases 347, diphtheria and croup 151, scarlet fever 72, diarrhœal diseases 55, typhoid fever 47, measles 30, malarial fevers 26, whooping-cough 25, cerebro-spinal meningitis 22, puerperal fever 14, erysipelas 14, small-pox 10. From *diarrhœal diseases*, New York 19, New Orleans nine, St. Louis seven, Boston six, New Haven five, District of Columbia three, Baltimore two, Brooklyn, Chicago, Providence, Nashville, and Charleston one each. From *measles*, District of Columbia nine, New York and Baltimore seven each, Brooklyn three, Philadelphia, St. Louis, Nashville, and Charleston one each. From *malarial fever*, New Orleans nine, New York eight, Brooklyn three, Chicago, Baltimore, and St. Louis two each. From *whooping-cough*, New York 10, Philadelphia, Brooklyn, and Boston three each, Chicago, Baltimore, St. Louis, Worcester, Gloucester, and Haverhill one each. From *cerebro-spinal meningitis*, New York nine, Chicago four, Philadelphia two, New Orleans, District of Columbia, Lowell, Lawrence, Salem, Newton, and Brockton one each. From *puerperal fever*, Chicago five, New York and Boston two each, Brooklyn, Baltimore, Milwaukee, Fall River, and Springfield one each. From *erysipelas*, Chicago three, Baltimore, New York, and New Orleans two each, Philadelphia, Brooklyn, Boston, St. Louis, and Lynn one each. From *small-pox*, New Orleans nine, Nashville one.

Three cases of small-pox were reported in St. Louis; scarlet fever 51, diphtheria 24, typhoid fever eight, and measles two in Boston; scarlet fever 22 and diphtheria six in Milwaukee.

In 95 cities and towns of Massachusetts, with an estimated population of 1,277,688 (estimated population of the State 1,922,530), the total death-rate for the week was 19.26 against 16.59 and 17.78 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 26th, the death-rate was 20.3. Deaths reported 3410: acute diseases of the respiratory organs (London) 360, whooping-cough 130, scarlet fever 97, measles 86, fevers 48, diarrhœa 27, diphtheria 26, small-pox (London and Birmingham two each) four. The death-rates ranged from 15 in Norwich to 26.8 in Manchester; Bradford 15.9; Leicester 16.9; Bristol 17.7; Blackburn 18.4; Sunderland 19.1; Nottingham 19.3; Birmingham 19.6; London 19.9; Liverpool 22; Sheffield 24.1; Leeds 25.5. In Edinburgh 18; Glasgow 22.7; Dublin 24.5.

For the week ending January 12th, in 170 German cities and towns, with an estimated population of 8,688,664, the death-rate was 25.5. Deaths reported 4269; under five years of age, 1909; consumption 647, lung diseases 492, diphtheria and croup 271, scarlet fever 75, measles and rötheln 71, typhoid fever 67, whooping-cough 54, puerperal fever 35, small-pox (Lubec one) one. The death-rates ranged from 11.8 in Wiesbaden to 52 in Duisburg; Königsberg 33.5; Breslau 30; Munich 30.8; Dresden 34.2; Berlin 24.9; Leipzig 26.9; Hamburg 27.3; Cologne 24.1; Frankfort a. M. 18.5; Strasburg 23.4.

For the week ending January 26th, in the Swiss towns, there were 28 deaths from consumption, lung diseases 27, diphtheria and croup 10, puerperal fever four, whooping-cough four, scarlet fever three, measles two, small-pox one, typhoid fever one. The death-rates were, at Geneva 20.6; Zurich 29.5; Basle 26.3; Berne 21.1.

The meteorological record for the week ending February 9th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.¹			Rainfall.	
Feb., 1884.	Daily Mean.	Daily Mean.	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 3	30.329	30	36	25	82	86	82	83	SW	NW	NW	4	24	12	R	F	C	—	—
Mon., 4	30.354	22	32	13.5	85	60	82	95	NW	SW	SW	1	10	9	F	O	C	—	—
Tues., 5	29.869	36	36	25	82	86	82	83	SW	E	O	6	7	0	F	O	O	—	—
Wed., 6	29.869	50	56	44	93	90	100	94	SW	SW	SW	3	10	6	O	R	R	—	—
Thurs., 7	30.226	40	51	32	92	94	78	88	E	NW	NE	1	2	12	R	O	O	—	—
Fri., 8	30.438	25	35	18	82	100	98	93	E	N	N	27	18	11	O	S	O	—	—
Sat., 9	30.121	32	37	21	94	88	89	90	N	S	W	3	8	12	O	O	C	—	—
Mean, the Week.	30.172	33.6						89.7										60.14	.62

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM FEBRUARY 9, 1884, TO FEBRUARY 15, 1884.

To be assistant surgeons, with the rank of first lieutenant, to date December 3, 1883: — William D. Dietz, Walter W. A. Fisher, William Stephenson, Adrian S Polhemus, John L. Phillips, Reuben L. Robertson, William C. Borden, Edgar A. Mearns, Guy L. Edie, William D. Crosby, William L. Kneedler, Charles M. Gandy, Charles S Black, James E. Pilcher, Alonzo R. Chapin. S. O., A. G. O., Washington, February 11, 1884.

Brewster, William B., first lieutenant and assistant surgeon. Resignation accepted to date February 7, 1884, S. O., A. G. O., Washington, February 11, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING FEBRUARY 16, 1884.

Coues, S. F., medical director, to the Naval Medical Examining Board, Philadelphia, March 3d, as the relief of Medical Director P. J. Horwitz, who retires on that date.

Suffolk District Medical Society. Special Meeting. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, February 27th, at 7.45 o'clock. Dr. J. Cheston Morris, of Philadelphia, will present a paper on The Milk Supply of Cities and Large Towns. Mr. Lloyd F. Abbott will read a paper on The Milk Supply of Boston and the Benefit to be Derived from the Spaying of Cows.

ALBERT N. BLODGETT, *Secretary.*

ERRATUM.

BOSTON, *February* 15, 1884.

MR. EDITOR. — It may seem a small matter, but, in quoting Wordsworth, I want to avoid errors. "The child is father *of* the man," not "*to*," as given in your last number, is the correct line.

Yours truly, H. I. B.

Books and Pamphlets Received. — The Surgical Treatment of Tumors and other Obscure Conditions of the Bladder. By Walter Whitehead, F. R. C. S. E., F. R. S. Edin., Surgeon, Manchester Royal Infirmary and the Manchester and Salford Lock and Skin Hospital, and Bilton Pollard, M. D., B. S., F. R. C. S., Resident Surgical Officer Manchester Royal Infirmary. (Reprint from the Lancet.) London: J. & A. Churchill. Manchester: J. E. Cornish.

On a New Mode of Operating for Fistula in Ano. By Edward W. Jenks, M. D., LL. D., of Chicago, Ill. (Reprint from Vol. VIII. Gynecological Transactions.) 1883.

First Annual Report of the New York Skin and Cancer Hospital, No. 243 East Thirty-Fourth Street, with Act of Incorporation and By-Laws. New York. 1884.

Medical Thoughts of Shakspere. Compiled by B. Rush Field, M. D., Easton, Penn. 1884.

School Hygiene. By Charles J. Lundy, A. M., M. D., Professor of Diseases of the Eye, Ear, and Throat in the Michigan College of Medicine, Detroit. Read before the American Health Association. 1883.

Medical Symbolism. By T. S. Sozinskey, M. D., of Philadelphia. (Reprint from the Medical and Surgical Reporter.)

Ninth Report of the Salem Hospital, 1884.

Borderland Psychiatric Records. Prodromal Symptoms of Psychical Impairment. By C. H. Hughes, M. D., St. Louis. (Reprint, Alienist and Neurologist, January, 1884.)

The Opium Psycho-Narcosis. Chronic Meconism or Papaverism. By C. H. Hughes, M. D., St. Louis. (Reprint.)

Fractures of the Neck of the Femur, with Special Reference to Bony Union after Intra-Capsular Fracture. By N. Senn, M. D., of Milwaukee, Wisconsin. Extracted from the Transactions of the American Surgical Association, Vol. I. 1883. Philadelphia: Collins, Printer, 705 Jayne Street.

Researches on the Pulse-Wave. An Experimental Inquiry into the Causes of Pulse-Wave Velocity and Duration of the Cardio-Aortic or Presphygmic Interval observed in Man, etc. By A. T. Keyt, M. D., Cincinnati, Ohio. (Reprint from The Journal of the American Medical Association.) Chicago. 1883.

Opera Minora. A Collection of Essays, Articles, Lectures, and Addresses from 1866 to 1882, inclusive. By Edward C. Seguin, M. D. New York: G. P. Putnam's Sons. 1884.

Thirty-Sixth Annual Report of the Trustees of the Massachusetts School for the Feeble-Minded, at South Boston, for the Year ending September 30, 1883. Boston. Public Document No. 28. 1884.

Is the Extirpation of the Cancerous Uterus a Justifiable Operation? By A. Reeves Jackson, A. M., M. D. (Reprint from Vol. VIII. Gynecological Transactions. 1883.)

Diseases of the Bladder, Prostate Gland, and Urethra, including a Practical View of Urinary Diseases, Deposits, and Calculi. Illustrated by numerous Wood Engravings. Fifth Edition, revised and much enlarged throughout. By Frederick James Gant, F. R. C. S., Senior Surgeon to the Royal Free Hospital. New York: Bermingham & Co. 1884.

Excessive Venery, Masturbation, and Continence. The Ætiology, Pathology, and Treatment of the Diseases resulting from Venereal Excesses, Masturbation, and Continence. By Joseph W. Howe, M. D. New York: Bermingham & Co. 1884.

Handbook of Eclampsia, or Notes and Cases of Puerperal Convulsions, etc. By E. Michener, M. D., J. H. Stubbs, M. D., B. Thompson, M. D., R. B. Ewing, M. D., S. Stebbins, M. D. Philadelphia: F. A. Davis, Attorney, 1883.

A System of Oral Surgery. Being a Treatise on the Diseases and Surgery of the Mouth, Jaws, Face, and Teeth, and Associate Parts. By James E. Garretson, M. D., D. D. S., etc. Illustrated with Numerous Steel Plates and Wood Cuts. Fourth Edition, thoroughly revised with additions. Philadelphia: J. B. Lippincott & Co. 1884.

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Original Articles.

THE TREATMENT OF RETROVERSION OF THE UTERUS WITH ADHESIONS.[1]

BY J. W. ELLIOT, M. D.,

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THIS malady has been and is still considered by many incurable. Thomas,[2] referring to adhesions, says "this is one of the conditions which render the prognosis" of retroversion "unfavorable." All the other text-books of the day are equally discouraging, and none of them lay down a definite mode of treatment. In my own experience I have found these cases curable. I therefore venture to describe a method by which favorable results may be obtained. This method consists, in brief, in repeatedly packing the posterior vaginal cul-de-sac with tampons in such a manner that the adhesions being gradually stretched, broken, and absorbed, the uterus is pushed into its normal position.

This method is by no means new. Dr. Bozeman claims to have used it before 1860. Dr. Taliaferro[3] first described it in a paper read before the Medical Association of Georgia, in 1878, on The Application of Pressure in Diseases of the Uterus. I understand also that this method has been used by a few New York specialists and several of my colleagues in Boston. I first learned it from Dr. Baker, who has practiced it for several years with most satisfactory results, and to him I owe many of my opportunities for investigating its value. This general method has, then, been employed by a few physicians with variable results. The details of the procedure have differed in more or less essential points with all. Without discussing these differences I shall simply describe the particular method which I now use after three years' experience. First let us consider what the course of this disease is when not treated.

When the uterus becomes retroverted from any cause it is lower in the pelvis, and drags more or less on the twisted broad ligaments, which contain the large arteries and veins which supply that organ. This causes a passive congestion in the uterus. This means increased size and weight. The increased size and weight cause in turn increased dragging; thus we have a "pernicious circle" established. The ultimate result of long-continued passive congestion is an increase of interstitial tissue. Here, then, we have a condition which tends to grow worse. This may give rise to quite a disagreeable set of symptoms, namely, feelings of dragging, of pressing down of the abdominal contents, and a sense of weight. The increased vascularity gives rise to increased menstrual flow, to increased secretion from the glands and mucous membrane (fluor albus), and to increased sensitiveness of uterus and vagina. The bladder being more or less displaced there is often frequent and difficult micturition. The rectum may be obstructed by the fundus uteri so as to cause difficult or painful defecation. The peritoneal surface of a uterus in this condition often becomes inflamed. If this occurs the result may be that the uterus becomes more or less firmly fixed by peritoneal adhesions; in which case the above-mentioned symptoms are, of course, increased. Not only this but when the uterus is once fixed in retroversion by adhesions successive attacks of local peritonitis usually follow. These attacks may recur after any slight provocation, such as jarring, going about during menstruation, taking cold, etc., until the patient is exhausted by pain or general peritonitis is imminent. She is then obliged to go to bed, where she will often improve for a time, but when she gets up the local peritonitis usually begins again, and she finds herself no better than before. This sort of thing may go on for years or the patient sometimes gives up trying to go about, and becomes a confirmed bed-ridden invalid. This disease is associated with great pain and tenderness in the vagina and all about the pelvis, causing inability to walk and a decline in the general health. The nervous system suffers as a matter of course. It very often causes sterility, and should the uterus by chance become impregnated a miscarriage is almost certain to follow, the common result of which is another sharp attack of local peritonitis with more adhesions. If, however, a miscarriage does not occur and the patient goes to full term, the adhesions are gradually absorbed as the uterus increases in size.

From this we see that retroversion with adhesions is a progressive disease; that it tends to grow worse when there is no treatment.

Next let us inquire into the more exact nature of these adhesions.

The peritonæum of the female pelvis may become inflamed at any point where it covers the various pelvic organs, so one speaks of perisalpingitis, pericystitis, periproctitis, perimetritis, etc. Usually inflammation of several of these organs is present at once. Then one speaks of pelvic peritonitis in distinction on the one side from general peritonitis, on the other from parametritis or pelvic cellulitis, by which last name we mean inflammation of the cellular tissue (including vessels and veins) just under the peritonæum. Inflammation of the peritonæum is associated with the exudation of fluid and the formation of fibrous adhesions. When pus is exuded it is often shut off by membranes between the uterus and rectum, then either the pus fatty degenerates, and is absorbed, or the abscess breaks. When the abscess is emptied healing takes place by the union of its two walls, which are the uterus and the rectum. In this way the uterus may become retroverted and bound firmly to the rectum by a very dense mass of adhesions. Vide Fig. 1.

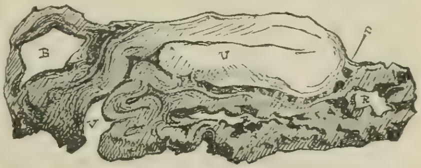

FIG. 1. (Winckel) *D*, Douglas's Fossa obliterated by a mass of adhesions, the result of an abscess. *B*, Bladder. *V*, Vagina. *U*, Uterus. *R*, Rectum.

The membranes resulting from peritonitis may become like ligaments, and bind the uterus to the rectum. Vide Fig. 2. When two inflamed surfaces of peritonæum on different organs come in contact they are often glued together. In this way the least firm adhesions are formed. Adhesions vary greatly in size and toughness. The large, tough ones are the result of often repeated attacks of peritonitis. If no fresh attack occurs the adhesions tend to disappear very slowly. From being constantly stretched and worn by the respiratory and other movements they may finally be absorbed. In spite of this fact many adhesions persist for a lifetime, hence their importance to gynæcologists.

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[1] Being the subject-matter of a lecture delivered at a Summer Course in Boston and cases reported at the Boston Society for Medical Observation, February 4th.

[2] Diseases of Women, page 438.

[3] Atlanta Medical Register, January, 1883.

Parametritis usually occurs in the broad ligaments and is, therefore, most often the cause of lateral displacements and adhesions. These lateral adhesions, being formed by cicatricial contractions of interstitial tissue, are much firmer and tougher than those resulting from simple peritonitis, which occur in connection with retro and anteversions. These two processes (peritonitis and parametritis) may occur together, and cause a right or left retro-lateral version.

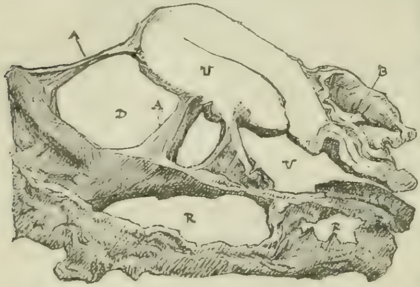

FIG. 2. (Winckel.) *A A*, Adhesions on the stretch. *D*, Douglas's Fossa.

The causes of this disease are various. Merely the condition of retroversion may be the cause of a local peritonitis, and hence adhesions. Also, having a retroversion a local peritonitis from any cause may result in adhesions. Any local peritonitis may form such adhesions about a uterus in normal position as to cause retroversion. The causes of local peritonitis are, then, the causes of adhesions. Among such causes Heitzmann [1] considers irregularity and other anomalies in menstruation as common. Hence any change in uterus, tubes, or ovaries which causes such irregularities, as stenosis, congenital anteflexion, etc., also taking cold during menstruation. Any catarrhal inflammation of the uterus may extend through the tubes to the peritoneal cavity. This most frequently happens with gonorrhœal endometritis. Ovaritis itself may be a cause, also the rupture of a Graafian follicle. The rubbing of a prolapsed ovary may be a cause. Parametritis may cause peritonitis by direct extension. There are various traumatic causes, such as direct injury to peritonæum, falls, coition, vaginal douche, pessaries, and any intra-uterine instrumentation, passing a sound or dilating with tents. Septic absorption from wounds of uterus or vagina may cause septic peritonitis. The last and most common cause is parturition and abortion.

The diagnosis of retroversion with adhesions is arrived at by first establishing the presence of a retroversion (by touch or probe), the adhesions may then be felt through the posterior vaginal cul de sac. Vide Fig. 1. In certain cases their presence can only be determined by a failure to replace the uterus by the various well known manœuvers. A strong firm adhesion is evident, and cannot easily be overlooked. The difficulty is that one not skilled in reducing retroversion may sometimes be led to suppose that the uterus is adherent when it is merely pressed down and caught behind the promontory of the sacrum. This mistake will, however, soon become evident if the treatment here described be applied.

There are four methods of treating this disease: —

(1.) Forcibly tearing up adhesions under ether at one sitting.

(2.) Gradually stretching and tearing the adhesions by lifting the body of the uterus with the finger a little at each sitting.

(3.) Gradually lifting the body of the uterus by a series of pessaries, beginning with a very small one; larger ones are placed as the uterus is lifted higher.

(4.) Packing as here described.

I prefer the last of these methods for most cases, because it seems to me the surest and safest.

To pack the vagina the patient must be placed in the semi-prone or knee-chest position. I use the latter position in the more difficult cases, and the former in ordinary cases, as it is much easier for the patients. A Sims' speculum being passed, small bits of cotton, wrung out in glycerine, are then packed into the posterior vaginal cul-de-sac. Each bit is placed with dressing forceps held in the right hand. It is then pressed back as hard as occasion may require with the blade of the speculum held in the left hand. Vide Fig. 3. When the posterior cul de-sac is full, the vagina is then packed full of the same tampons to hold those placed in the cul-de-sac tight up against the fundus of the uterus. At the outlet of the vagina the cotton is pressed back toward the rectum, away from the point where the urethra passes under the pubic arch, as pressure on that point may cause retention. The last two pieces of cotton should be rather larger than the others, and one should be pushed to the right and the other to the left, so that when the patient stands and pressure comes from above these two pieces wedge each other like the stones in an arch and keep the packing from falling out. The packing being thus placed piece by piece, the result should be that, as a whole, the mass will exactly conform to the shape of the vagina, exerting a firm, even, and constant pressure against the fundus uteri. It will of course require some practice to do this well. The packing should be removed every three to five days, with the patient in the same posi-

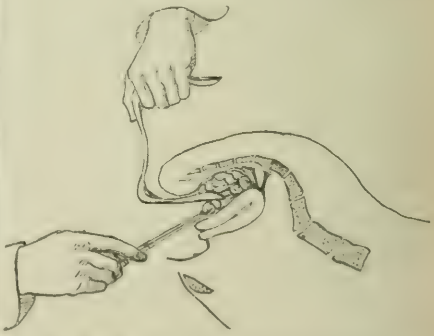

FIG. 3. Manner of placing the Cotton Tampons.

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[1] Beckenbauchfells Entzündung.

tion. On removing the packing we find the post-vaginal cul-de-sac somewhat deeper, for the pressure when properly applied tends always to wedge the uterus away from the rectum. Before replacing the packing it is a good plan to try to determine how much has been gained and where the adhesions still bind. This is best done while the patient is in the semi-prone position by hooking the cervix forward with a tenaculum held in the left hand, then passing the forefinger or two fingers of the right hand high up into the posterior vaginal cul-de-sac (the palm being toward the patient's back), and pressing the uterus forward with the back of the finger. In this way the adhesions can be put on the stretch over the ends of the fingers, and a good estimate of their strength and position be formed. Vide Fig. 4.

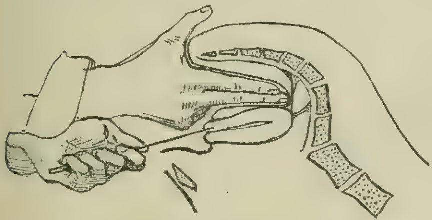

Fig. 4. Method of detecting the Adhesions.

We then proceed to repack the vagina as before. The pressure should be exerted directly backwards into the posterior cul-de-sac against the remaining adhesions. If the force is directed too far forward the result is that the cervix and bladder are raised and tipped forward, while the fundus remains fixed and unmoved. The ability to get the pressure exactly in the right direction is a matter of skill, and requires practice. The question of how tight the packing is to be must remain a matter of judgment in each case at each packing. This judgment will depend upon the condition of the vaginal wall and upon the increasing or diminishing tenderness of the adhesions. In a general way it is best to begin with a light packing, and increase the pressure each time until you pack as hard as you can, unless some contra-indication becomes manifest. The possible dangers from too tight packing are peritonitis and sloughing or rupture of the vagina. As a matter of experience most men pack too loose rather than too tight. Even when there is considerable tenderness a well fitting tight packing gives the most relief.

Some patients get immediate relief when the first packing is applied, and are perfectly comfortable during the whole treatment. Others have constant pain and discomfort. If the treatment is painful the patient must be very carefully managed. A nervous woman, who has often had attacks of pelvic peritonitis, will complain loudly, and actually say that she is sure you have started the inflammation again. It is sometimes very difficult to distinguish between hyperæsthesia and real tenderness. In such cases, when you have decided that there is no increasing local peritonitis, it is important to persist with the packing in spite of their protestations. One soon learns the peculiarities of each individual. It is, of course, very important to stop packing at the slightest indication of increasing or fresh local peritonitis. I have known of several severe cases of peritonitis followed by abscess, etc., which was caused by packing. I have never had this misfortune myself, and it seems to me entirely unnecessary. It may, however, become a very delicate and difficult problem in the case of a feeble and nervous patient to begin with a light packing, making sure that you are doing no harm, and at the same time holding your patient under strict and strong control, to push the treatment forward, packing tighter and tighter, until the uterus is forced into its normal position. No routine can be laid down for such cases.

The packing must be removed before each menstruation.

The treatment is to be continued until the fundus uteri can be pushed well forward; the uterus can then easily be held in position by a pessary. If, however, the adhesions are very resisting and the patient becomes somewhat run down by the treatment, a convenient time to rest is when the fundus has been raised just above the promontory of the sacrum. At this point the uterus can be held for a time with a Thomas' bulb pessary or with a soft rubber bulb pessary. The pressure of the packing may cause constipation; if so, the bowels must be regulated by a cathartic.

As before stated, the packing acts by mechanically forcing the posterior vaginal cul-de-sac up into Douglas's fossa, and thus separating uterus from rectum. Some of the adhesions are torn off, others are so stretched and pulled that being deprived of blood supply they finally wither and are absorbed

The packing is applied as above stated in the knee-elbow or semi-prone position, when the contents of the pelvis are hanging forward into the abdomen and the vagina is at its greatest length. Consequently, when the upright position is resumed, we have a mass of cotton wedging its way up behind the fundus uteri and the weight of all the organs tending to pull the cervix downwards. These two forces twist the retroverted uterus into its normal position.

The uterus, as above stated, having become passively congested, is large and tender. The packing exerts an even pressure against the organ, which partially empties it of blood, so that when the packing is removed the cervix appears smaller and wrinkled. The packing acts in this respect like a well-applied bandage on a swollen limb, and often gives in this way the greatest relief. As the uterus becomes less congested and is raised higher in the pelvis, the attacks of perimetritis (before referred to) become less frequent and less severe, and finally do not recur. The carefully-applied pressure seems also to exert a favorable influence on the inflamed peritoneal surface. I have of late become so impressed with this fact that I now often begin packing when there is considerable tenderness, and I find that this treatment is frequently much the quickest cure for chronic local peritonitis.

I have used various materials for these tampons, but I prefer cotton pluggets wrung out in glycerine. In packing I dip every fourth or fifth plugget in iodoform to keep the packing sweet. Where the adhesions are very firm I sometimes use bits of compressed sponge wrapped in cotton cloth. The sponge swells and exerts a very powerful pressure. I prefer to have the patients walk about during the treatment, for I think in this way the adhesions work loose faster. But certain debilitated cases I have kept in bed.

The general health is usually somewhat pulled down during the treatment; on the other hand it is often improved by the immediate comfort caused by relief from dragging, etc.

It is hoped that this manner of packing will not be confounded with the ordinary cotton pessary for simple retroversion, or with the practice which is not uncommon among physicians of loosely placing a few tampons in the vagina. This sort of thing is, of course, entirely inadequate. The method here described is intended for the treatment of an important disease, and when really firm adhesions are present the packing must be delicately and understandingly applied, each bit of cotton being placed with precision, otherwise it is worse than useless.

The cases here reported were treated at the Free Hospital for Women, the Boston Dispensary, and in my own private practice.

I am greatly indebted to Drs. Davenport and Green, of the Dispensary, for their kind permission to use the records of the cases as they passed to and from my treatment when the terms of service changed.

Out of 1500 gynæcological patients who have come under my observation and treatment within the last three years, there have been eighty-nine cases of retroversion with adhesions, is about .06. Of these cases, two, occurring in old women without symptoms, were advised against treatment, four are still under treatment, and seem to me to be curable, sixteen disappeared without treatment and sixty-seven were cured. By cured I mean here that the adhesions were so dissipated that the uterus is held in its normal position with a pessary, and that the patients have been free from the recurring attacks of pelvic peritonitis. Two of these cases have relapsed after removing the pessary against my directions. In two cases I have already removed the pessary, and the uterus remains in good position. Two cases have become pregnant after several years of sterility.

The length of time required for the treatment of these cases has varied from one month to three years.

The most troublesome complication has been prolapse of the ovaries. In twelve cases there was prolapse of one or both ovaries. With this complication it is necessary to proceed much more slowly. Prolapsed ovaries are almost always very sensitive, and the packing must be placed with great care until they are pushed to one side. Lacerated cervix was a common complication. This condition was invariably much improved by the pressure of the packing. Lacerated perinæum was occasionally an annoying complication on account of the difficulty in keeping the cotton in place. In no case, however, was it found necessary to sew up the perinæum before overcoming the adhesions. In one or two debilitated patients with ruptured perinæums the vagina, after being stretched by the packing, was left in a very flabby condition. This subinvolution of the vagina gradually disappears in a few months.

The change of life came about in one case, aged thirty-five, during treatment.

In one case at the Free Hospital the whole pelvis was filled with a mass of false membranes. The uterus was so imbedded in this mass that there seemed to be adhesions on every side. For three years this case was treated for several months in each year. The uterus is now movable and held in good position with a pessary, and the patient does all her own house work.

The patients have all been more or less relieved of their symptoms. Some have been restored to good health. Some were left in a very nervous condition. The few who had been bed-ridden were put on to their feet again and seemed delighted.

By way of illustration I will give the records of one case: —

Case I. On November 3d Mrs. B. was referred to me by Dr. James Minot. She was large and stout, but in very poor general health, being much run down, was forty-three years old, had been married twenty-four years, had had three children, and eleven or twelve miscarriages. She complained of wind and pain in the abdomen, of fullness and distress after eating, of vomiting, also of a soreness in the left lower abdomen, which at times became so severe that she was obliged to go to bed, and of dragging about pelvis and abdomen, of a bearing-down pain, frequent and painful micturition. The catamenia were natural; there was a profuse white discharge. On examination I found the uterus enlarged, retroverted, and tightly bound down by a large mass of very tender adhesions, subacute pelvic peritonitis, and chronic endometritis. The uterine cavity was three and a quarter inches deep. I advised rest and the hot douche.

November 10th. She returned in about the same condition. The vagina was then lightly packed with cotton tampons.

November 14th. The packing was removed and not replaced on account of approaching catamenia. The patient was ordered to rest in bed during menstruation.

November 21st. The vagina was repacked.

November 26th. The patient is much relieved of her pain and tenderness. The uterus was found somewhat higher in the pelvis and the adhesions less tender. Vagina repacked.

December 1st. The patient has wet her feet and caught cold, complains of pain and tenderness across her abdomen, but is not as sore as she usually is after taking cold. The adhesions were slightly tenderer, vagina hot and dry. Vagina repacked moderately tight.

December 5th. Much less tenderness. Uterus quite movable. Vagina repacked tightly.

December 8th. Uterus quite freely movable. Can be pushed into normal position. A block tin pessary was placed.

December 20th. Pessary holds uterus in good position. Patient is much relieved in every way.

CLINICAL ASPECTS OF CEREBRAL SYPHILIS.[1]

BY HORATIO C. WOOD, M. D.,

Professor of Diseases of the Nervous System in the University of Pennsylvania.

In the present article I propose to say very little in regard to the lesions of cerebral syphilis, only making such allusions as are necessary to the clinical study. So much practical importance attaches to the ætiological relations of the disorder that I shall discuss these at some length.

We do not know why syphilis attacks one portion of the brain rather than another in any individual case; indeed, very rarely can we give any sufficient explanation why the brain is affected at all.

It is naturally to be expected that any cause of ordinary brain inflammation would, when present in a syphilitic person, tend to precipitate a specific cerebral disease. Thus, as thermic fever frequently provokes chronic meningitis, much plausibility attaches to the report of a case in the *Journ. de Méd. et Chir. prat.*, Paris, 1879, page 291, where the cerebral syphilis is ascribed to a sunstroke. Blows and other traumatisms would, in a similar manner, be supposed to figure largely as exciting causes of brain syphilis; but I have never met with a case having such relations, and reports of them are rare in literature. The only records I have found are the cases reported by Dr. Broadbent, *London Lancet*, 1876, ii., p. 741, and a small collection in Huebner's article on Nervous Syphilis, in Ziemssen's Encyclopædia, xii., 301. I have seen two cases of presumably traumatic spinal syphilis: one in which a polio-myelitis[1] followed a fall on the ice, and one in which, after a fall from a cart, and marked spinal concussion, a local myelitis developed.[2]

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[1] Read before the College of Physicians of Philadelphia, February 6, 1884.

Various authorities attach much influence to over-study and other forms of cerebral strain in exciting brain syphilis. Engelstedt is stated to have reported cases having such ætiological relations, and Fournier[3] affirms that he has especially seen the disease in professional men and other persons habitually exercising their brains to excess. Neither in private or public practice have I met with any instance where over-brain work could be considered a distinct ætiological factor, whilst the wards of the Philadelphia Hospital and the roll of the University Dispensary are full of cases occurring in persons who use not at all the modicum of brains nature has endowed them with. So far as my observation goes, cases of brain syphilis in which any exciting cause can be found are very rare.

The inherited diathesis is less prone to manifest itself in the nervous system than in other portions of the body, but it certainly is capable of causing every type of nervous disease that follows infection from impure coition.

As early as 1779 Dr. Jos. Glenck[4] reported a case of a girl, six years old, cured by a mercurial course of an epilepsy of three years' standing, and of other manifestations of hereditary syphilis. Graefe found gummatous tumors in the cerebrum of a child nearly two years old.[5] Prof. O. Huebner[6] details the occurrence of pachymeningitis hæmorrhagica in a syphilitic infant under a year old. Dr. Hans Chiari[7] reports a case in which very pronounced syphilitic degeneration of the brain-vessels was found in a child fourteen months old. Both Dr. Barlow[8] and Dr. T. S. Dowse[9] report cases of nerve syphilis in male infants of fifteen months.

It is a matter of great interest to know how late in life nervous disease from inherited taint may develop. We have, as yet, little light upon the equally interesting and cognate problem as to how far inherited syphilis may produce late in life nervous diseases whose type is not distinctly specific, but it is probable that even after puberty specific nervous affections may appear for the first time in the unfortunate offspring of syphilitic parents. Mr. Nettleship reports[10] the development of a cerebral gumma in a girl of ten years, and Mr. J. A. Ormerod[11] of a tumor of the median nerve (probably gummatous) in a woman of twenty-three, both the subjects of inherited syphilis. Dr. Thomas S. Dowse[12] details a case of cerebral gumma at the age of ten years, and Dr. Samuel Wilks[13] one of epilepsy from inherited taint in a boy of fourteen. Dr. I. Hughlings Jackson reports[14] paraplegia with epilepsy in a boy of eight, hemiplegia in a girl of eighteen, and in the *British Medical Journal*, May 18, 1872, hemiplegia in a woman of twenty-two; the nervous affection in each case being associated with or dependent upon inherited syphilis. Dr. E. Mendel reports[15] a case of a child who had inherited syphilis, and developed in her fifteenth year a maniacal attack with hallucinations.

Some time since I saw, in an orphan of fourteen, a chronic basal meningitis, and, in the absence of any history, gave the fatal prognosis of tubercular disease, but to my astonishment, under the long-continued use of iodide of potassium, complete recovery occurred. No signs of inherited syphilis were perceptible, but the specific nature of the inflammation is, in view of the result, scarcely doubtful; it is probable that in some of the reported cases of alleged recovery from tubercular meningitis the affection has really been syphilitic.

The relation of inherited syphilis to idiocy appears to be a close one. What rôle the diathesis has in the production of those cases which are dependent upon arrest of development we have no way at present of knowing, but that it very frequently causes chronic hydrocephalus seems to be well established. A number of cases have been reported; they have been collected by Dr. E. Mendel.[16]

Nervous diseases following acquired syphilitic infection certainly belong to the advanced stages of the disorder. Huebner reports[17] a case in which thirty years elapsed between the contraction of the chancre and the nervous explosion. I have seen a similar period of thirty years. Fournier reports intervals of twenty-five years, and thinks from the third to the tenth year is the period of maximum frequency of nerve accidents.

The fact that cerebral syphilis may occur many years after the cessation of all evidence of the diathesis is one of great practical importance, especially when taken in conjunction with the circumstance that the nervous system is more prone to be attacked when the secondaries have been very light than when the earlier manifestations have been severe. I have repeatedly seen nerve syphilis in persons whose secondaries have been so slight as to have been entirely overlooked or forgotten, and who honestly asserted that they never had had syphilis, although they acknowledged to gonorrhœa or to repeated exposure, and confessed that their asserted exemption was due to good fortune rather than chastity.

To show that my experience is not peculiar, I may be allowed to make the following citations: Dr. Dowse[1] says: "Often have I had patients totally ignorant of having at any time acquired or experienced the signs or symptom of syphilis in its primary and secondary stages, yet the sequelæ have been made manifest in many ways, particularly in many of the obscure diseases of the nervous system." Dr. Buzzard[2] reports a case of nervous syphilis where the patient was unconscious of the previous existence of a chancre or of any secondaries. Professor Rinecker also calls attention[3] to the frequency of nervous syphilis in persons who afford no distinct history of secondary symptoms.

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[1] In this case the man had symmetrical specific skin eruptions upon the arm, and the symptoms were peculiarly symmetrical; great coldness of both fore-arms; excessive sweating of the palms; loss of power, so much more pronounced in the extensors than elsewhere that the patient had been treated for lead-poisoning and great wasting of the extensor muscles. Evidently a symmetrical syphilis chiefly confined to the anterior spinal cornua.

[2] Univers. Hosp. Dispen. Service Book, x., 1875, p. 58.

[3] La Syphilis du Cerveau.

[4] Doctrina de Morbis Venereis, Vienna.

[5] Arch. f. Ophthalm., Bd. i., erst. Abth.

[6] Virchow's Archiv, Bd. lxxxiv., 269.

[7] Wien. Med Wochenschrift, xxxi., 1881, 17.

[8] Lond. Patholog. Soc. Trans., 1877.

[9] The Brain and its Diseases, vol. i., p. 76.

[10] Trans. Lond. Path. Soc., xxxii., 13.

[11] Ibid., p. 14.

[12] Loc. cit , p. 71.

[13] Lectures on Dis. of Nerv. Syst., Philadelphia, 1878, p. 333.

[14] Journ. Ment and Nerv. Diseases, 1875, p. 516.

[15] Archiv f. Psychiatrie, Bd i., 313.

[16] Archiv f Psychiatrie, Bd. i., 309. For a very important paper see, also, Virchow's Archiv, Bd. xxxviii., p. 129.

[17] Ziemssen's Encyclopædia, xii., 298, New York edition.

This frequent absence of history of specific infection is of great practical importance, and has led me to attach comparatively little weight to the statements of patients. In private practice I usually avoid asking questions which might bring up from the past unpleasant memories, and arrive at the diagnosis by studying the symptoms present.

Although syphilis is most prone to attack the nervous system many years after infection, it would be a fatal mistake to suppose that brain disease may not rapidly follow the occurrence of a chancre. What is the minimum possible intermediate period we do not know, but it is certainly very brief, as is shown by the following cases of this so-called precocious cerebral syphilis. Dr. Alfrik Ljunggrén, of Stockholm, reports[4] the case of H. R., who had a rapidly-healed chancre in March, followed in May of the same year by a severe headache, mental confusion, and giddiness. Early in July H. R. had an epileptic attack, but he was finally cured by active antisyphilitic treatment. Although the history is not explicit the nervous symptoms appear to have preceded the development of distinct secondaries other than rheumatic pains.

Davaine is said[5] to have seen paralysis of the portio dura "a month after the first symptoms of constitutional syphilis." Dr. E. Leyden[6] found advanced specific degeneration of the cerebral arteries in a man who had contracted syphilis one year previously. Dr. R. W. Taylor details a case in which epilepsy occurred five months after the infection.[7] In the case of M. X., reported by Dr. Ad. Schwarz,[8] headache came on the fortieth day after the appearance of the primary sore, and a hemiplegia upon the forty-sixth day. S. L.[9] had a paralytic stroke, without prodromes, six months after the chancre. A. P. L.[10] had an apoplectic attack seven months after the chancre; A. S. one five months after her chancre. In a case which recently occurred in the practice of Dr. A. Sydney Roberts, of this city, the chancre appeared after a period of incubation of twenty-six days, and two months and eight days subsequent to this came the first fit; eight days after the first the second convulsion occurred, with a distinct aura, which preceded by some minutes the unconsciousness. The further details of this case are not germane to the present discussion, which only requires the additional statement that the attack developed into an unmistakable cerebral syphilis, with temporary aphasia, and that convalescence was finally secured by active antisyphilitic treatment. As the first paroxysm came on without warning, whilst the man was fishing in the sun, it is not unwarrantable to suppose that a precocious cerebral syphilis was in this case precipitated by exposure to the ordinary causes of sunstroke. This list of cases might be much extended, but it certainly is sufficient to show that cerebral syphilis occurs not very rarely within six months after infection, and may be present in two months.

An interesting observation in this connection is that of Dr. Ern. Gaucher[11] of a spinal syphilis occurring six months after the appearance of a chancre.

Syphilographers are in accord in regard to the existence of two pathological varieties of brain syphilis, whilst some authorities believe in a third form. The most common seat of attack is the membranes; next to these are the brain vessels, whilst, as already intimated, there is difference of opinion as to whether the disease ever directly affects the brain tissue. Reasons will be given later on for believing that the brain substance may suffer violence from syphilis, but I shall first discuss the clinical aspects of specific disease of the membranes.

DISEASE OF BRAIN MEMBRANES.

Specific affections of the brain membranes very often declare themselves with great suddenness. The records of the disease present case after case in which an apoplectic attack, a convulsive paroxysm, a violent mania, or a paralytic stroke, has been the first detected evidence of syphilitic cerebral disease. On the other hand, in many instances the symptoms come on slowly and successively. Proper treatment, instituted at an early stage, is usually successful, so that a careful study of these prodromes is most important. They are generally such as denote cerebral disturbance, and, although they should excite suspicion, are not diagnostic except as occurring in connection with a specific history or under suspicious circumstances.

Headache, slight failure of memory, unwonted slowness of speech, general lassitude, and especially lack of willingness to mental exertion, sleeplessness or excessive somnolence, attacks of momentary giddiness, vertiginous feelings when straining at stool, yelling, or in any way disturbing the cerebral circulation, alteration of disposition, any of these, and *a fortiori*, several of them, occurring in a syphilitic subject, should be the immediate signal of alarm, and lead to the examination of the optic disks, for in some cases the eyeground will be found altered even during the prodromic stage. Of course if choked disk be found the diagnosis becomes practically fixed, but the absence of choked disk is no proof that the patient is not suffering from cerebral syphilis. In regard to the individual prodromic symptoms, my own experience does not lend especial importance to any one of them, although, perhaps, headache is most common. There is one symptom which may occur during the prodromic stage of cerebral syphilis, but is more frequent at a later stage, a symptom which is not absolutely characteristic of the disease, but which, when it occurs in a person who is not hysterical, should give rise to the strongest suspicion. I refer to the occurrence of repeated, partial, passing palsies. A momentary weakness of one arm, a slight drawing of the face, disappearing in a few hours, a temporary dragging of the toe, a partial aphasia, which appears and disappears, a squint, which to-morrow leaves no trace, may be due to a non-specific brain tumor, to miliary cerebral aneurisms, or to some other non-specific affection, but in the great majority of cases where such phenomena occur repeatedly the patient is suffering from syphilis or hysteria.

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[1] The Brain and its Diseases, London, [illegible], vol. [illegible], p. 7.

[2] [illegible] Nervous Affections, London, 1874, p. 80.

[3] [illegible] f. Psychiatrie, [illegible], p. 241.

[4] [illegible]

[5] [illegible] London, 1874.

[6] Zeitschrift f. klin. Med., Bd. v., [illegible]

[7] [illegible] Nervous and Mental Dis., 18[illegible], p. [illegible]

[8] [illegible] Syphilitiques [illegible], Paris, 1880.

[9] Ibid.

[10] Ibid.

[11] Revue de Méd., 1882, ii., 678.

The first type or variety of the fully formed syphilitic meningeal disease to which attention is here directed is that of an *acute meningitis*. I am much inclined to doubt whether an acute syphilitic meningitis can ever develop as a primary lesion, whether it must not always be preceded by a chronic meningitis or by the formation of a gummatous tumor, but it is very certain that acute meningitis may develop when there have been no apparent symptoms and may, therefore, seem to be abrupt in its onset. Some years ago I saw, in consultation, a man who, in the midst of apparent health, was attacked by violent meningeal convulsions, with distinct evidences of acute meningitis. He was apparently saved from death by very heroic venesection, but after his return to consciousness developed very rapidly a partial hemiplegia, showing that a latent gumma had probably preceded the acute attack. On the other hand, an acute attack is liable at any time to supervene upon a chronic syphilitic meningitis. At the University Hospital Dispensary I once diagnosticated chronic cerebral syphilis in a patient who, the next day, was seized with violent delirium, with convulsions and typical evidences of acute meningitis, and died four or five days afterwards. At the autopsy an acute meningitis was found to have been engrafted on a chronic specific lesion of a similar character. In the case reported by Dr. Gamel,[1] in which intense headache, fever, and delirium came on abruptly in an old syphilitic subject, and ended in general palsy and death, the symptoms were found to depend upon an acute meningitis, secondary to a large gumma.

In this connection may well be cited the observation of Dr. Molinier,[2] in which violent delirium, convulsions, and coma occurred suddenly. A very curious case is reported by Dr. D. A. Zambaco,[3] in which attacks simulating those of acute meningitis appear to have been produced in a man with a cerebral gummatous tumor by a malarial complication. In such a case the diagnosis of a malarial paroxysm could only be made by the presence of the cold stage, the transient nature of the attack, its going off with a sweat, its periodical recurrence, and the therapeutic effect on it of quinine.

In the cases of *chronic meningeal syphilis* which have come under my observation, most usually after a greater or less continuance of prodromes, such as have been mentioned, epileptic attacks have occurred with a hemiplegia or a monoplegia, which is almost invariably incomplete, and usually progressive; very frequently diplopia is manifested before the epilepsy, and on careful examination is found to be due to weakness of some of the ocular muscles. Not rarely oculomotor palsy is an early and pronounced symptom, and a marked paralytic squint is very common. Along with the development of these symptoms there is almost always distinct failure of the general health, and progressive intellectual deterioration, as shown by loss of memory, failure of the power to fix the attention, mental bewilderment, and, perhaps, aphasia. If the case convalesce under treatment the amelioration is gradual, the patient traveling slowly up the road he has come down. If the case end fatally it is usually by a gradual sinking into complete nerve-paralysis, or the patient is carried off by an acute inflammatory exacerbation, or, as I saw in one case, amelioration may be rapidly occurring, and a very violent epileptic fit produce a sudden asphyxia. In this form of cerebral syphilis death from brain softening around the tumor is not infrequent, but a fatal apoplectic hæmorrhage is rare.

The clinical varieties of cerebral meningeal syphilis are so polymorphic and kaleidoscopic that it is almost impossible to reduce them to order for descriptive purposes. Professor Fournier separates them into the cephalic, congestive, epileptic, aphasic, mental, and paralytic, but scarcely facilitates description by so doing. Huebner makes the following types: —

"(1.) Psychical disturbances, with epilepsy, incomplete paralysis (seldom of the cranial nerves), and a final comatose condition, usually of short duration.

"(2.) Genuine apoplectic attacks with succeeding hemiplegia, in connection with peculiar somnolent conditions, occurring in often-repeated episodes; frequently phenomena of unilateral irritation, and generally at the same time paralyses of the cerebral nerves.

"(3.) Course of the cerebral disease similar to paralytica dementia."

In regard to these types the latter seems to me clear and well defined, but contains those cases which I shall discuss under the head of cortical disease.

Meningeal syphilis as seen in this country does not conform rigidly with the other asserted types, although there is this much of agreement that when the epilepsy is pronounced the basal cranial nerves are not usually paralyzed, the reason of this being that epilepsy is especially produced when the gummatous change is in the ventricles or on the upper cortex. In basal affections the epileptoid spells, if they occur at all, are usually of the form of petit mal, but this rule is general, not absolute. The apoplectic, somnolent form of cerebral syphilis, for some reason, is rare in this city, and it seems necessary to add to those of Professor Huebner's a fourth type, to which a large proportion of our cases conform. This type I would characterize as follows: —

(4.) Psychical disturbance without complete epileptic convulsions associated with palsy of the basal nerves and often with partial hemiplegia.

The most satisfactory way of approaching this subject is, however, to study the important symptoms in severalty, rather than to attempt to group them so as to make typical, recognizable varieties of the disease, and this method I shall here adopt.

Headache is the most constant and usually the earliest symptom of meningeal syphilis; but it may be absent, especially when the lesion is located in the reflexions of the meninges, which dip into the ventricles, or when the basal gumma is small and not surrounded with much inflammation. The length of time it may continue without the development of other distinct symptoms is remarkable. In one case,[4] at the University Dispensary, the patient affirmed that he had had it for four years before other causes of complaint appeared. It sometimes disappears when other manifestations develop. It varies almost indefinitely in its type, but is, except in very rare cases at least, so far paroxysmal as to be subject to pronounced exacerbations. In most instances it is entirely paroxysmal, and a curious circumstance is that very often these paroxysms may occur only at long intervals; such distant paroxysms are usually very severe, and are often accompanied by dizziness, sick stomach, partial unconsciousness, or even by more marked congestive symptoms. The pain may seem to fill the whole cranium, may be located in a cerebral region, or fixed in a very limited spot. Huebner asserts that when this headache can be localized it is generally made distinctly worse by pressure at certain points, but my own experience is hardly in accord with this. Any such soreness plainly cannot directly depend upon the cerebral lesion, but must be a reflex phenomenon, or due to a neuritis. According to my own experience, localized soreness indicates an affection of the bone or of its periosteum. In many cases, especially when the headache is persistent, there are distinct nocturnal exacerbations.

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[1] Tumeurs Gommeuses du Cerveau, Inaug. Diss., Montpellier, 1875.

[2] Revue Méd. de Toulouse, xiv., 1880, 341.

[3] Des Affections Nerveuses Syphilitiques, Paris, 1862, page 485.

[4] Book Y, page 88, 1879.

It will be seen that there is nothing absolutely characteristic in the headache of cerebral syphilis; but excessive persistency, apparent causelessness, and a tendency to nocturnal exacerbation, should in any cephalalgia excite suspicion of a specific origin; a suspicion which is always to be increased by the occurrence of slight spells of giddiness, or by delirious mental wandering accompanying the paroxysms of pain. When an acute inflammatory attack supervenes upon a specific meningeal disease, it is usually ushered in by a headache of intolerable severity.

When the headache in any case is habitually very constant and severe, the disease is probably in the dura mater or periosteum, and this probability is much increased if the pain be local and augmented by firm, hard pressure upon the skull over the seat of the pain.

Disorders of Sleep. — There are two antagonistic disorders of sleep, either of which may occur in cerebral syphilis, but which have only been present in a small proportion of the cases that I have seen. Insomnia is more apt to be troublesome in the prodromic than in the later stages, and is only of significance when combined with other more characteristic symptoms. A peculiar somnolence is of much more determinate import. This may occur in non-specific leptomeningitis, and in states of altered brain nutrition from senile or other degenerations of the walls of the cerebral vessels, and is therefore not pathognomonic of cerebral syphilis, yet of all the single phenomena of the latter disease it is the most characteristic. Its absence is of no import in the theory of an individual case.

As I have seen it, it occurs in two forms: In the one variety the patient sits all day long or lies in bed in a state of semi-stupor, indifferent to everything, but capable of being aroused, answering questions slowly, imperfectly, and without complaint, but in an instant dropping off again into his quietude. In the other variety the sufferer may still be able to work, but often falls asleep while at his tasks, and especially towards evening has an irresistible desire to slumber, which leads him to pass, it may be, half of his time in sleep. This state of partial sleep may precede that of the more continuous stupor, or may pass off when an attack of hemiplegia seems to divert the symptoms. The mental phenomena in the more severe cases of somnolency are peculiar. The patient can be aroused, indeed in many instances he exists in a state of torpor rather than of sleep; when stirred up he thinks with extreme slowness, and may appear to have a form of aphasia; yet, at intervals he may be endowed with a peculiar automatic activity, especially at night. Getting out of bed, wandering aimlessly and seemingly without knowledge of where he is, and unable to find his own bed, passing his excretions in a corner of the room, or in other similar place, not because he is unable to control his bladder and bowels, but because he believes that he is in a proper place for such act, — he seems a restless automaton rather than a man.

Apathy and indifference are the characteristics of this state, and yet the patient will sometimes show excessive irritability when aroused, and will at other periods complain bitterly of pain in his head, or will groan as though suffering severely in the midst of his stupor, at a time, too, when he is not able to recognize the seat of the pain. I have seen a man with a vacant apathetic face, almost complete aphasia, persistent heaviness and stupor, arouse himself when the stir in the ward told him that the attending physician was present, and come forward in a dazed, highly pathetic manner, by signs and broken utterance begging for something to relieve his head. Huebner speaks of cases in which the irritability was such that the patient fought vigorously when aroused; this I have not seen.

This somnolent condition may last many weeks. Dr. T. Buzzard[1] details the case of a man who, after a specific hemiplegia, lay silent and somnolent for a month, and yet finally recovered so completely as to win a rowing match on the Thames.

In its excessive development, syphilitic stupor puts on the symptoms of advanced brain softening, to which it is indeed often due. Of the two cases with fatal result of which I have notes, one at the autopsy was found to have symmetrical purulent breaking down of the anterior cerebral lobes; the other, softening of the right frontal and temporal lobes due to the pressure of a gummatous tumor, and ending in a fatal apoplexy.

This close connection with cerebral softening explains the clinical fact that apoplectic hæmorrhage is very apt to end the life in these cases of somnolent syphilis. Dr. Buzzard's case given above and others which might be cited prove, however, that a prolonged deep stupor in persons suffering from cerebral syphilis does not prove the existence of extensive brain softening, and is not incompatible with subsequent complete recovery. As an element of prognosis, it is of serious but not of fatal import.

(*To be continued.*)

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REPORT ON MATERIA MEDICA.

WILLIAM F. BOLLES, M. D.

ABRUS PRECATORIUS, L. (INDIAN LIQUORICE, PATER NOSTER BEANS, JEQUIRITY, BLACK-EYED SUSANS, ETC.)

This plant is by no means new to botanists nor its products to commerce. It was named by Linné, and has had a place in the pharmacopœia of India for forty years, the root, however, being the only part used in medicine. It is a papilionaceous plant, doubtfully placed in the tribe *Viciæ* of the order *Leguminosæ*, a small woody twiner with abruptly pinnate, many-pinnuled leaves, and rose-colored flowers in rather close racemes. The pods are smaller than those of the sweet pea, clustered, four to six seeded. The seeds, considerably smaller than the pea seeds, are roundish ovoid, of a brilliant scarlet color, with a black patch around the hilum, covering about one third of the surface; they are hard and beautifully polished. The plant is indigenous in India, but is found in almost all tropical countries, probably introduced.

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[1] Clinical Lectures on Dis. Nerv. Syst., London, 1882.

The root is used to a small extent in India as a poor substitute for liquorice root. The seeds are used as toys or strung into necklaces or rosaries. They are favorite curiosities with our sailors, and as a consequence were often seen in our sea-ports long before they had any commercial value here.

A full botanical description of the plant, with plate, may be seen in Bentley and Trimen's Medicinal Plants, and of the root, "*Radix abri*," in the Pharmacographia.

The root as well as the leaves contains a sweet principle resembling liquorice, and is destitute of any poisonous or deleterious quality. The seeds have not been thoroughly examined, but are non-poisonous, and have even been used in Egypt as food.

The present interest in the plant centres, however, in the application of the seeds, in infusion or decoction, to trachomatous eyes for the purpose of producing a substitutive conjunctivitis. According to Dr. Moura Brazil, the seeds have been employed for many years in the Brazilian provinces of Ceará and Piauhy for chronic granular conjunctivitis. They are usually prepared by soaking them for a few hours in boiling water, or for a few days in cold water, then blanched, and the kernel reduced to a fine powder, which is macerated for twenty-four hours and filtered. This liquid is applied beneath the eyelids three times a day. The proportion of one part of *jequirity* to twenty of water, the skin and radicle being removed, produces a moderate inflammation, but if all the parts of the seed are used the irritation is most intense.

Dr. Silva found what he supposed to be conidia of some fungus in the fresh infusion, and the mycelium and spores of the same in an older specimen. The same organisms were found in and could be developed from the conjunctival products.[1]

It was introduced into European practice by M. de Wecker, who received a sample of seeds from a patient who, after a long and unsuccessful treatment in Paris, returned to Brazil, and was there cured by this local remedy. The directions accompanying the sample were the following: Take thirty-two seeds (about three grammes), macerate them for twenty-four hours in five hundred cubic centimetres of cold water, then add the same quantity of warm water, filter, and the fluid is ready for use. The infusion changes from green to brown, and finally to yellow, without, however, becoming completely putrid.

Professor Sattler (Sadtler?) found that the symptoms did not vary greatly with the strength of the infusions, a one half per cent. solution producing symptoms almost as severe as one ten times as strong, but that a fresh preparation was much more efficient than one forty-eight hours old, and one prepared at the ordinary temperature than one prepared at a considerably higher one (85° F. to 96° F.). The decoction of the pulverized seeds he found to be inoperative.

The symptoms following the use of jequirity are as follows: The application is painless, and for several hours no sensations follow, then a sense of fullness followed by injection of the conjunctiva and lachrymation appear; then a thin film forms upon the conjunctival surfaces, which, however, is superficial, and can be wiped off without hæmorrhage. By the next day the eyelids are swollen and closed, and the conjunctiva is covered with lymph and pus. General disturbance is often present to a considerable degree, and restlessness and pain almost always. Coryza is a not infrequent accompaniment. This condition lasts five or six days, and then gradually disappears. The cornea is not apt to be, but is occasionally attacked. As the traumatic inflammation passes away the chronic trouble is found to be very much improved.[2]

THE DRASTIC AND VESICATING ELEMENTS OF CROTON OIL SEPARABLE.

The partial or variable solubility of croton oil in alcohol is a long observed fact. The Pharmacographia says: "Its solubility in alcohol (.794) appears to depend in great measure upon the age of the oil and the greater or less freshness of the seeds from which it is expressed, oxidized or resinified oil dissolving the most readily."

M. Harold Senier has succeeded in separating completely the vesicating and purgative principles from each other by means of alcohol. He says: "When alcohol (specific gravity 794–800) is mixed in equal volumes with English pressed croton oil perfect and permanent solution takes place, and this is equally true when any less quantity of alcohol is used. When, however, the proportion of alcohol to oil is as seven to six or any larger proportion of alcohol then a part of the croton oil separates, and cannot afterwards be dissolved by any amount of alcohol. The other portion, on the other hand, is soluble in all proportions of alcohol."

The remarkable feature of the observations is that the alcohol-soluble portion appears to contain all the vesicating principle, and the insoluble the cathartic element of the crude oil. Dr. Meek experimented with the non-vesicating, and found that doses of from one tenth to one half of a drop produced the cathartic action of croton oil without any irritation or other disturbance, the smaller dose being a mild, and the larger a powerful, purgative, unaccompanied by any unpleasant symptoms. The vesicating (soluble) oil in the same doses gave no purgation, but occasioned a considerable amount of nausea and irritation. The latter readily produced pustulation when applied to the skin, the other did not. Further study indicated that the real vesicating element was one of the combined fatty acids, but the author has not yet succeeded in isolating it.

The above observations if supported by clinical experience will greatly increase the value of this remedy as a purgative.[3]

ARBUTIN; UVA URSI.

Dr. Lewin[4] claims to have proved that all the value of uva ursi is due to the arbutin contained in it; that the latter can be given as safely and more efficiently than the other; that both are eliminated in part as hydrochinon in the urine; and that the antizymotic and antiseptic qualities of this latter are the secret of their value in vesical catarrh. (Hydrochinon is a whitish powder, allied to resorcin and pyrocatectin; it is also found in the urine in phenol poisoning.)

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[1] New Remedies.

[2] Therapeutic Gazette.

[3] Pharmaceutical Journal.

[4] Therapeutic Gazette.

The writer states that urine of patients taking uva ursi is discolored to a greater or less degree by the hydrochinon, and "that it remained fresh after standing in the open air for two weeks, while that subsequently voided rapidly decomposed." He recommends that the dose of uva ursi be increased to from thirty to eighty grammes in decoction, filtered through animal charcoal to remove the tannic acid; or, still better, the substitution of arbutin in one gramme (?) doses be used instead.

The price of arbutin, fifty cents per gramme, will prevent its being a very popular remedy, although as it is found in a number of Ericaceæ the supply might be increased.

QUASSIIN.

Although known in a crystalline form for many years the processes for extracting it have been either difficult or wasteful, and all the commercial quassiin has been in the condition of extract. MM. Adrian and Moreaux[1] have proposed a new process by which they obtain a larger quantity, 0.8 per cent. of an amorphous "quassiin," a friable product consisting of not quite half pure quassiin (crystallizable and uncrystallizable); by further purification they obtained 0.125 to 0.150 per cent. of pure white crystals. The amorphous quinine left behind in the mother liquor is about as bitter, and, for all that we know, as good as the other.

The drug examined was the Surinam quassia from *Quassia amara*, L., which is used in France more than that which constitutes the quassia of the United States and Great Britain, but the two drugs appear to be identical in their activity.

CONVALLARIA.

Prof. E. Maragliano[2] made the following observations on Convallaria.

He employed it as an aqueous and alcoholic extract, also its derivatives, convallarin and convallamarin, using it in thirteen cases of valvular (especially mitral) insufficiency, all with the symptoms of cardiac weakness.

In nine cases the result was favorable, and in a few superior even to digitalis; in four cases it had no effect, but neither had digitalis. Convallamarin showed itself the most powerful.

By continued use it increased the secretion of urine, and lowered the frequency of pulse and respiration without otherwise altering it.

The experiment of making use of it in increasing the secretion of urine for the reabsorption of pleuritic exudations failed in the nine cases tried.

The doses given were one to two grammes of the extract, in an indifferent vehicle, daily; of convallarin or convallamarin 0.25 grammes to one gramme daily (0.50 grammes was sufficient in most cases) in pills of about 0.05 grammes each.

COLOCYNTHIN.

Herr Gustav Henke,[3] in a communication to the Pharmaceutical Institute of Strassburg, gives a short history of the previous investigations upon the active principle of colocynth, and his own.

The purest form in which he was able to obtain it was as a "brittle, resinous mass (Mercks' is a softish black extract), making a dry yellow powder, permanent in the air. It is neutral, soluble in twenty parts of cold water, freely so in diluted, and sparingly in absolute, alcohol. Insoluble in chloroform, ether, etc.

He was unable to attain to Waltz's success in obtaining it in crystalline form, although he prepared it after Waltz's method, as well as his own, and he considers the glucoside decomposition, commonly believed, to be erroneous.

He obtained scarcely thirty grammes of the active principle from five kilos of colocynth pulp, or about 0.6 per cent.

PRESERVATION OF GREEN HERBS.

Dr. F. I. B. Quinlan read before the British Pharmaceutical Conference two papers[4] upon preserving green pulps by what he calls ensilage; that is, pounding to a pulp, packing hard, sealing in bottles, and burying deep in the ground. The herbs, in a perfectly fresh state, are bruised to a pulp in a mortar, and then placed in glass bottles, being well tamped down, and filled to the very stopper, so as to exclude all the air. They were then sealed with beeswax, and buried three feet below the ground. Belladonna, conium, and other herbs were kept in this way four months, "perfectly sweet and fit for pharmaceutical purposes." Dr. Quinlan had not, however, at the time of his report, tried the products of his "ensilage," and so the most important claim of the experimenter, the therapeutical value of the products, needs yet to be maintained.

THE AMOUNT OF IODINE IN COD-LIVER OIL.

Mr. Edward C. Stanford[5] has just gone over this much-contested ground, and reached the conclusion that the amount of iodine has heretofore been very much overestimated. The mean of six samples in his hands, and carefully examined, was 0.000322.

GELATINE BANDAGE, TRAUMATICINE, ETC.

Dr. Pick[6] has been employing a glue varnish as a protective coating for cases of chronic eczema, psoriasis, etc. It consists simply of a strong solution of gelatine, or fine glue, painted over the affected parts with a brush, and made flexible by a little glycerine rubbed over its surface after it is dry.

For the same purpose Professor Auspitz has proposed a chloroformic, ten per cent., solution of gutta percha. Both these substances are transparent, and permit the surface to be readily seen. If they should crack or peel they can be easily repaired.

GELSEMINE.

Mr. A. W. Gerrard,[7] F. C. S., has succeeded in obtaining this amorphous alkaloid, of which the purest form has hitherto been Sonnenschein's brownish-yellow powder, in imperfect but unmistakably crystalline form, and several of its salts, also crystalline. It is white, in "granular" crystals, sparingly soluble in boiling water, from which it separates upon cooling, and differs in its color reactions with acids, and its chemical composition, from that of Sonnenschein.

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[1] Rep. de Pharm., copied in Pharmaceutical Journal.

[2] Archiv der Pharmacie.

[3] Archiv der Pharmacie.

[4] Pharmaceutical Journal.

[5] Ibid.

[6] Ibid.

[7] American Journal of Pharmacy.

CHINOLIN, KAIRIN, ETC.

These interesting artificial relatives of the cinchona alkaloids have received a considerable amount of attention from chemists and physiologists during the past year or two. The most promising of these is "kairin," so called. It is a grayish-white powder, with a saltish, bitter, aromatic taste, not very unpleasant, reminding one a little of salicylate of soda. In doses of 0.5 gramme to one gramme it distinctly lowers the febrile temperature for two or three hours, and is followed by sweating. The article is at present rather but not excessively costly, and can be easily obtained in the larger cities by those who wish to use it.

PERFECTLY PURE PHENOL.

Another gain in the manufacture of carbolic acid has been made by a firm in Eisenbüttel, who have produced pure, clear, colorless, *dry, and separate crystals* of this universally used substance. They are less deliquescent than the ordinary crystalline masses; the solution is white, and does not change by light. To every test for purity it excels anything heretofore made.

TANRET'S ERGOTININE.

There is an article upon this alkaloid in the *Pharmaceutical Record* for January, 1884, by M. Tanret himself, in which he defends its value and explains its administration. Although he has obtained the alkaloid in crystalline form, it is not perfectly unchangeable, and he only offers it in syrup and solution. Of the former a teaspoonful, representing 0.00025 of the alkaloid, is the average dose of the solution. For hypodermic use five drops represent the same amount.

Reports of Societies.

NEW YORK COUNTY MEDICAL ASSOCIATION.

ÆTIOLOGY OF TYPHOID FEVER.

At a stated meeting, held February 18th, **Dr. E. G. Janeway** read a paper on the above subject. He said that in rural districts and in institutions typhoid fever seemed not infrequently to spread by contagion, as person after person sickened with the disease; yet in not a few of these instances it could be shown that such contagion was not direct, but indirect. It could not but be admitted that very few cases would stand a rigorous examination and be capable of proving that the disease was spread by direct contact. In order to arrive at a just conclusion in this matter an inquiry had been made at several hospitals receiving typhoid-fever patients, and the result was in the main negative. All claimed that no nurse or patient in the wards contracted the disease; but in one, some years ago, one of the physicians contracted typhoid fever while residing in the hospital, and in another a domestic sickened with the disease. The small number of cases occurring among those resident in hospitals treating typhoid-fever patients would, therefore, point towards failure of disinfection or to defect in the plumbing of the institution where such cases had occurred.

The principal source of typhoid fever in New York City was to be looked for in defective sanitary arrangements, permitting the entrance of the emanations of the sewers either to the air or to the drinking-water of which the patient made use. It was a great mistake, however, to suppose that invariably when sewer emanations gained entrance to a house, and even when the defects were very great, typhoid fever would appear. The writer had seen marked exceptions to such an idea, which, together with the susceptible character of those exposed, only proved that something more was necessary than ground saturated with water and sewage in order that typhoid fever should occur. In cases of typhoid it was not always easy to decide how the poison gained entrance to the system. If we supposed that germs were floating in the air, the question must be raised, Do they occasion the disease by being received through respiration and taken into the lungs, or are they by this act simply drawn into the mouth and throat, and thence swallowed with the saliva, food, and drink, to develop in the alimentary canal? To the writer the latter method seemed the more probable. Any one who had examined much the sanitary defects in cases of typhoid fever would find that vitiation of water was in many cases possible, especially at the present time, when the water supply and water pressure were both defective in New York. The drawing of water on a lower floor caused a partial vacuum, which, if stop-cocks were open, or if tanks supplied by ball-floats, which opened the pipe when the water was lowered, were employed, or if there were defective valves to pipes in water closets with direct supply, caused an aspiration of air into the water pipes of the house. The writer had traced outbreaks of typhoid fever in two institutions to sanitary defects of this nature and operating in this way. Having alluded to other sources of danger in connection with water pipes, he went on to say that a large number of privy vaults were still attached to the tenement houses in New York, and that there was but one form of these places which was devoid of danger, the school sink or trough closet. In such houses in a large city the question of the origin of cases of typhoid fever, with or without the germs from preëxisting cases of the disease, was as impossible of a just decision as in the case of defective sewage. That these privy vaults served to develop the poison of typhoid fever there was sufficient evidence, and the method of action might be in one of three directions: (1) by the use of the place, (2) by the leakage from such place, causing saturation of the soil beneath a house, and (3) by the connection of the living rooms of a house with such places by waste pipes. For several years the Board of Health had refused to allow any new privy vaults to be constructed; but under the law the tenement-house owner had the option of a trough closet or some form of water closet, and the writer had feared that with the defective water supply, and consequent deficient flushing of soil-pipes, an increase of typhoid fever might result from the introduction of water closets in the tenement houses on a large scale.

In the upper portions of the city of New York wells, with all the attendant liability of sewage-pollution, were still in use to a considerable extent, and the writer had been able to trace the outbreak of typhoid fever in an institution to use of such water by the em-

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[1] Pharmaceutical Record. Translation from Pharm. Centralhalle.

ployment of the chloride of lithium test. In this connection Dr. Janeway gave an account of the outbreak of typhoid fever at Princeton College, in regard to which he had made a thorough investigation. The origin of the trouble was traced to a house within which there was a water-closet discharging into a cess-pool with earth sides and bottom, in a shale soil, forty feet distant from a well, the water of which was found, on chemical analysis, to be seriously polluted. Afterwards the disease was ascertained beyond a doubt to have spread not by the drinking water, by the air, or by direct contact, but by means of the emanations from the sewer and cess-pool into which the passages from those sick with the fever had been thrown without disinfection. As regards the question of origin of this outbreak, whether spontaneous or from a previous case, the writer had been unable to come to a positive conclusion. Other avenues by which the disease might be introduced in a house, and of which the writer had seen possible, though not positive, illustrations, were, by means of refrigerators having direct sewer connection and by contaminated milk and food. He had been able to connect one outbreak in the upper districts of New York with affected milk, possibly diluted with water coming from a contaminated well, as in the cases reported from abroad, especially from England.

Dr. Janeway had reached the following conclusions with reference to the ætiology of typhoid fever: —

(1.) That it is in all probability due to a bacillus.

(2.) That this virus is certainly contained in the discharges from the bowels.

(3.) That it gains entrance to the system through the air coming from places into which the discharges of other typhoid-fever patients have been deposited, or through water contaminated by a similar process, or through milk diluted with contaminated water, or perhaps vitiated by contaminated air.

(4.) That there are instances which point to the probability that the germs which produce typhoid fever may develop in a suitable soil, but not have been derived from a preëxisting case of the disease.

(5.) That it is not necessary to invoke the aid of the rise and fall of the ground water to explain the disease; though a low state of the ground water, by favoring an increase of the impurities in a well or water-supply, may favor the spread of the disease, as may also a sudden severe rain after a drought, by washing impurities, including the germ of the disease, into the drinking water.

(6.) That the failure of the disease to spread when prompt and thorough disinfection of the excreta has been performed, as well as of clothing soiled by such discharges, makes it extremely doubtful whether the disease is communicated by the respiration, perspiration, etc.

(7.) The writer has had no opportunity to study outbreaks of fever resembling typhoid, such as have occasionally been met with abroad, due to the eating of diseased meat.

The writer said that accompanying the paper were tables which would give in detail the number of deaths which had been ascribed in New York to each of a number of febrile diseases since 1852. In each of the last four years more deaths were ascribed to the malarial class of diseases than to typhoid fever; and this he thought was due to error in diagnosis, since in Bellevue Hospital [illegible] cases of malarial fever had been treated during the last three years, with a mortality of only three, or one death for each year. Among the fevers referred to, from 130 to 154 deaths in each year were reported as due to the hybrid, typho-malarial fever, and, as far as New York City was concerned, the writer regretted the employment of this term. It had led to confusion, and had also prevented those proper measures from being employed which would prevent the spread of typhoid fever and lead to an investigation of its causes. He had long insisted that the evidence of post-mortem examinations was opposed to the use of this term here, and he had known cases which clinically seemed, and were asserted to be, typical of this combination, which only presented the ordinary anatomical conditions of typhoid fever. The concluding part of the paper was devoted to a consideration of the relationship of age to the development of typhoid fever, and of the question whether the disease were increasing or not.

Dr. A. Flint, Sr., said he had listened to the paper with great interest, and was glad that the subject had been brought before the Association. At the present time preventive medicine was of greater importance than therapeutic, and our ability to protect the public from typhoid fever, which was a purely preventable disease, depended, of course, on our knowledge of its ætiology. There was every reason to suppose that typhoid fever was developed from a special cause, which produced this particular disease, and no other, just as the eruptive fevers were. Whether this were a germ, or something else, had not as yet been definitely determined; but, reasoning from analogy, it was fair to assume that the disease did depend on a special organism. It was desirable to know, then, whether this special cause, whatever its nature might be, was always derived from the body of a patient ill with typhoid fever, or whether it could not originate spontaneously under certain circumstances. Here, again, it was not possible in our present state of knowledge to say positively; but, reasoning still from analogy, we would infer that the germ, as it might be called for convenience' sake, at all events, always did come from the body of a patient. One point of great practical importance was that this germ was capable of preserving its activity for a considerable period — at least two years. It seemed to be well established that it entered the system in two ways: (1) in the drinking water, or other liquid mixed with water, and (2) by the inspiration of contaminated air. In New York the infection was probably almost always conveyed by contaminated air, and the manner in which this was effected could generally be traced to some defect in plumbing or sewerage. This was why the disease ought to be preventable. It seemed to be the fact, however, that typhoid fever was increasing in New York, and one reason for this, in addition to the defective sanitary provisions found in many houses, was probably the present deficient water supply.

In every case of this disease to which a physician was called it behooved him to ask, What is the cause of the trouble? and the cause, he thought, could almost always be ferreted out if a thorough investigation were made. But in case the physician failed in his duty in this respect, he believed that it was the business of the Board of Health to make such an investigation in every single case of typhoid fever reported to them. In this way a great deal might be accomplished towards the prevention of the disease.

In regard to typho-malarial fever, he was a little at variance with the author of the paper. He thought that this was a good term, as he believed that even in New York it was not uncommon to find the typhoid fever poison in combination with a malarial element. Dr. Janeway looked at the matter from an anatomical stand-point, while he regarded it mainly from a clinical stand-point. Although the name typho-malaria was of recent origin, this special form of disease had been recognized many years ago by Dr. Drake, who, in his great work on the diseases of the Mississippi Valley, had designated it as malario-typhus.

Dr. Hocheimer said that he was glad to inform the last speaker that the Board of Health was now engaged in the work which he had recommended, and that during the past season he himself (Dr. Hocheimer) had been among those whose duty it was to investigate the circumstances connected with every case of typhoid fever reported in the city. One of the special features which he had noted about the disease as it had prevailed of late was that the central portion of the city (between Sixth and Lexington Avenues) was almost entirely exempt from its ravages, while in the districts along the rivers, both east and west, by far the greatest number of cases occurred. When instances were found in the central district they could almost invariably be traced to a source out of town. It was also worthy of note that typhoid fever as now found in New York differed very greatly from the typical description of the text-books. In nine tenths of the cases not half the ordinary symptoms of the disease could be found.

In regard to some of the sanitary aspects of the disease that he had noticed, he went on to say that no case of it had been found in a house provided with the school sink unless the latter was in a filthy condition or out of repair. In houses with privy vaults it was met with where the vaults were not ventilated or where the ventilating pipes had traps. It was also interesting to note that cases of it occurred on the fourth floor of houses where there were houses in the rear, to the roofs of which the ventilating pipes were carried, these roofs being just on a level with the fourth floors of the houses in front. Where the premises were provided with water closets the cases of typhoid fever were generally found on the upper floors, where the water supply was imperfect and irregular. The youngest child that he had seen ill with it was twenty-two months old, and, as a rule, he found that young children were not attacked by it except after a comparatively long exposure to infection. The greatest number of cases occurred in persons between the ages of twelve and forty, while there was a remarkable immunity in those between forty and sixty. Persons over sixty, however, were found exceedingly liable to contract the disease.

In closing the discussion Dr. Janeway made a few remarks in regard to typho-malaria, the use of which term, he said, tended to keep physicians as well as patients from taking proper precautions in regard to the dejecta, which it was such an essential point to thoroughly disinfect in every case of typhoid fever whether there was any malarial complication or not. Therefore on this ground, as well as from anatomical considerations, he was opposed to the designation, and thought that in those cases in which it would seem to apply clinically it was better to speak of the malarial element simply as a complication of the typhoid fever.

SPECIMENS OF SARCOMA, ETC.

Dr. George L. Peabody presented a specimen of spindle-celled sarcoma of the dura mater, which, he said, was of interest as offering a negative contribution to the subject of cerebral localization, since, although its convex surface made a decided depression in the left hemisphere, its situation was out of the motor tract and no paralysis was caused by it. The patient was seventy-two years of age at the time of death, and as far as the history of the case could be ascertained there had been absolutely no symptoms referable to the tumor.

Dr. Gouley mentioned a somewhat similar case which he had reported in the first number of the *New York Medical Journal*, in 1864, and Dr. Flint then presented a rare and interesting specimen of congenital stenosis of the pulmonary artery, which had led to a reversal of the ordinary conditions in the heart, the right ventricle being relatively very large, and the left ventricle extremely small.

Dr. Janeway related a similar case which he had seen some years ago, after which the President, Dr. Detmold, made, by request, some remarks on the

DIAGNOSIS AND TREATMENT OF SYPHILIS.

All were aware, he said, of the difficulty which was sometimes met with in practice in deciding whether certain symptoms noticed were of specific origin or not, especially in instances where the patient denied ever having had syphilis, or was really unaware that such had been the case. It might, therefore, be of interest to know that there was one indication which he considered absolutely pathognomonic of syphilis, although the text-books seemed to attach little or no importance to it. He did not hesitate to say, however, that he had never in a single instance been misled by it. After referring to the predilection of different diseases for special tissues and organs, and instancing scrofula particularly, as prone to attack the cancellated structure of the bones, he went on to say that syphilis had a decided preference for the bodies of the bones, and especially those bones which were not covered by large masses of muscular or fibrous tissue. Among these might be mentioned the anterior aspect of the tibia, the surface of the ulna, the sternum, the bones of the nose, and the bones of the skull; but of all these the favorite seat of secondary syphilis in the bones was the anterior surface of the tibia. A chronic periostitis was set up, and, as an invariable result of this, there was œdema over the bone. The peculiar feature of this œdema was that it was permanent, so permanent that it continued throughout the rest of the patient's life. Hence this constituted an ineffaceable and certain sign of syphilis, and it was this to which he referred as a pathognomonic symptom. It was true, of course, that œdema over the tibia might be the result of injury, or other causes; but where this œdema was found in both legs, and no local cause could be assigned for it, there could be no reasonable doubt that the patient had had syphilis.

The treatment which he advocated, Dr. Detmold said, was different from that ordinarily recommended in the text-books and from that ordinarily resorted to in practice; but his experience had been so extremely satisfactory with it that he did not hesitate to recommend it to others. Some years ago he was called upon to treat a gentleman suffering from syphilis who had such an intolerance of mercury given in any of the ordinary ways that it was constantly necessary to suspend its administration, and, consequently, it seemed almost impossible to secure a permanent cure. Under these circumstances he determined to try the external use of a solution of bichloride of mercury, and accordingly directed the patient to rub one grain of corrosive sublimate, dissolved in half an ounce of water, upon his body every night and morning; applying it to each of the extremities in turn. The results thus obtained were far beyond his expectations, and, in consequence of the marked success of the method, he had scarcely employed any other treatment since. It never produced salivation or other inconvenience of any importance, produced no local effect upon the skin, was perfectly clean, and, what was of more consequence, was efficient. Occasionally he thought he had seen it produce some griping pains in the stomach after it had been continued for some time, and in some cases it seemed to cause a slight discoloration of the finger-nails; which, however, he supposed was simply attributable to the friction to which they were exposed in the rubbing. On the whole, therefore, he preferred this method of administering mercury to any other, and he was glad to say that it had now been followed with success in various hospitals. If those present had never employed it, he thought it would be worth their while to give it a trial whenever occasion should offer.

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PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

Thursday evening, January 24, 1884, Vice-President Shakespeare in the chair.

GENERAL TUBERCULOSIS OF SEROUS MEMBRANES.

Exhibited by Dr. W. E. Hughes.

Caroline K., white, aged seventeen, was admitted to the University Hospital November 3, 1883. There was a history of articular rheumatism in father and mother. The family was free from consumption. She herself had been perfectly well till eight months previous, when she developed symptoms of acute pleurisy. The acute symptoms subsided after a few days, and, with the exception of slight dyspnœa and hacking cough, she soon felt as well as before. Two months afterward she had pain, swelling, and redness involving successively all the large joints of the body, lasting ten weeks, and disappearing completely. From the onset of the articular symptoms her strength and flesh failed steadily, appetite grew poor, and digestion bad, dyspnœa and cough increased slightly. Five weeks before admission she began to have occasional sharp pains through the abdomen, and noticed that the abdomen was gradually enlarging. When first examined she was pale, somewhat emaciated, had hacking cough with mucous expectoration, slight constant dyspnœa, very little increased on exertion. The right pleural cavity was filled with fluid up to the third rib. The abdomen much distended with fluid free to move. The heart was normal in size, but there was a strong mitral systolic murmur. She had an irregular hectic fever. Under treatment the pleural effusion rapidly subsided, that in the abdomen less rapidly. One month after admission symptoms of meningitis developed, and examination of the eye-ground showed descending neuritis. A week afterward a double pericardial friction sound developed over the sternum opposite the third intercostal space. She died December 16th.

Autopsy seven hours after death. Thorax. Right pleural cavity completely obliterated by organized plastic adhesions. In the adhesions numerous gray miliary tubercles were found. Right lung congested, compressed, and contains scattered miliary tubercles. Left lung contains a few miliary tubercles. Pleura normal. Heart normal in size; marked thickening of mitral leaflets with incompetency. In the pericardium, at upper part of anterior surface of left auricle and over base of aorta, were a few small, grayish granulations, apparently tubercular. Peritoneal cavity contains about two quarts of straw-colored serum. Peritonæum everywhere thickly studded with gray miliary tubercles. Old peritoneal adhesions in several parts of abdomen, notably in left lumbar region and around pancreas. These old adhesions are filled with miliary tubercles. Lymphatic glands moderately enlarged, not cheesy. Numerous gray miliary tubercles in membranes of base of brain, especially in Sylvian fissures. No tubercles in any organs except the lungs.

TUBERCULAR ULCERS OF INTESTINES WITH PERFORATION.

Exhibited by Dr. William E. Hughes.

William I., white, aged thirty, was admitted to the University Hospital April 16, 1883. His mother and a sister died of phthisis. He always took cold easily, and was never strong. Two years ago, after lifting a heavy weight, he had several slight pulmonary hæmorrhages. At that time he had no cough. Four months before admission he took a heavy cold. From that time up to his admission he had a dry, hacking cough with mucous expectoration, some dyspnœa, pleuritic pains on the right side, and a few small hæmorrhages. He lost twenty pounds. On admission there was in the lower part of the right pleural cavity an effusion localized in the posterior half. Over the right lung the respiration was somewhat roughened, with an occasional bronchitic rhonchus. The left lung was normal. Under treatment the effusion subsided, but consolidation commenced at the apex of the right lung. The consolidation went on to breaking down, and the same process commenced at the left apex. He gradually failed with the usual phthisical history. One month before death uncontrollable diarrhœa developed, with severe colicky pains and intense tenderness throughout the abdomen. He died December 26th of gradually increasing asthenia.

Autopsy three hours after death. Great emaciation. The right pleural cavity was completely obliterated by firm, old adhesions; on the left there were some adhesions at the apex; no fluid. The right lung had numerous small cavities in the apex; the lower two lobes were studded with miliary tubercles and small cheesy masses. The left lung was at the apex indurated with tubercular and cheesy deposits; in all other parts it was healthy; bronchial glands were enlarged. The heart weighed four and one half ounces. The aorta was slightly atheromatous. The liver weighed two and one half pounds, and was somewhat nutmeg in appearance. The spleen weighed two and two thirds ounces. The kidneys were normal in size and appearance. The intestines were everywhere adherent to each other and to the abdominal wall, and scattered through the adhesions and over the peritonæum were a few miliary tubercles. The small intestine contained tubercular ulcers strung along its length from the lower part of the duodenum to the ileo-cæcal valve. They were about as numerous in the upper part of the intestine as in the lower. Several of these ulcers had perforated the peritoneal coat, but the contents of the intestine were prevented from exuding into the abdominal cavity by adhesions which had formed around the perforations to the neighboring peritoneal surfaces. There were a few tubercular ulcers in the colon. The mesenteric glands were enormously enlarged.

PHTHISIS FOLLOWING EMPYEMA; AMYLOID KIDNEYS; CANCER OF UTERUS.

Exhibited by Dr. William E. Hughes.

Amanda F., white, aged thirty-eight, was admitted to the University Hospital for cancer of the uterus. She had been a sewing woman, and had been much exposed to draughts. Her mother died of cancer of the uterus. There was no phthisical family history. One of her children died of tubercular meningitis. While in the hospital she complained of pulmonary symptoms, and physical examination of her lungs showed on the left posteriorly flatness down to midway between the spine and the angle of the scapula, with blowing, breathing, and gurgling râles, anteriorly tympany with metallic, cavernous breathing; at the base a small amount of fluid free to move. On the right hyper-resonance with exaggerated breathing, and at the apex moist râles. Her general condition was much below par. She had a troublesome loose cough, with free muco-purulent expectoration, and pleuritic pains through both sides of her chest. Five and a half years before she had taken a severe cold, from which she dated all her trouble. With the cold there had been severe pleuritic pain in the left side, some dyspnœa, and slight muco-purulent expectoration, occasionally streaked with blood. In a month she had lost twenty pounds. Afterward the acute symptoms disappeared, the pain grew less severe, the cough looser, and the expectoration quite profuse. She slowly lost ground till about a year before, when, after a succession of heavy colds, her condition deteriorated more rapidly. There was more dyspnœa, more cough, and an occasional rise of temperature preceded by chilliness. During this year she had several pulmonary hæmorrhages. For a month the frequency of micturition had been much increased, but the urine contained no albumen, though the quantity was increased and the specific gravity somewhat lowered. The first symptoms of cancer of the uterus had appeared about seven months before. For more than a month after admission she improved, then, a day after a rather profuse pulmonary hæmorrhage, she developed a typical uræmic condition. The urine was very scanty and loaded with albumen, but contained neither tube casts nor blood. The uræmic condition disappeared after two days, and the urine increased to its former quantity, all but a trace of the albumen disappearing. Two weeks after this, for the first time, a few waxy and epithelial casts were found in the urine. From this time on the quantity of urine passed daily varied from fifty ounces to seventy ounces, its specific gravity ranged between 1008 and 1015, and the quantity of albumen contained steadily increased till toward the end it became as much as one third of the bulk of the urine. At no time were very many tube casts present, though they were never absent they were either waxy or epithelial. She died January 1, 1884, of uræmia; which had gradually developed.

Autopsy five hours after death. Much emaciation. The left lung was compressed, atrophied, and firmly bound down in the posterior part of the pleural cavity. The remainder of the cavity contained gas and about eight ounces of sero-pus. The pleura was much thickened and transformed into a pyogenic membrane. The lung itself was hollowed out into a large cavity with suppurating walls by an extensive series of bronchial dilatations with more or less destruction of lung tissue. The lung was so torn in its removal that it was impossible to say whether or not there had been a communication between it and the pleural cavity. The right lung was emphysematous, and contained some tubercular and cheesy deposits at the apex. The heart weighed nine ounces, its right cavities contained an unusually developed ante-mortem clot closely moulded to the pulmonary valve. The kidneys weighed eleven and a half ounces, and presented very characteristic amyloid change. The body of the uterus was unchanged, but its cervix and the upper part of the vagina were destroyed by cancerous ulceration. There was no infiltration of the lymphatic glands. Other organs normal.

SECONDARY TUBERCULOSIS OF THE BLADDER, URETER, KIDNEY, AND SUPRARENAL BODY.

Exhibited by William E. Hughes, M. D.

Ida G., white, aged nineteen, had suffered with the usual symptoms of phthisis for about nine months before she came under observation. Her father and a sister had died of phthisis, and she had always taken cold on the slightest exposure. When first seen she was standing leaning over the back of a chair suffering the most agonizing pain in the region of the bladder. Desire to urinate was constant and irresistible, and the passage of the small quantities of urine gave rise to such suffering that she would shriek and almost faint. Till two weeks previous there had been no trouble with the urine, then the pain began, slight at first, and became gradually more and more severe. She had passed frequently masses of clotted blood with great suffering. Under anodynes the pain became less, and an examination of the bladder showed it to be much contracted with roughened walls. Examination also brought on a slight hæmorrhage. The urine contained nothing abnormal except blood and pus. Under the continued use of anodynes the pain decreased and finally disappeared. After the cessation of pain the blood disappeared from the urine, but was replaced about two months afterward by a small quantity of albumen and a few granular tube casts. About this time œdema began in the ankles and gradually involved the whole of the lower extremities. The tissues finally became so distended that her legs were utterly useless. The urine never contained more than one tenth of its bulk of albumen, and the tube casts were always few in number. She died of asthenia four months after coming under observation.

Autopsy fourteen hours after death. Extensive degeneration of lungs. Liver was extremely fatty, being of a uniformly yellow color with no distinction whatever between its lobules. The bladder was small and firmly contracted, its walls thickened, its inner surface roughened, rugose, papillomatous, its mucous membrane thickly studded with tubercle granulations. The substance of the right kidney contained numerous gray miliary tubercles, its pelvis was dilated and presenting the same appearance as the inner surface of the bladder. The corresponding ureter was as thick as an index finger, its walls firm, hard, infiltrated with tubercular deposit, its mucous membrane in the same condition as that of the pelvis of the kidney. The right suprarenal body retained none of its original structure, it was a mass of cheesy tubercles firmly adherent to the kidney. The left kidney, as well as the other organs, was normal.

Dr. Formad had examined these specimens for bacilli. None were found in the first case although the post mortem was made within about two hours after death and frozen sections at once cut. The lymph glands were also examined as well as the lungs without detecting any bacilli. In Dr. Hughes's second case the lymph glands as well as the perivascular spaces were crowded with colonies of bacilli. In the first case was an absolutely primary tuberculosis of the serous membranes with no bacilli, while in the second, *ulceration* was present with lymph gland bacilli as well as invasion of other tissues. This would indicate that bacilli and general tuberculosis most commonly result from surface troubles, that is, the mucous membrane of the lungs, intestines, etc., when affected by tuberculosis. In the case of tuberculosis of the serous membranes there was no history of a strumous diathesis, and no general tuberculosis ensued. From the careful study of ten similar cases Dr. Formad was inclined to think that serous tuberculosis was the only form of the disease to which *non strumous* individuals were liable.

Dr. Shakespeare said that he had been struck with the fact that the third case, with a family history of carcinoma, apparently developed tuberculosis after empyema, and that, post mortem, carcinoma of the uterus was found. An antagonism between these two diseases has been long believed in, but of late has been questioned, since a careful scrutiny of statistics has shown them to be more commonly associated than is generally believed. Dr. Shakespeare then called attention to the fact that in most cases a family history was obtained running back for only one generation, yet, there being no statement as to what degree the investigations had been carried, statistics drawn from such sources must be unreliable, as Dr. Formad, among others, has called attention to the fact that tuberculosis can and often *does* skip one generation. There were some points in the history of the case of tuberculosis of the serous membranes which suggested that the primary trouble might have arisen in the joints which are closely analogous to serous sacs, if they are not actually such.

Dr. Hughes said that in the patient where he had stated that the family history was good, he had gone back for three generations, directly and collaterally.

Dr. Musser asked what was the effect of repeated tappings on the development of tubercle, as some clinical teachers are now advising against such operations in simple pleurisies, advocating in preference other remedies to induce rapid absorption of the effusion.

Dr. J. C. Wilson thought this question could only be answered by an analysis of a large number of cases specially examined for this purpose.

Dr. Shakespeare having been informed by Dr. Hughes that the so-called tubercles in the case of carcinoma had not been examined microscopically suggested the reference of this specimen to the Committee on Morbid Growths, since it might really be only a case of miliary carcinosis and not tubercle. With reference to the influence of tapping on the development of tubercle the latter seemed to be most frequently developed where no tapping had been performed, but where rapid resorption had taken place. Pathological experiment has shown with what ease any innocuous substance, even simple traumatisms, will set up tuberculosis of the serous membranes. If, then, a general tuberculosis can result from tubercle of serous membranes — a point not settled as yet by experimenters — repeated tappings, with perhaps the coincident introduction of deleterious substances, might account for the alleged fact mentioned by Dr. Musser.

TUMOR OF THE ANTERIOR MEDIASTINUM WITH SECONDARY DEPOSITS IN THE HEART AND LUNGS.

Presented by **Dr. J. C. Wilson.**

The specimens were removed from the body of an unmarried woman, aged sixty years, who died in the hospital of the Jefferson College, January 7, 1884. The patient had been singularly free from sickness until about eighteen months before coming to the hospital, three weeks prior to her death. The earliest symptoms were fixed pains of varying intensity in the sternal region, with attacks of palpitation and dyspnœa. These symptoms increased in severity, and were aggravated by exertion. After a time she began to experience difficulty in swallowing. Six weeks before admission to the hospital her feet and legs were for the first time observed to be swollen. The dropsy soon became general. She had no knowledge of her family history. On admission she suffered from constant dyspnœa, paroxysmal, often urgent, worse at night; inability to lie down; occasional unproductive cough; a sense of weight and oppression in the chest, and particularly in the precordial region; pain under the sternum; and great discomfort in swallowing. There was a high degree of general anasarca, and the evidences of pleural and peritoneal effusion. The surface was cool, the skin bluish. The examination of the chest was rendered difficult by the unusual thickness of the tissues, the patient being not only enormously dropsical, but also very fat, and the breasts being hugely developed. It was nevertheless noted that the impulse of the heart was feebly felt, the apex beating in the sixth interspace, and somewhat to the left of its usual position; that a faint systolic blowing murmur was heard at the apex, feebly propagated towards the left; that the heart sounds at the base were unusually obscure; and that the pulse was feeble, frequent, and irregular. There was flatness with absence of respiratory murmur at the base of the chest on both sides, and harsh, broncho-vesicular respiration over the upper regions of the chest. In the upper sternal region the cutaneous venous tinge was conspicuous without rising, as is sometimes seen, above the level of the skin. The veins were dilated and tortuous, and symmetrically arranged beyond the sternal borders, at which they abruptly ceased. The thyroid body was enlarged, and formed an egg-like projection in the median line. It was exceeding hard, but not sensitive nor the seat of pain. The patient regarded it with indifference, and said that *the lump* had existed for "many years."

I was, unfortunately, prevented from being present at the necropsy, and this tumor was not removed.

The boundaries of dullness in the pericardium could not be distinctly made out. It was, however, noted that the distribution of percussion signs absolutely negatived the existence of aneurism of the aortic arch as their cause. The pupils were equal in size, and in response to light. The voice was unchanged. The radial pulses equal.

The patient died suddenly in an attack of dyspnœa at nine P. M. on the 7th of January.

Necropsy. Body much swollen and œdematous. Face and thorax very blue. Both the pleural sacs and the peritoneal cavity contained fluid in large amounts. Strong pleural adhesions on left side. The anterior mediastinum in its upper segment was occupied by a large, firm mass, mammilated in structure, extending from the notch of the sternum downwards for five inches, and adherent to the lung and the costal cartilages. The width was about three inches, and its depth, in an antero-posterior direction, about the same. It occupied exactly the position of the thymus gland. Its visceral surface was embossed, but smooth, and in its upper portions only adherent to the great vessels. No adhesions existed between the parietal pericardium covering its posterior surface and the visceral layer of the pericardium.

Recent Literature.

On Sterility in Woman. By J. Matthews Duncan, M. D., LL.D. Philadelphia: P. Blakiston, Son & Co. 1884.

This book is a reprint of the Gulstonian Lectures delivered by Duncan in the Royal College of Physicians, London, in February, 1883. As the author says in his preface, "they form a mere outline sketch of the parts of the subject of which they treat"; yet they are sufficiently comprehensive to give the reader a clear idea of the subject as at present understood, and are replete with statistics and suggestions that will aid the student in further investigations.

The subject is treated under three heads: Nature and Amount, Theory or Causation, and Prevention and Cure. At the outset the author excludes from consideration those cases where conception is impossible on account of such causes as absence of the uterus or imperforation of the vagina. He then defines his subject under the heads of absolute sterility, where there is no conception, or where the impregnated ovum is lost without leading to what is recognizable as an early abortion; and of sterility not absolute, by which he means the failure to produce a viable child, while there is evidence of conception. He also deals with the condition known as relative or acquired sterility, by which is meant the failure to produce in number according to the conditions of age and length of married life, even though the woman may have borne one or more living children.

Under the head of Theory or Causation the author considers analogous conditions in vegetable and animal life, showing in what way fertility is affected by circumstances of heat and cold, over- or under-feeding, youth and old age, confinement and domestication. He points out the fact that plants frequently produce seeds apparently perfect, but which will not germinate; also that fowls produce eggs that will not hatch, although affording no evident imperfection: "that there are such ova in other animals and in women is highly probable; but in them the completeness of the demonstration is unattainable." The variations of sterility in woman according to the age at marriage is dwelt upon at some length, and the conclusion drawn that premature marriage is a cause of sterility. The causes of the comparative infertility of heiresses and the wives of peers are touched upon; and the allies of sterility, excessive production, pluriparity, and abortion receive adequate attention. Dysmenorrhœa, so frequently associated with sterility, especially the spasmodic variety, and other neurotic conditions, such as depraved or absent sexual appetite and pleasure, and so-called dyspareunia, are fully considered.

So far as the prevention of sterility is concerned, the author believes the best hopes of success lie in the avoidance of unions with immature or post-mature women, that is with women under twenty or over twenty-five, as he has shown the period between those extremes to be the best marriageable age with a view to fertility and the rearing of healthy children and the safety of the mothers: this prevention can of course only be attained by the diffusion of knowledge as to the probabilities of fertility according to the age at which marriage is entered upon. Under existing conditions of society, however, not much is to be hoped for in this direction; and certainly so far as the practical physician is concerned he must take things as he finds them and devote his attention to the search for, and removal of, other causes of sterility than those of age. In a certain proportion of cases the dysmenorrhœa, which is frequently the concomitant of sterility, may be found to be due to mechanical obstruction: in a certain other proportion intra-uterine or para-metric disease may be the cause upon which the sterility depends. But the author believes that local causes cover but a small proportion of the cases of sterility, and that the cure of the sterile condition is to be sought in the improvement of the general health and attention to the nutrition and hygiene of individual cases.

As a whole the book is not one which will commend itself to the mechanically disposed gynæcologist; but to the general physician and the medical economist we believe it will prove instructive and interesting.

C. M. G.

The Diagnosis of Diseases of the Spinal Cord. By W. R. Gowers. Third Edition. Philadelphia: P. Blakiston, Son & Co. 1884.

Dr. Gowers has resisted any temptation to unduly increase the size of his book; it is the same compact, satisfactory little treatise in the third edition that it was in the earlier, and is well worth reading. A few symptoms have been considered a little more in detail; a section has been added in regard to the distinction of functional and organic disease.

The excess of "myotatic contractions" (the deep reflexes), which are found in cases of degeneration of the pyramidal tracts, are referred to changes in the gray substance of the cord in which the fibres of the pyramidal tracts are lost in its interlacing net-work of fine fibres and minute nerve cells. "The phenomena are best explained by the hypothesis that this structure, in the matrix of the gray matter, controls the muscle-reflex centres (of which the ganglion cells are part), and that the degeneration of the pyramidal fibres, which can be traced to the gray matter, invades this structure."

Medical and Surgical Journal.

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THE METRIC SYSTEM AND THE PYRAMID OF GHIZEH.

As an example of a style of argument which is not infrequently brought to bear upon scientific questions we have been interested in a periodical which has just been launched upon the sea of journalism, and which is, in its own words, "a magazine devoted to the Preservation and Perfection of the Anglo-Saxon Weights and Measures and the Discussion and Dissemination of the Wisdom contained in the Great Pyramid of Jeezeh in Egypt." A model of the pyramid was displayed at the Foreign Exhibition in this city last fall, illustrating the peculiar theories of this Society. It is, in fact, to this ancient structure that the inch and the pound are to be ascribed. Though the cause is old the Society is new. It dates back, we are told, "only to noon of the eighth day of November, 1879, when at the Old South Church, Boston — that spot of wonderful memories and more wonderful prediction — we asked the blessing of God upon our undertaking, and the guidance of His Holy Spirit through the merits of His Son."

Of the ordinary arguments against the metric system this periodical makes not much account, save to say, for instance, that the value of the metre, 39.37 inches in length, is "a very awkward number," and that the metric system is "utterly deficient in availability" for the more comprehensive measures of the English system, in that it affords no separate table for liquids and solids, for surveyors', linear, and cloth measure. On other questions, such as the relative convenience of a decimal subdivision and of one into halves, quarters, etc., and the expense in time and money of putting the foreign system into use, there is room for diversity of opinion among sincere and honest men, and on them one may hear the pros and cons in every-day life. The Institute has a higher sphere. Its method is transcendental. The pith and marrow of the controversy is in the insidious attempt of the French and other European nations to subvert our Anglo-Saxon institutions and to foist upon us a "unit of measure born of infidelity and atheism in 1792." Shall we sell our birthright for a kilo of pottage? Never. It is not only on patriotic and ethnic but on religious grounds that we must resist the aggression of the corrupt despotisms of the Old World.

Have we not the divine command, "A just weight and a just measure shall ye have"? "Could the prophets of the Lord," asks the President of this Society in his inaugural address, "have so earnestly and so persistently declared for a just balance and a just measure if the origin of these was the result of *accident* or *caprice!*"

There being then a divinely appointed standard of measure, opposed to this wicked product of the French Revolution, it must be the Anglo-Saxon standard. Where can we find the original measure of that system? Obviously in that "venerable and stupendous monument which was erected, as we believe, for 'an Altar to the Lord in the midst of the land of Egypt and a Pillar at the border thereof to the Lord.' Isaiah, xix. 19." *Videlicet* the great pyramid of Jeezeh (Ghizeh). This is no problem fit for nineteenth century science. Go back to the time of Cheops and the fourth dynasty. Let no such question be discussed by the buyers and sellers of England and America. *Abeste profani.* On the sands of Egypt and beneath the everlasting smile of the Sphynx should its solution be sought. *The architect of the great pyramid used the British inch!* The diameter of the length of the granite floor of the king's chamber, the length of the king's chamber, and its diagonal diameter in inches multiplied by π all give integral numbers. The Anglo-Saxon inch is the talisman by which the circle can be squared! Elaborate mathematical formulæ involving the parallax of the sun (the diameter of the latter body, by the way, being given as 10″ less than the mean of all the best observations hitherto made) demonstrate that the inch is exactly one five-hundred-millionth of the polar diameter of the earth (said polar diameter being rather more than seven miles less than that accepted by practical astronomers). The fact that another mathematical contributor to the journal claims that the pyramid inch was $\frac{1}{987}$ greater than the British, and elsewhere asserts that the mysterious relations with π claimed for the standard inch are equally true for other values of the inch, seems in the mind of a layman to slightly weaken the force of the argument. But still it remains true, at least, that all accessible dimensions of the pyramid are capable of mensuration with the British yard-stick, and that fact can probably always be maintained against all cavil.

Not only does the pyramid give us our inch but our thermometric scale. Thus: The king's chamber begins at the fiftieth course of masonry. Hence the temperature of this room shall be 50° of the new scale. This corresponded on the occasion observed to 68° F. (or else should do so, from its being a perfect room, — the exact fact does not appear). Wherefore 250° Pyramid represents the boiling point of water. Thermometers on this scale have been constructed for the Society, and their general introduction is recommended. The centigrade scale, which savors of the abominable thing, is thus avoided. The Institute also proposes to take the meridian of the great pyramid as the zero point in its system of standard time.

On these vital grounds the International Institute sets out in its warfare on the metre. The adoption of this unit by the custom houses, marine hospitals, and coast survey fill it with undisguised alarm. The recognition of the metre by Congress is a usurpation. The Constitution authorizes it possibly to make changes in the system of weights and measures, but never to abolish the units. It is the duty of the "loyal and faithful citizen" to maintain a ceaseless vigil against that movement which, emanating from France, and sustained by the influence of Germany, Italy, Spain, Turkey, Egypt, Austria, Norway, and Sweden, is directed against the Anglo-Saxon world.

THE DETERMINATION OF SEX AT WILL.

Several years ago the Journal[1] gave some account of the experiments of a gentleman named Fiquet upon a Texan cattle ranche in regard to the production of a desired sex at will, and the results at which he had arrived, with a somewhat limited experience, it is true, were detailed. He was enabled to predict the sex of calves in a dozen successive cases by preparing the bull and cow before coming together, the physiological hypothesis upon which he acted being that the sex would be the opposite of that of the more vigorous and eager progenitor. Mr. Fiquet reported that he had by experiments eliminated other theories as fallacious, and had finally been led to adopt this one and put it to practical tests by observations upon mankind.

Since then we have heard nothing more from Texas upon this subject, but singularly enough we get a large volume from London devoted to the elaboration of this principle, which applied to animals who can be selected and attuned to a given occasion with a chosen mate at a designated moment seems tolerably simple, although still hypothetical, but when extended to man becomes complex enough.

The writer of this octavo[2] of nearly three hundred pages on the Law of Sex states that he has spent twenty years of his life in studying the subject and its connected literature in various languages, and although his theory has been matured for several years its publication has been delayed until, by extensive observation, he "could establish its truth beyond the possibility of a doubt." This he evidently believes he has succeeded in doing so satisfactorily that he begins his preface with this sentence: "In the following pages I claim to make known a new discovery of a great law of Nature; nothing less than the law which governs the sexes, and whereby the sex of offspring can be controlled."

The "determination of sex" is almost as enticing to the average physiologist as the location of a new gold field to the average adventurer or the discovery of the philosopher's stone to the nearly extinct alchemist. The secret of making boys or girls at will is about as alluring as that of making gold or silver, or would be except in those places where it has been discovered by the sociologists that there is really very little difference between the sexes, and that such thinkers should care whether a given individual be a boy or a girl, though caring much whether it be a "radical or conservative," we, of course, do not believe. Still retaining ourselves, however, some of the old-fashioned ideas as to the distinct mission of the two sexes in the world's work, we have not lost our interest in the attempts, which from time to time get themselves into print, to evolve a law for the determination of sex at will, and in spite of the many preceding false starts are always ready to follow a new trail, especially when marked by a very promising sign-board indicating with confidence and precision a sure arrival at the heart of the mystery.

Hence we read undaunted through the first five chapters, or ninety pages, which are mainly devoted to setting forth the fallacies of previous and current theories, and reached with eagerness the sixth chapter which opens with the announcement that sex is determined by what the writer designates as the "superior parent;" also that the "superior" parent produces the opposite sex. This statement merely substituted a word we did not know how to interpret for everything else we did not understand. The author, apparently anticipating such a frame of mind on the part of the reader, apologizes for the expression as open to objections, but though not finding it entirely satisfactory still it is the best he could think of to express his meaning, which we prefer that he should assume the responsibility of making clear in his own words, as follows: "My difficulty in selecting a suitable designation for the controlling power in each case will be understood, when I state that among the numerous factors to be taken into account are the temperament, activity, energy, will, intellect, features, color, physique, bodily health, nutrition, etc., etc. The term 'superiority' will be used, but it must be understood to include all these, and to be susceptible of variation through temporary circumstances, — state of health, age, and the like; while the term '*inferiority*' will signify the opposite. The temperament and energy will be the more permanent elements of 'superiority;' but the invidious meaning of the word in ordinary social phraseology must be *altogether eliminated.* Let it be distinctly understood that '*superiority*' *here means everything that tends to increase functional energy* in any part of the system, and thus to influence the determination of sex; and it does not follow that this kind of 'superiority' must in all cases coincide with superiority in the general sense of the term — by which we imply superior mental and moral qualities. It may and often does happen that the two kinds of superiority are found together, but the coincidence is not necessary, and they are often, in fact, separated."

A little farther on we find: "Life, then, with all its phases must be the basis upon which to estimate 'superiority.'" And again: "*Cerebral development* is the key to *superiority* as understood in this work."

We did read the rest of Mr. Starkweather's book, but with a much diminished enthusiasm, and, as we carried with us a very vague comprehension of the just interpretation of his word "superior," it is very probable under disadvantages. The "superior" bull of Mr. Fiquet was a comparatively simple creature; more food and better food, and a suitable seclusion, gave him the necessary advantage over a mate subjected to opposite conditions. The "superior" man, as previously described, is a very complex organism, which does not reveal itself so easily, and is not convenient to deal with when found.

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[1] Vol. cii., p. 471.

[2] The Law of Sex: Being an Exposition of the Natural Law by which the Sex of Offspring is Controlled in Man and the Lower Animals. And giving the Solution of Various Social Problems. With Forty Illustrative Portraits. By George B. Starkweather, F. R. G. S. London: J. & A. Churchill. 1883.

We are not indisposed, in spite of our conservatism, to lend some credence to the statement that a "superior" father begets daughters, and are willing to regard a man, on the *post hoc propter hoc* principle, as "superior" because he has begotten daughters, and to extend the same, in strict impartiality, to mothers and sons; beyond this Mr. Starkweather has not succeeded in enlightening us with anything promising practical results. Other readers may be more fortunate, and for their encouragement we may state that, if the stamp of "superiority" is only recognized in the result of cohabitation, hopes are still held out that by a well considered lowering or elevation of the physical, mental, and moral tone (*morale*) on the one side and the other the mistake may still be corrected.

Where the temperamental equality of the parents is close slight causes will, of course, influence the sex of the offspring.[1] And time makes all things even, for the "superior" fathers of one generation transform themselves into the "superior" daughters and mothers of the next, and thus kindly Nature, even should we rob her of this mystery, will continue to balance her accounts and populate the earth.

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MEDICAL NOTES.

— According to the *Révue Médicale*, M. Aimée Girard lately proposed at the Académie des Sciences the destruction of the bodies of animals dying of virulent diseases by means of sulphuric acid (as their interment does not always secure from the danger of contagion). M. Réguard thereupon resolved to try the effect of this substance on the human subject. His experiments with the bodies of new-born infants and fœtuses have been completely successful, and he believes would be equally so if tried on the adult. To the body of an infant he added about double its weight of the sulphuric acid of commerce, and after twenty-four or thirty hours of maceration not a vestige of the body remained, the decomposition having taken place silently and without any smell. Neither the microscope nor the test tube can detect the slightest trace of the body beyond the presence of some fat, phosphoric acid, and nitrogen. M. Réguard points out how easily a body may be made away with by means of a substance so easily procured, and suggests that some restrictions should be placed on its sale.

— In Manchester, Eng., a druggist dispensed "three pennyworth of quicksilver and three pennyworth of aqua fortis" to a man who wished to mix them to make some sort of an ointment. The man had bought these articles before, but they had always been put up separately. On this occasion they were put in the same bottle, which the man placed in his breast pocket, and left the shop. Very soon the bottle exploded, burning his face and eyes so seriously that he died at the Manchester Eye Hospital.

— The Senate of the United States has recently voted to recompense Surgeon E. P. Vollum, of the army, for the loss of his personal effects sustained by shipwreck while in the line of duty in the year 1856. The amount awarded is $700.

— Bermingham & Co., medical publishers, of 28 Union Square, who made an assignment on the 19th ult., have resumed business, the temporary embarrassment which caused the assignment having been removed, and the assignee having reassigned to said firm.

NEW YORK.

— A committee representing the Association for Improving the Condition of the Poor, one of the members of which was Dr. F. R. Sturgis, had a conference, on the 21st of February, with General Shaler and Dr. Woolsey Johnson, of the Health Department, with reference to the condition of the tenement houses of the city, the principal subject discussed being the insufficient water supply now existing in many of the houses, with its attendant uncleanliness and increased risk of disease. The committee also called the attention of the Health Commissioners to the fact that the law which requires the name of the owner or agent of every house inhabited by three or more families to be posted in the entrance had become a dead letter, and General Shaler assured them that if it was within the province of the Health Department to cause it to be done the law would be strictly enforced in the future.

— The German Society of the City of New York, which this year celebrates its centennial anniversary, has just published its annual report, prefacing it with some account of its history during the past hundred years. Among the institutions which it has been instrumental in founding are the German Hospital and Dispensary, and the report urges the necessity at the present time of a hospital for convalescents and incurables.

— The first annual report of the New York Skin and Cancer Hospital has just been published. In it the following figures in reference to the increasing mortality from cancer in New York City are given: In 1869 there were 304 deaths from cancer, being a little over one per hundred of deaths from all causes. In 1879 there were 572 deaths from cancer, or a trifle over two per hundred of all deaths, that is, in ten years the proportion of deaths from cancer had nearly doubled. In 1880 there were 659 deaths from cancer, or 2.06 per cent. of all deaths, the mortality from the disease being greater than that from scarlet fever, which amounted to 618. In 1881 cancer caused 707 deaths, and in 1882 731 deaths, while during the fourteen years mentioned there were 6843 deaths from it. Up to the time of the establishment of this hospital cancer patients were admitted to only one or two institutions in the city, and then not for the purpose of treatment, but simply to await the fatal termination of the disease, and nowhere in this country had cancer cases been grouped together with a view of studying the disease as to its nature and cure. The dispensary department of the hospital was opened on the 11th of January, 1883, and from that date to December 31st 767 patients were entered on the books, who made altogether 2708 visits. On the 24th of February a ward, with five beds for female patients, was opened, and afterwards twenty-nine beds were fitted up in the building, which is situated in Thirty-Fourth Street, between Second and Third Avenues. Five of these are reserved for males, and three for children. The total number of patients treated in the wards was seventy-six. The great need of the institution at the present time is for a country branch hospital, where chronic and offensive cases can be treated in small pavilion buildings, and a subscription toward this purpose has been started. It is hoped by this means to be able to receive any and every case of cancer needing hospital assistance, and in the end to have this department one of great magnitude and importance. Appropriate cases of skin disease would also be transferred to the country branch as circumstances required. During the year forty-nine cases of cancer (including sarcoma and epithelioma) were treated, of whom thirty-seven were females and twelve males. Among the other cases treated were one of elephantiasis Arabum, two of hydroa, one of keloid, two of leucoderma, and one of true leprosy. On the medical staff the principal physicians are Drs. L. Duncan Bulkley and George H. Fox, gynæcologist, Dr. James B. Hunter, and operating surgeons, Drs. Robert F. Weir and Edward L. Keyes.

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[1] A convenient head under which to classify numerous exceptions to the law.

— St. John's School at Manlius, New York, has been closed on account of the prevalence of diphtheria among the scholars.

Correspondence.

HARTZELL'S METHOD FOR STAINING THE TUBERCLE BACILLUS.

MR. EDITOR, — In your issue for February 14, 1884, you quote Dr. Hartzell's method for staining the tubercle bacillus, which he claims to be new, and to have the advantage over other methods of avoiding the use of nitric acid as the decolorizing agent. The latter is of course true; but at the same time that we get rid of the nitric acid we lose the *diagnostic* value of the Ehrlich method. This is proven by experiments which I have made with Dr. Hartzell's method in the last fortnight, using it exactly as he directs upon half a dozen distinct forms of micro-organisms. I find that they are all stained equally well by this method as is the tubercle bacillus. Therefore the method is only of value as an indication of the presence of micro-organisms in general, and should certainly not be relied upon for the diagnosis of any special form.

Dr. Gradle, using the same method of staining with the substitution of nitric acid for the oxalic acid recommended by Dr. Hartzell, says: "I found in most sputa a micrococcus in chains, and a bacillus a trifle longer and much thicker than the real tubercle bacilli. The latter, however, are stained much darker, and can be recognized besides by their size and shape. While, therefore, this method enables us to decide instantly whether the sought-for bacilli are absent in a sputum, any doubt as to their identity in case of their presence may be removed by the use of the more characteristic aniline method." [1]

The hope of preventing any more confusion by the adoption of faulty methods in the investigation of this subject must serve as my excuse for trespassing upon your space. Very truly yours,

HAROLD C. ERNST, M. D.

JAMAICA PLAIN, *February* 23, 1884.

Miscellany.

THE GOVERNMENT CONTROL OF THE UNITED STATES PHARMACOPŒIA.

THE *North Carolina Medical Journal* for February publishes the following excellent editorial on this subject: —

A bill has been introduced into the House of Representatives, by Mr. Randall, of Pennsylvania, to prepare and publish a national pharmacopœia. The chief of the Marine Hospital Service, of the Navy, and of the Army are each to detail two medical officers, and these officers are to invite the American Medical Association and the American Pharmaceutical Association to form committees of not more than three members, and thus constituted this board shall proceed to the work of forming a new pharmacopœia, said board having the power to add to its number from time to time as may in its judgment be necessary. Five thousand dollars are to be appropriated for carrying out the work.

No doubt this proposition will strike the profession in this country with surprise, more especially when the history of the Pharmacopœia is recalled. From the beginning the labor and expense of the production of this work has been undertaken and carried forward by enterprise. The few men who have been interested in it have given their time and labor with an ardor which does credit to the two professions from which they came. Furthermore, they had the wisdom to keep this work alive by their desire to promote the best interest of the profession, and we are quite sure that none would have resisted quicker than they any movement, even by implication, which would have surrendered the work to the general government. This is more than ever inferable when we remember, that in the early conventions the organization was completed before the officers of the army and navy were invited to take seats.

It will be surprising, therefore, to the profession, that there should have suddenly arisen an emergency which makes it now more necessary that "a national authorative standard" should be undertaken by the government.

The *Medical News*, it seems, is able to give a reason. In its issue of 9th February it says: "Unfortunately, since 1880 the United States Pharmacopœia has become a matter of commercial speculation. While a vast amount of intelligent and well-directed labor was bestowed upon it by the Committee of Revision, taken as a whole it is by no means creditable to the science of the country, and complaints as to its inaccurary and the inconvenience of its methods have been numerous. Not only was it thus inferior to former revisions, but it was padded out into an absurdly large and clumsy volume, and supplied to the profession at an extravagant price wholly disproportionate to its former rate. That this departure from the time-honored course followed in former revisions should awaken widespread dissatisfaction was inevitable; and it was to be anticipated that the dissatisfaction would lead the government to supply a want which had always existed, but which had never before become so imperative as now."

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[1] Bacteria and the Germ Theory of Disease, page 166.

Per contra, we consider it rather fortunate that the committee has been able to produce a volume that could attain to any sort of a commercial dignity instead of preparing revision after revision that did not possess any. We cannot agree either that the revision was supplied at an extravagant price, for had this been so the volume would not have been sought after so eagerly in the book market by such a large number of purchasers, a number far greater than for any previous edition however cheap. The medical and pharmaceutical professions were willing to pay the price asked for the work, just as they would for anything they thought worth the money.

As to the inferiority of the present revision as compared with previous ones, we will let the *British Medical Journal*, page 700 (October 1883) speak. The reviewer in that journal has been comparing the British Pharmacopœia, the German Pharmacopœia, and the United States Pharmacopœia (1880) and says: "In comparing the three Pharmacopœias, it must at once be conceded that the United States Pharmacopœia is incomparably the best. The previous revision was very poor, but the present revision is a very great improvement on the last. It contains an enormous mass of information, which is, however, chiefly of use to the pharmacist. Nevertheless it contains almost every possible preparation which can be needed by the medical practitioner."

We think the *Medical News* will be greatly disappointed in not finding "professional approval" [of the proposed National Pharmacopœia] "practically unanimous." Not a large number of men are going to give the matter a thought, if we are to judge by the past. But of those who do actively consider the subject, we believe that very few will have such poor memories as to overlook the undesirable basis upon which, by the conditions of this bill, the national pharmacopœia would be founded. An expensive and disappointing experiment has already been tried by attempting to combine such incongruous bodies as the Army, Navy, and Marine Hospital Service, and the result was the wrecking of the National Board of Health, through the ambition of the Marine Hospital Service. With this disaster staring a confiding profession in the face, it is now proposed to reform the old combination, and to attach enough civilian experts to the board to give it a general scientific character, and so avoid the suspicion of making it a purely government work.

We think when these facts are duly considered, if the profession of medicine and pharmacy are to have any voice in the matter, they will more nearly unanimously reject the proposition.

Another point. The whole movement as set forth first in the Randall Bill, and in the approving editorial of the *Medical News*, has too much of the color of rivalry between New York and Philadelphia not to be understood by non-residents of those favored cities. Some of the gentlemen of the latter city have never been able to disguise their dissatisfaction at the departure of the Pharmacopœia from them, and we do not believe a word of complaint against the scientific part of the present revision of the Pharmacopœia would have been sounded had the business management been to the liking of the complainants.

But we assert, even if the proposed plan is excellent in every respect, there is no reason why a new Pharmacopœia should be compiled at an earlier date than 1890. We are willing to take the opinion of the *British Medical Journal* upon this subject, and repeat that the U. S. Pharmacopœia is incomparably the best in any language, and a wise Congress will not willingly interrupt the course of a scientific body, pursuing its work zealously and honestly, and at its *own expense*.

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THE GRANT OF £10,000 TO THE PHYSIOLOGICAL LABORATORY OF OXFORD CONSIDERED AS A "NATIONAL DISASTER."

AFTER two pages of print devoted to various woes and horrors of the preceding week, among which appears a statement of the slaughter of twenty-three hundred Egyptian soldiers and eighteen European officers, the *Spectator* of February 9th exhibits the following paragraphs, which, if found in anything except an anti-vivisection organ, would be mildly characterized as amazingly silly: —

"Not the least of the disasters of the week — if we look at it from the point of view of the principle involved, — is the carrying in the Oxford Convocation on Tuesday of the decree voting £10,000 to the physiological laboratory at Oxford, without any sort of restriction on the vivisectional experiments which — for the purposes of research — may be carried on there. The Dean of Christ church proposed the decree, expressing the most perfect confidence in the kindness and humanity of Professor Sanderson, — a confidence which will be present or absent, according to what is understood by kindness and humanity, and that is precisely the matter in dispute. Mr. Freeman, the historian, made a very masterly speech, showing that the students and teachers of all branches of knowledge were understood to pursue these subjects under those general restrictions involved in refraining from using blameworthy means. You might revive gladiatorial shows or bull-baiting, he said, to throw a new light on history, but any one who did so would be severely condemned. Only in the case of physiology was a vote of money proposed such as could never have been got out of the University for such an object as the new School of Art at Athens, in order to foster a method of research which did not scruple to do what for any other purpose all men would condemn.

"The other speakers were chiefly favorable to the vote. The Warden of Keble surprised and grieved a great many of his friends by deprecating at this stage resistance to the vote. Professor Acland, in the silky accents familiar to the University, dilated, in what has been termed a 'beautiful speech,' on the thesis that nothing more directly conducive to the cause of humanity has ever been conceived than the vivisectional method of investigation, and no doubt he may have convinced some of his more innocent hearers that, in the interests of the dumb creation, they should at once put themselves in training for bland and loving acts of vivisection. Dr. Pope made a not very judicious speech on the other side, and then the decree was carried by one hundred and eighty-eight votes against one hundred and forty-seven; majority, forty-one."

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 16, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diphtheria and Croup.	Typhoid Fever.	Scarlet Fever.
New York	1,340,114	694	270	16 52	17.52	5.60	.98	2.10
Philadelphia	927,995	379	125	17.01	15.93	4.05	3.78	5.40
Brooklyn	644,526	—	—	—	—	—	—	—
Chicago	632,100	170	75	20.30	7.54	6.38	2.32	2.90
Boston	423,800	167	60	17.40	14.40	8.40	.60	1.80
Baltimore	408,520	166	73	21.00	15 00	6 60	—	1.20
St. Louis	400,000	160	63	20.16	6.93	10.70	—	1.89
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	34	8	17.64	23.52	2.94	—	5.88
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	53	21	22.68	7.56	7.56	1.89	5.67
Providence	119,405	39	8	15.36	17.92	5.12	7.68	—
New Haven	62,882	28	9	25.00	10.71	7.14	—	7.14
Nashville	54,400	16	7	6.25	12.50	—	—	—
Charleston	52,286	—	—	—	—	—	—	—
Lowell	71,447	26	7	7.70	19.25	3.85	—	3.85
Worcester	69,442	[illegible]	5	11.11	44.44	11.11	—	—
Fall River	62,674	22	7	9.10	9.10	9.10	—	—
Cambridge	60,995	13	6	7.69	30.76	—	—	—
Lawrence	45,516	15	8	13.33	13.33	—	—	—
Lynn	44,895	12	4	16.66	8.33	16 66	—	—
Springfield	38,090	13	2	15.38	15.38	15.38	—	—
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	8	5	25.00	12.50	—	12.50	—
New Bedford	30,144	10	2	—	40.00	—	—	—
Salem	29,503	11	4	18.18	9.09	—	—	9.09
Chelsea	24,347	9	2	11.11	22.22	—	—	—
Taunton	22,693	2	0	—	50.00	—	—	—
Gloucester	21,400	5	2	—	40.00	—	—	—
Haverhill	20,905	8	2	12.50	12.50	—	—	—
Newton	19,421	3	1	—	—	—	—	—
Brockton	18,323	3	1	—	—	—	—	—
Malden	15,273	2	1	50.00	—	50.00	—	—
Newburyport	13,947	3	0	—	100.00	—	—	—
Fitchburg	13,433	5	2	—	40.00	—	—	—
Seventy-six Massachusetts towns	326,292	79	16	7.56	17.60	5.04	—	2.52

Deaths reported 2164: under five years of age, 796: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 377, lung diseases 365, consumption 333, diphtheria and croup 141, scarlet fever 65, diarrhœal diseases 38, typhoid fever 35, measles 30, cerebro-spinal meningitis 23, malarial fevers 15, erysipelas 13, whooping-cough 10, puerperal fever seven, small-pox three. From *diarrhœal diseases*, New York 15, Boston 11, St. Louis four, Chicago, Baltimore, and Buffalo two each, Providence and Haverhill one each. From *measles*, New York 12, Baltimore 11, Philadelphia four, New Haven two, St. Louis one. From *cerebro-spinal meningitis*, New York eight, Chicago three, Philadelphia and Milwaukee two each, Baltimore, Buffalo, New Haven, Lawrence, and Salem one each. From *malarial fevers*, New York nine, Baltimore four, St. Louis two. From *erysipelas*, New York five, Philadelphia and Baltimore two each, St. Louis, Milwaukee, Lawrence, and Holyoke one each. From *whooping-cough*, New York five, Philadelphia and Baltimore two each, Chelsea one. From *puerperal fever*, St. Louis three, New York two, Philadelphia and Milwaukee one each. From *small-pox*, Philadelphia, St. Louis, and Nashville, one each.

Five cases of small-pox were reported in St. Louis; scarlet fever 35, diphtheria 21, and typhoid fever six in Boston; scarlet fever nine and diphtheria seven in Milwaukee.

In 95 cities and towns of Massachusetts, with an estimated population of 1,377,016 (estimated population of the State 1,955,104), the total death-rate for the week was 16.28 against 19.26 and 16.59 for the previous two weeks.

For the week ending January 19th, in 167 German cities and towns, with an estimated population of 8,621,321, the death-rate was 24.8. Deaths reported 4107; under five years of age, 1952; consumption 572, lung diseases 528, diphtheria and croup 273, diarrhœal diseases 125, measles and rötheln 82, scarlet fever 69, whooping-cough 65, typhoid fever 47, puerperal fever 27, small-pox (Zittau one) one. The death-rates ranged from 13.2 in Metz to 39.2 in Essen; Königsberg 33.5; Breslau 32; Munich 28.2; Dresden 26.8; Berlin 22.7; Leipzig 35.4; Hamburg 24.7; Cologne 25.2; Frankfort a. M. 17.8; Strasburg 22.

For the week ending January 19th, in the Swiss towns, there were 25 deaths from consumption, lung diseases 25, diarrhœal diseases 13, diphtheria and croup seven, whooping-cough seven, measles four, typhoid fever three, scarlet fever two, small-pox two, puerperal fever one. The death-rates were, at Geneva 19.4; Zurich 15.8; Basle 13.2; Berne 26.7.

The meteorological record for the week ending February 16th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Feb., 1884.	Daily Mean.	Daily Mean	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 10	30.445	34	40	28	69	66	70	68	NW	NW	N	17	8	6	F	O	O	—	—
Mon., 11	30.515	31	35	26	77	78	100	85	NW	NE	NE	5	5	4	O	O	S	—	—
Tues., 12	30.307	32	36	27	100	100	100	100	NW	E	E	3	7	6	S	O	R	—	—
Wed., 13	29.902	47	58	33	100	96	100	99	SE	SW	SW	7	13	6	R	R	O	—	—
Thurs., 14	29.813	46	59	36	93	83	61	79	SW	W	NW	8	19	12	O	O	O	—	—
Fri., 15	30.426	24	36	19	73	57	70	67	NW	NW	NW	23	14	12	O	F	C	—	—
Sat., 16	30.672	28	34	16	46	88	86	73	NW	E	S	7	9	4	F	O	F	—	—
Mean, the Week.	30.297	34.4	42.4	26.2				81.6										32.25	—

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., sleet; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM FEBRUARY 16, 1884, TO FEBRUARY 21, 1884.

Perin, Glover, lieutenant-colonel and surgeon, medical director, is granted one month's leave of absence, with permission to apply at Division Headquarters, Missouri, for an extension of one month. S. O. 16, Department of Dakota, February 9, 1884.

Wilson, George F., first lieutenant and assistant surgeon. Assigned to duty at Fort Walla Walla, W. T. S. O. 14, Department of the Columbia, February 5, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING FEBRUARY 23, 1884.

Nash, F. S., passed assistant surgeon, detached from the U. S. S. Dispatch, and waiting orders.

Rush, W. H., passed assistant surgeon, detached from the Minnesota, and ordered to duty on board the Dispatch.

Hall, J. H., passed assistant surgeon, to the Minnesota.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION AT BELFAST. MEETING OF THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

We have received from Sir William MacCormac the following announcement in regard to the meetings of the British Medical Association at Belfast, and of the International Medical Congress at Copenhagen, next July and August, from which those desirous of attending will see how they can best combine both occasions.

The fifty-second annual meeting of the British Medical Association will be held on July 29, 30, and 31, and August 1, 1884, at Belfast, under the presidency of James Cuming, M. A., M. D., Professor of Medicine, Queen's College, Belfast. The Address in Medicine will be delivered by Sir Andrew Clark, Bart., M. D., F. R. C. P., Physician and Lecturer on Clinical Medicine, London Hospital. The Address in Obstetric Medicine will be delivered by George H. Kidd, M. D., F. R. C. S. I., Master of the Coombe Lying-in Hospital, Dublin. The Address in Physiology will be delivered by Peter Redfern, M. D., F. R. C. S. E., Professor of Anatomy and Physiology, Queen's College, Belfast.

Visitors coming from America to attend this meeting can travel by any of the following routes: —

(1.) A Cunard steamer will leave (a) New York on Wednesday, July 16th, arriving in Queenstown about the following Thursday week, July 24th; (b) Boston on Saturday, July 19th, reaching Queenstown the following Monday week, July 28th.

(2.) A White Star steamer will leave New York on Saturday, July 12th, and on Saturday, July 19th; due at Queenstown about July 20th and July 27th.

(3.) An Inman steamer will leave New York on Tuesday, July 15th; due at Queenstown about July 23d.

(4.) An Allan steamer will leave Quebec on Saturday, July 19th, arriving in Londonderry about the 26th or 28th July.

(5.) An Anchor steamer will leave New York on Saturday, July 19th; due at Londonderry on July 29th.

Londonderry is ninety-five miles from Belfast, and trains run daily between the two places.

The route from Queenstown to Belfast is from Queenstown to Cork, Cork to Dublin (one hundred and sixty-five miles by train), and Dublin to Belfast (one hundred and thirteen miles).

MEETING OF THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

The time of the meeting of the British Medical Association at Belfast has been fixed so as not to interfere with the International Medical Congress, which is to begin at Copenhagen on 10th August.

A steamer will leave Hull (England) on August 2d and 9th for Copenhagen; and on August 5th a steamer will leave Leith (Scotland) for Copenhagen. Both these places (Hull and Leith) can be reached on any day by leaving Belfast on the previous evening by the cross-channel steamers. Visitors after attending the meeting of the British Medical Association in Belfast will have ample time to travel to Copenhagen for the Congress.

Communications in reference to the meeting of the British Medical Association at Belfast to be addressed to the Honorable Local Secretaries, John Moore, M. D., Alex. Dempsey, M. D., John W. Byers, M. A., M. D.

Suffolk District Medical Society. Surgical Section. — There will be a meeting of the Section at 19 Boylston Place on Wednesday evening, March 5th, at 7.45 o'clock. Communication: Excision of a Portion of Intestine, including part of the Ileo-Cæcal Valve, for the Cure of Fæcal Fistula in the Right Groin, Dr. C. B Porter. S. J. Mixter, *Secretary.*

Death. — Died, at Williamstown, Mass., February 24, 1884, Henry Lyman Sabin, M. D., M. M. S. S., aged eighty-three years.

Appointment. — Dr. E. N. Whittier has been appointed Visiting Physician at the Massachusetts General Hospital.

Books and Pamphlets Received. — A Manual of Medical Jurisprudence, with Special Reference to Diseases and Injuries of the Nervous System. By Allan McLane Hamilton, M. D. With Illustrattons. New York: Bermingham & Co. 1883.

The Hip and its Diseases. By V. P. Gibney, A. M., M. D., Professor of Orthopædic Surgery in the New York Polyclinic, etc. New York: Bermingham & Co. 1884.

A Manual of Obstetrics. By A. F. A. King, M. D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, etc. With Fifty-Nine Illustrations. Second Edition. Philadelphia: Henry C. Lea's Son & Co. 1884.

Original Articles.

GENERAL PARALYSIS OF THE INSANE.[1]

BY GEORGE F. JELLY, M. D.

I CANNOT hope to add anything to the already existing knowledge of this disease, but its rapid increase in modern times, its insidious beginning in many instances, the importance of its early detection, and its fatal character, make it one of the most interesting of brain diseases, and I shall narrate briefly a few cases which have come under my personal observation at the McLean Asylum and in private practice.

The French physicians first described general paralysis as a distinct disease. Esquirol recognized insanity with paralysis as incurable, but looked upon the latter symptom simply as a complication and not as a part of the disease.

In 1822 M. Bayle for the first time noted that the mental disturbance and paralysis were synchronous. M. Delaye in 1824 thought it not always accompanied by insanity, and that it was a softening or atrophy of the brain.

In 1826 M. Calmeil gave a most complete account of the disease, and has therefore generally been regarded as its discoverer.

General paralysis may be defined as a disease of the brain marked by general and progressive loss of coördinating power over the muscles, especially those of speech and locomotion, with greater or less impairment of sensation, always tending to dementia, and characterized by a sense of well being or actual delusions of an exalted character.

It is essentially a disease of civilization and of modern times, is much more common in the cities than in the country, and attacks by preference the robust and vigorous rather than the sick or those whose constitutions are weak congenitally or from the effects of disease.

More than any other serious mental disease it appears in persons in whom insanity is not an inheritance, chiefly in men who are in the prime of life, from thirty-five to fifty years of age. It is rare in persons under thirty or over sixty. I have seen one case in a man of twenty-six, and within a fortnight have examined a man sixty-four years old who presented all the characteristic symptoms of the disease. Most of the cases coming under my own observation have been in persons between forty and fifty. In women the disease is comparatively rare, but I am unable to give definite statistics in regard to the relative proportion between men and women. It is about one in ten or twelve.

There are at the present time at the Taunton Hospital ten male and three female paretics; at the Worcester Hospital there are twelve male and one female paretics; and at the Danvers Hospital there are forty-one male and fourteen female paretics, — making a total of eighteen females in a total of eighty-one cases, which I should think a larger proportion than usual. The whole number of patients in the three hospitals is two thousand and fifty-six — nine hundred and eighty-four men, and one thousand and seventy-two women.

The most common causes of general paralysis are excessive drinking, excessive sexual indulgence, overwork, and excessive or prolonged mental anxiety. Not infrequently some shock or acutely painful impression upon the moral sensibilities seems to furnish the additional weight needed to overcome a brain already tottering. So important a part does this strain or shock often play as a cause of this disease that the late Dr. Tyler was accustomed to say that the case was rare in which it was not a factor. General paralysis is described as having three periods: —

(1.) Commencement period or period of incubation.
(2.) Maniacal period.
(3.) Period of chronic mania, lapsing into dementia, with utter prostration of mind and body.

These periods often run into each other, and the first may escape the notice of friends and even of physicians unless they are accustomed to observe patients affected with this disease, but sooner or later it presents both motor and mental symptoms, which are characteristic, and if the disease runs its course and no intercurrent disease supervenes no portion of the body escapes.

In the first period the patient may simply be noticed to have changed, to be more irritable, more easily excited, less able to attend to business, more forgetful, less careful of money, and less shrewd in bargains. There is, if I may so express it, a peculiar "damaged" condition of mind, which gives the friends anxiety, but of which the patient is entirely unconscious. It is during this early stage that the patient may commit irregularities in business and in his moral conduct, may wreck his own and others' fortunes, and may ruin the reputation and prospects of his entire life. Hence the necessity of the early recognition of the disease, that its victim may be restrained in some way and protected from himself. There soon develops some difficulty in articulating certain words, especially those abounding in consonants; there is a tremor of lips and tongue, like that of a person about to weep; and it is observed that he drags one or both feet in walking. He now becomes extravagant and passes into the period of excitement. He considers himself all-powerful, believes that he owns everything, and talks constantly of the most extensive projects — a trip to the moon, pumping the Atlantic Ocean dry, and invents wonderful machines. At this time he is often very licentious, and talks much of his sexual powers and his influence over women. He is indifferent to his friends, is untidy in dress, and does not observe the proprieties of life. He may become violent at the slightest provocation, especially if any attempt is made to control or oppose him, and then is very dangerous, his weakened mind being capable of great fury, resembling the excitement following an epileptic seizure.

While in the excited period he is often taken to an insane hospital. There he soon settles down and becomes contented and happy, and owns the whole establishment. He considers himself well, and his complacency and self satisfaction continue through the whole course of the disease. The delusions change rapidly; there is great incoherence; when questioned he contradicts himself, and when his delusions are proved false he may admit their falsity in one moment and reassert them the next. Hallucinations of sight and hearing are not infrequent.

Sometimes epileptic or apoplectic seizures occur among the earliest symptoms, especially those of an epileptic nature, which may be the first warning of the serious nature of the malady. During the progress of the disease they are very common, and may cause death at any time, and if frequent the mental failure is very rapid.

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[1] Read before the Boston Society for Medical Improvement, February 25, 1884.

In the later stages of the disease the paralysis increases, until he is no longer able to walk at all; the difficulty in articulation becomes worse, and produces a mere unintelligible jargon; the mind becomes incapable of any effort whatever; the sphincters are relaxed, and the patient dies from exhaustion; from choking owing to inability to swallow; suddenly, from convulsions or apoplexy; from serous effusion into the brain, or from some intercurrent disease, as pneumonia, diarrhœa, or septicæmia from bedsores.

The incipient stage may be one of melancholia instead of exaltation, which, however, is comparatively rare, and is distinguished from ordinary melancholia by the greater mental weakness; there is no method, and there are no connected and good arguments.

The writing of a general paralytic is characteristic, and is often one of the first symptoms to attract attention. At first only a certain tremulousness may be noticed; then words are left out and misspelled, and as the disease progresses the tremulousness and indistinctness are more and more marked until the writing is entirely illegible.

The peculiarities in walking arise from the loss of coördinating power and increasing paralysis. The gait is stiff, the patient moving with a jerking, uncertain movement, though he may walk fast. He easily trips, and sooner or later shuffles, and as he progresses a peculiar straddling gait is seen, and finally he drags his legs after him in an indefinite, peculiar manner, as if they did not belong to him. Sometimes the gait is high stepping, and the patient walks with erect head.

There is always more or less paralysis of sensation, which increases as the disease advances, and the sensibility finally disappears.

The condition of the patellar tendon reflex is of some diagnostic value. In certain cases it is exaggerated, in others normal, and in still others below normal. In the majority of cases where there is any change it is supra-normal in the early stages of the disease.

Well-marked exaggeration in both legs is strong corroborative evidence of general paralysis; diminution or absence of it is decidedly less so, but has some value.

Where patellar reflex is absent disordered gait is among the first symptoms. There is generally inequality of the pupils, in some cases there is dilatation of both pupils, and sometimes the pupils are both abnormally small, mere pin holes, as in a case which I have had under observation for several months.

There is often no great change in the temperature of general paralytics. It averages a little above normal, but there is nothing diagnostic in it. There is a noticeable difference between the morning and evening temperature, and the prognosis as to time may be based to a certain extent upon the amount of this variation rather than upon any great or continuous elevation.

An ophthalmoscopic examination of the eyes of general paralytics often reveals atrophy of the optic disks, but as this change is frequent in other forms of cerebral disease its existence is corroborative rather than diagnostic.

The diagnosis in well-marked cases of general paralysis is easy, no other disease presenting the same combination of symptoms, excitement, extravagance, loss of memory, tremor of lips and tongue, and impairment of gait.

Sometimes in the somewhat rare cases where maniacal excitement is the earliest symptom, and there is no defect in the speech and no trouble in walking, even if delusions are extravagant, it may be difficult to make a positive diagnosis between general paralysis and acute mania. We must then await developments before giving a positive opinion. There are, however, certain impressions of general mental weakness which such cases give which will help very much in forming a decided opinion. Later in the disease there may again be difficulty, unless the physician is furnished with a full history of the case from its commencement. Advanced dementia, with hesitation in speech, may give rise to some doubt, but the absence of the peculiar muscular tremors in lips and tongue, and the optimistic view of things taken by general paralytics, even when very feeble, will help settle the diagnosis.

In the epileptic seizures of general paralysis the tongue is seldom bitten, the insensibility following a fit is much more deep, and the impairing effect of each seizure is much more apparent than in true epilepsy. In the grand mal of epilepsy the outcry which precedes the convulsion is characteristic, but is not heard in general paralysis.

Sometimes locomotor ataxia has been mistaken for general paralysis, but the general history of the case and the absence of mental symptoms would eliminate the latter disease.

The prognosis in this disease is always unfavorable. Remissions of active symptoms, which may continue for some months even, are not very unusual, but a relapse and eventual death must be expected. A few cases of recovery have been reported, but they lack the confirming test of time. The average duration of general paralysis is from two to three years, though a few cases have lived five, and, it is said, even ten and twelve years. I have in mind two undoubted cases, perfectly characteristic in every respect, one of which is of eight years' and the other of six years' duration. Much will depend in each case upon the violence or acuteness of the symptoms, the previous history of the individual, and the care which he receives.

In one of our public institutions, whose superintendent is a very careful and accurate observer, a patient with general paralysis was considered a case of locomotor ataxia for a year, till the development of disease made the diagnosis plain. A comparison of the symptoms of the two diseases shows the following differences: —

GENERAL PARALYSIS.	LOCOMOTOR ATAXIA.
Mental symptoms generally though not always first. Motor symptoms secondary.	Motor symptoms primary, following acute pain in distal part.
Extravagant delusions and violence.	Mental symptoms secondary, and are [illegible], with gradual impairment, without excitement.
Great sexual excitement.	No sexual desire and loss of sexual power.
Progress rapid.	May extend over ten or twelve years.
From above down.	From below up.

Very little can be said in regard to treatment. It must be mainly palliative, and directed to rendering less rapid the ravages of the disease. Quiet, a carefully regulated life, and the removal from everything which has a tendency to excite are essentials, and when there is much excitement these can rarely be attained outside of an insane hospital. Various emergencies and conditions call for medical treatment, and sedatives, tonics, and in the later stages stimulants may be useful, but nothing curative can be hoped for from any treatment.

The pathology of general paralysis is still debatable ground, but is admitted to be a degenerative inflammation of the cortical portion of the brain. Its inflammatory character is denoted by the post-mortem appearances. Those most commonly seen are adhesions of the dura mater, the vessels of which are often distended, and on its inner surface are found layers of hæmorrhagic exudation. The arachnoid is milky and thickened, studded with Pacchionian granules, and united to the dura mater. It is sometimes separated from the pia mater by effusion, and sometimes firmly adherent to it.

The pia mater and the cerebral cortex present the most pathognomonic signs of the disease. It adheres to the convolutions so intimately that portions of the latter come away with it, leaving a reddened surface. These appearances are seen chiefly in the frontal, posterior central, and parietal regions. The points of adhesion may be few or numerous, but are confined to the summits of the gyri. When the pia mater is removed the cortical substance is found atrophied in cases of average duration. Not only is there atrophy of the cortex, but also small capillary apoplexies may be seen. If the patient dies early in the disease we do not find the adhesions of the later stages, but only hyperæmia, with some opacity of the arachnoid. The vessels of the brain are often tortuous and varicose, and their walls are thickened; this is especially true of the veins of the pia mater. There may be effusions of serum or blood into the ventricles and sinuses, which fill the place of the atrophied brain.

There may be the same changes in the spinal cord and its membranes, but Westphal does not connect these appearances with the diseased conditions found in the brain (which is the true seat of the disease), and thinks them independent of each other. General paralysis is essentially a cerebral disease.

Dr. Blandford, in his work on Insanity and its Treatment, says: "That the cortex is the seat of this disease can hardly be doubted if we reflect that after all it is an insanity resembling in many respects the ordinary non-fatal insanity which we term mania. The 'pars affecta' is one and the same. The line of demarkation between ordinary insanity and general paralysis is exceedingly fine, and the whole history of the latter points to a difference in degree rather than in kind. That general paralysis is intractable and progressive is the fact that we are certain of. The hyperæmia which accompanies curable mania subsides and the disease vanishes. The hyperæmia of general paralysis becomes a slowly advancing inflammation which destroys the tissue."

Case I. I. G., aged forty-three, single, merchant. Admitted to the McLean Asylum July 22, 1869. No insanity in family. He has been a man of very convivial habits. One year before admission he found himself unable to do his work, and retired from business. Of late he has been very extravagant, restless, and excited. His excitement passing beyond the control of his friends, he was sent to the asylum. On admission his speech was thick and his lips tremulous; he was self-satisfied and extravagant. Memory poor.

August 31st. He is the most contented and happy patient in the house. Is becoming stout. Thinks himself a very expert player of whist and euchre, but cannot follow the game. Becomes gradually duller and thicker.

In January, 1870, speech more impaired.

March 8th, eight months after admission, was semiconscious for an hour and a half, and the next day there was a repetition of the same condition. After these seizures the thickness of speech and dullness of intellect increased. Strange and deluded. Believed that the Lord was in his room. His mother died about this time, but when told of it he was affected only momentarily.

April 2d. Very restless, full of wants and schemes. Says that his mother is alive, and wishes to go to her. Is noisy at night and destructive. Losing flesh.

One month afterwards he had an apoplectic seizure, and could not swallow for twenty-four hours. After this he rallied, but was very weak and incoherent.

June 7th. Could walk with difficulty, and could take only liquid nourishment, but was in the best of spirits; considered his room magnificent, and believed himself quite well and possessed of great physical strength.

A month later he became highly excited, noisy, very filthy, and utterly incoherent. This excitement told upon his strength, and after being confined to his bed a week with symptoms of effusion he died, after one year's residence in the asylum, and two years from the commencement of the disease.

Case II. F. A. B., aged thirty, married, innkeeper. Admitted August 31, 1869. For three months had been queer and excited. Much worried by the enforcement of prohibitory liquor law. On admission very much excited; believed himself Napoleon I. Speech thick, lips tremulous, gait enfeebled and shuffling.

His condition January 21, 1870, five months after admission, was much the same, except that he had advanced in dementia and feebleness. His delusions continued, and after nine months' residence in the asylum he was transferred to the Boston Lunatic Hospital, where he died within two years from the commencement of the disease.

Case III. W. B., aged forty-five, widower, lawyer, native of New Hampshire. Admitted May 12, 1870. His father was subject to periods of depression. Patient was married ten years since, but his wife lived only six weeks. Her early death gave rise to talk on the part of his acquaintances, and he was blamed though there seems to have been no reason to believe him in fault. He had a lawsuit with his father-in-law about his wife's property, was defeated, became sullen and morose, and has since lived much by himself, and has dwelt upon his treatment by others. Has considerable property in real estate, and has had a very annoying class of tenants. Two years ago became very licentious, and he has been much addicted to masturbation.

For months his friends have noticed a change, and think that he has not appeared natural. Three weeks before admission he seemed very dull and stupid, was much troubled with nausea, and it was noticed that there was difficulty in articulation, and that he dragged his feet. He soon rallied from this condition, talked much and at random on business matters, and wrote many letters full of wild projects. When he came to the asylum talked extravagantly of his plans and schemes, and his speech and walk were affected. Had much to say of buying elephants to do his farm work, said that an acre or two adjoining would be worth $25,000, styled himself the Astor of New Hampshire. Remained at the asylum willingly, and was at once at home. Said all the implements on his farm, including troughs for the pigs, were of solid silver. There was no great change for a month except that he increased in extravagance, and manifested more excitement, and was very obscene. He masturbated on all possible occasions. During next two months there was great excitement accompanied by threats, great irritability, and violence. During the next two months he was more quiet, and less extravagant, decidedly more sane, and generally quite gentlemanly in his conduct, but tremor of lips and mental enfeeblement were always apparent. He then became more unsettled and excitable, and had several dull, partially insensible attacks without convulsions, during which he vomited, and after which he was always weaker, more confused, and more excited. Often his attempts to talk were mere jargon, and his gait very feeble. These alternations continued steadily, he lost ground mentally and physically, and his incoherence and exalted ideas increased. Fifteen months after admission had his first epileptiform attack when exercising out-of-doors. From the early attacks he rallied, but they soon became very frequent, and he failed much more rapidly. His extravagance continued, and so long as he could talk he spoke constantly of his great sexual power, his powerful influence with the female sex, and insisted that Queen Victoria, whose daughter he had married, had built him a golden palace in the centre of his farm.

He died in epileptic convulsions three years and six months after admission to the asylum, and not far from five years from the first appearance of the disease. No autopsy.

(*To be continued.*)

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CLINICAL ASPECTS OF CEREBRAL SYPHILIS.[1]

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Paralysis. — When it is remembered that a syphilitic exudation may appear at almost any position in the brain, that spots of encephalic softening are a not rare result of the infection, that syphilitic disease is a common cause of cerebral hæmorrhage — it is plain that a specific palsy may be of any conceivable variety, and affect either the sensory, motor, or intellectual sphere. The mode of onset is as various as the character of the palsy. The attack may be instantaneous, sudden, or gradual. The gradual development of the syphilitic gumma would lead us, *a priori*, to expect an equally gradual development of the palsy; but experience shows that in a large proportion of the cases the palsy develops suddenly, with or without the occurrence of an apoplectic or epileptic fit. Under these circumstances it will be usually noted that the resulting palsy is incomplete; in rare instances it may be at its worst when the patient awakes from the apoplectic seizure, but mostly it progressively increases for a few hours, and then becomes stationary. These sudden partial palsies probably result from an intense congestion around the seat of disease, or from stoppage of the circulation in the same locality; but whatever their mechanism may be, it is important to distinguish them from palsies which are due to hæmorrhage. I believe this can usually be done by noting the degree of paralysis.

A suddenly developed, *complete* hemiplegia, or other paralysis, may be considered as in all probability either hæmorrhagic or produced by a thrombus so large that the results will be disorganization of the brain substance, and a future no more hopeful than that of a clot. On the other hand, an *incomplete* palsy may be rationally believed to be due to pressure or other removable cause, and this belief is much strengthened by a gradual development. The bearing of these facts upon prognosis it is scarcely necessary to point out.

Although the gummæ may develop at almost any point, they especially affect the base of the brain, and are prone to involve the nerves which issue from it. Morbid exudations, not tubercular nor syphilitic, are very rare in this region. Hence a rapidly but not abruptly appearing strabismus, ptosis, dilated pupil, or any paralytic eye symptom in the adult, is usually of syphilitic nature. Syphilitic facial palsy is not so frequent, whilst paralysis of the nerve from rheumatic and other inflammation within its bony canal are very common. Paralysis of the facial may therefore be specific, but it is of no diagnostic value. Since syphilitic palsies about the head are in most instances due to pressure upon the nerve trunks, the electrical reactions of degeneration are present in the affected muscles.

There is one peculiarity about specific palsies which has already been alluded to as frequently present, namely, a temporary, transient, fugitive, varying character and seat. Thus an arm may be weak to-day, strong to-morrow, and the next day feeble again, or the recovered arm may retain its power, and a leg fail in its stead. These transient palsies are much more apt to involve large than small brain territories. The explanation of their largeness, fugitiveness, and incompleteness is that they are not directly due to clots or other structural changes, but to congestions of the brain tissues in the neighborhood of gummatous exudations. It is easily seen why a squint will remain when the accompanying monoplegia disappears.

Motor palsies are more frequent than sensory affections in syphilis, but hemianæsthesia, localized anæsthetic tracts, indeed any form of sensory paralysis, may occur. Numbness, formications, all varieties of paræsthesia are frequently felt in the face, body, or extremities. Violent peripheral neuralgic pains are rare, and generally when present denote neuritis. Professor Huguenin, however, reports[2] a case in which a severe trigeminal anæsthesia dolorosa had existed during life, as the only cerebral symptom, and death occurring from lung disease, a small gumma was found on the sella turcica pressing upon the Gasserian ganglion.

The special senses are liable to suffer from the invasion of their territories by cerebral syphilis, and the resulting palsies follow courses and have clinical histories parallel to those of the motor sphere. The onset may be sudden, or gradual, the result temporary or permanent. Dr. Charles Mauriac[1] reports a case in which the patient was frequently seized with sudden attacks of severe frontal pain and complete blindness, lasting from a quarter to half an hour; at other times the same patient had spells of aphasia lasting only for one or two minutes. In a case still under my care with unmistakable signs of cerebral syphilis the man was suddenly and unaccountably seized with complete deafness which after some days disappeared in the course of a few hours. Like other syphilitic palsies, therefore, paralyses of special senses may come on suddenly or gradually, and may occur paroxysmally.

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[1] Continued from page 200.

[2] Schwiez. Corr. Blat., 1875.

Among the palsies of cerebral syphilis must be ranked aphasia. An examination of recorded cases shows that it is subject to vagaries and laws similar to those connected with other specific cerebral palsies. It is usually a symptom of advanced disease, but may certainly develop as one of the first evidences of cerebral syphilis.

Coming on after an apoplectic or epileptic fit, it may be complete or incomplete: owing to the smallness of the centre involved, and the ease with which its function is held in abeyance, a total loss of word thought is not so decisive as to the existence of cerebral hæmorrhage as is a total motor palsy. Like hemiplegia or monoplegia, specific aphasia is sometimes transitory and paroxysmal. Dr. Buzzard[2] records several such cases. Dr. Charles Mauriac[3] details a very curious case in which a patient, after long suffering from headache, was seized by sudden loss of power in the right hand and fingers, lasting about ten minutes only, but recurring many times a day. After this had continued some time the paroxysms became more completely paralytic and were accompanied by loss of power of finding words, the height of the crises in the palsy and aphasia being simultaneously reached. For a whole month these attacks occurred five or six times a day, without other symptoms except headache, and then the patient became persistently paralytic and aphasic, but finally recovered.

To describe the different forms of specific aphasia and their mechanism of production would be to enter upon a discussion of aphasia itself, a discussion out of place here. Suffice to say that every conceivable form of the disorder may be induced by syphilis.

Owing to the centres of speech being situated in the cortical portion of the brain, aphasia in cerebral syphilis is very frequently associated with epilepsy. Of course right-sided palsy and aphasia are united in syphilitic as in other disorders. If, however, the statistics given by M. Tanowsky[4] be reliable, syphilitic aphasia is associated with left-sided hemiplegia in a most extraordinarily large proportion. Thus in fifty-three cases collected by Mr. Tanowsky, eighteen times was there right-sided hemiplegia, and fourteen times left-sided hemiplegia, the other cases being not at all hemiplegic. Judging from the autopsy on a case reported in Mauriac's brochure this concurrence of left-sided paralysis and aphasia depends partly upon the great frequency of multiple brain lesions in syphilis, and partly upon the habitual involvement of large territories of the gray matter secondarily to diseased membrane. An important practical deduction is that the conjoint existence of left hemiplegia and aphasia is almost diagnostic of cerebral syphilis.

Probably amongst the palsies may be considered the disturbances of the renal functions, which are rarely met with in cerebral syphilis, and which are probably usually dependent upon the specific exudation pressing upon the vaso-motor centres in the medulla. Fournier speaks of having notes of six cases in which polyuria with its accompaniment, polydipsia, was present, and details a case in which the specific growth was found in the floor of the fourth ventricle. Cases have been reported in which true saccharine diabetes has been present,[5] and I can add to these an observation of my own. The symptoms, which occurred in a man of middle age with a distinct specific history, were headache, nearly complete hemiplegia, and mental failure, associated with the passage of comparatively small quantities of a urine so highly saccharine as to be really a syrup. Under the influence of the iodide of potassium the sugar in a few weeks disappeared from the urine.

Epilepsy. — Epileptic attacks are a very common symptom of meningeal syphilis, and are of great diagnostic value. The occurrence in an adult of an epileptic attack, or of an apoplectic fit, or of a hemiplegia after a history of intense and protracted headache, should always excite grave suspicion.

Before I read Professor Fournier's work on Nervous Syphilis, I taught that an epilepsy appearing after thirty years of age was very rarely, if ever, essential epilepsy, and unless alcoholism, uræmic poison, or other adequate cause could be found was in nine cases out of ten specific; and I therefore quote with satisfaction Professor Fournier's words: "L'épilepsie vraie, ne fait jamais son premier dêbut à l'âge adulte, à l'âge mûr. Si un homme adulte, au dessus de 30, 35 à 40 ans, vient à être pris pour la première fois d'une crise épileptique, et cela dans la cours d'une bonne santé apparente, il y a, je vous le répète, huit ou neuf chances sur dix pour que cette épilepsie soit d'origine syphilitique."

Syphilitic epilepsy may occur either in the form of petit mal or of the haut mal, and in either case may take on the exact characters and sequence of phenomena which belong to the so-called idiopathic or essential epilepsy. The momentary loss of consciousness of petit mal will usually, however, be found to be associated with attacks in which, although voluntary power is suspended, memory recalls what has happened during the paroxysm; attacks, therefore, which simulate those of hysteria, and may lead to an error of diagnosis.

Even in the fully-developed type of the convulsions the aura is only rarely present. Its absence is not, however, of diagnostic value, because it is frequently not present in true essential epilepsy, and it may be pronounced in specific disease. It is said, that when in an individual case the aura has once appeared, the same type or form of approach of the convulsion is thereafter rigidly adhered to. The aura is sometimes bizarre; a severe pain in the foot, a localized cramp, a peculiar sensation, indescribable and unreal in its feeling, may be the first warning of the attack.

In many, perhaps most cases of specific convulsions, instead of a paroxysm of essential epilepsy being closely simulated, the movements are in the onset, or, more rarely, throughout the paroxysm, unilateral; indeed, they may be confined to one extremity. This restriction of movement has been held to be almost characteristic of syphilitic epilepsy, but it is not so. Whatever diagnostic significance such restriction of the convulsion has is simply to indicate that the fit is due to a cortical organic lesion of some kind. Tumors, scleroses, and other organic lesions of the brain cortex are as prone to cause unilateral or monoplegic epilepsy when they are not specific as when they are due to syphilis.

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[1] Aphasie et Hemiplégie droite Syphilit., Paris, 1877.

[2] Loc. cit., p. 81.

[3] Loc. cit., page 31.

[4] L'Aphasie Syphilitique.

[5] Consult. Servantié, Des rapports du Diabéte et de la Syphilis. Paris Thèse, 1876.

Sometimes an epilepsy, dependent upon a specific lesion implicating the brain cortex, may be replaced by a spasm which is more or less local and is not attended with any loss of consciousness. Thus, in a case now convalescent in the University Hospital, a man, aged about thirty-five, offered a history of repeated epileptic convulsions, but at the time of his entrance into the hospital, instead of epileptic attacks, there was a painless tic. The spasms, which were clonic, and occurred very many times a day — sometimes every five minutes — were very violent and mostly confined to the left facial nerve distribution. The trigeminus was never affected, but in the severer paroxysms the left hypoglossal and spinal accessory nerves were profoundly implicated in all of their branches. Once, fatal asphyxia from recurrent laryngeal spasm of the glottis was apparently averted only by the free inhalation of the nitrite of amyl. The sole other symptom was headache, but the specific history was clear, and the effect of antisyphilitic remedies rapid and pronounced.

Psychical Symptoms. — As already stated, apathy, somnolence, loss of memory, and general mental failure are the most frequent and characteristic mental symptoms of meningeal syphilis, but, as will be shown in the next chapter, syphilis is able to produce almost any form of insanity, and therefore mania, melancholia, erotic mania, delirium of grandeur, etc., etc., may develop along with the ordinary manifestation of cerebral syphilis, or may come on during an attack which has hitherto produced only the usual symptoms. Without attempting any exhaustive citation of cases, the following may be alluded to: —

Dr. A. Erlenmeyer reports[1] a case in which an attack of violent headache and vomiting was followed by paralysis of the right arm and paresis of the left leg with some mental depression; a little later the patient suddenly became very cheerful, and shortly afterwards manifested very distinctly delirium of grandeur with failure of memory. Dr. Batty Tuke reports[2] a case in which with aphasia, muscular wasting, strabismus, and various palsies there were delusions and hallucinations.

In the same journal, April, 1869, Dr. S. D. Williams reports a case in which there were paroxysmal violent attacks of frontal headache. The woman was very dirty in her habits, only ate when fed, and existed in a state of hypochondriacal melancholy.

M. Leiderdorf details a case with headache, partial hemiplegia, great psychical disturbance, irritability, change of character, marked delirium of grandeur, epileptic attacks, and finally dementia, eventually cured with iodide of potassium.[3] Several cases illustrating different forms of insanity are reported by Dr. N. Manssurow.[4]

That the attacks of syphilitic insanity, like the palsies of syphilis, may at times be temporary and fugitive, is shown by a curious case reported by Dr. H. Hayes Newington,[5] in which along with headache, failure of memory, and ptosis in a syphilitic person there was a brief paroxysm of noisy insanity.

DISEASES OF BRAIN SUBSTANCE.

The psychical symptoms which are produced by syphilis are often very pronounced in cases in which the paralysis, headache, epilepsy, and other palpable manifestations show the presence of gross brain lesions. In the study of syphilitic disease of the brain membranes sufficient has been said in regard to these psychical disturbances, but the problem which now offers itself for solution is as to the existence or non-existence of syphilitic insanity, that is, of an insanity produced by specific contagion without the obvious presence of gummatous disease of the brain membranes. Very few alienists recognize the existence of a distinct affection entitled to be called syphilitic insanity, and there are some who deny that insanity is ever directly caused by syphilis. It is certain that insanity often occurs in the syphilitic, but syphilis is abundantly joined with alcoholism, poverty, mental distress, physical ruin, and various depressing emotions and conditions which are well known to be active exciting causes of mental disorder. It may well be that syphilis is in such way an indirect cause of an insanity, which under the circumstances could not be properly styled syphilitic.

If there be disease of the brain cortex produced directly by syphilis, of course such disease must give rise to mental disorders, and, if the lesion be situated in such a way as to affect the psychic and avoid the motor regions of the brain, it will produce mental disorder without paralysis, that is, a true insanity; again, if such brain disease be wide spread, involving the whole cortex, it will cause a progressive mental disorder, accompanied by gradual loss of power in all parts of the body and ending in dementia with general paralysis; or, in other words, it will produce an affection more or less closely resembling the so-called general paralysis of the insane, or dementia paralytica.

As a man having syphilis may have a disease which is not directly due to the syphilis, when a syphilitic person has any disorder there is only one positive way of determining how far said disorder is specific, namely, by studying its amenability to antisyphilitic treatment. In approaching the question whether a lesion found after death is specific or not, of course such a therapeutic test as that just given is inapplicable. We can only study as to the coexistence of the lesion in consideration with other lesions known to be specific. Such coexistence of course does not absolutely prove the specific nature of a nutritive change, but renders such nature exceedingly probable.

What has just been said foreshadows the method in which the subject in hand is to be here examined, and the present chapter naturally divides itself into two sections: the first considering the coexistence of anatomical alterations occurring in the cerebral substance with syphilitic affections of the brain membranes or blood-vessels, the second being a clinical study of syphilitic insanity.

In looking over literature I have found the following cases in which a cerebral sclerotic affection coincided with a gummatous disease of the membrane. Gross and Lancereaux[1] report a case having a clear syphilitic history, in which the dura mater was adherent to the skull. The pia mater was not adherent. Beneath, upon the vault of the brain, was a gelatinous exudation. The upper cerebral substance was indurated, and pronounced by M. Robin after microscopic examination to be sclerosed. At the base of the brain were very atheromatous arteries and spots of marked softening.

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[1] Die luetischen Psychosen.

[2] Journ. Ment. Sci., January, 1874, page 560.

[3] Medicin. Jahrbücher, xx., 1864, p. 114.

[4] Die tertiare Syphilis, Wien, 1877.

[5] Journ. Ment. Sci., London, xix., 555.

Dr. Jos. J. Brown[2] reports a case in which the symptoms were melancholia, excessive irritability, violent outbursts of temper, very positive delusions, disordered gait ending in dementia. At the autopsy, which was very exhaustive, extensive syphilitic disease of the vessels of the brain and spinal cord was found. The pia mater was not adherent to the brain. The convolutions, particularly of the frontal and parietal lobes, were atrophied with very wide sulci, filled with bloody serum. The neuroglia of these convolutions was much increased and "appeared to be more molecular than normal, the cells were degenerated and in many places had disappeared, their places being only occupied by some granules." These changes were most marked in the frontal convolutions.

H. Schule reports[3] a very carefully and meritoriously studied case. The symptoms during life exactly simulated those of dementia paralytica. The affection commenced with an entire change in the disposition of the patient; from being taciturn, quiet, and very parsimonious, he became very excited, restless, and desiring continuously to buy in the shops. Then failure of memory, marked sense of well-being, carelessness and indifference for the future, developed consentaneously with failure of the power of walking, trembling of the hands, inequality of the pupils, and hesitating speech. There was next a period of melancholy, which was, in time, followed by continuous failure of mental and motor powers, and very pronounced delirium of grandeur, ending in complete dementia. Death finally occurred from universal palsy with progressive increase of the motor symptoms. At the autopsy characteristic syphilitic lesions were found in the skull, dura mater, larynx, liver, intestines, and testicles. The brain presented the macroscopic and microscopic characters of sclerosis and atrophy; the neuroglia was much increased, full of numerous nuclei, the ganglion cells destroyed. The vessels were very much diseased, some reduced to cords; their walls were greatly thickened, and full of long, spindle-shaped cells, sometimes also containing fatty granules.

Dr. C. E. Stedman and Robert T. Edes report[4] a case in which the symptoms were failure of health, ptosis, trigeminal palsy with pain (anæsthesia dolorosa), finally mental failure with gradual loss of power of motion and sensation. At the autopsy the following conditions were noted: apex of the temporal lobe adherent to dura mater and softened; exuded lymph in neighborhood of optic chiasm; sclerosis of right Gasserian ganglion, as shown in a marked increase of the neuroglia; degeneration of the basal arteries of the brain.

These cases are sufficient to demonstrate that sclerosis of the brain substance not only may coexist with a brain lesion, which is certainly specific in its character, but may also present the appearance of having developed *pari passu* with that lesion, and from the same cause.

It has already been stated in this memoir that cerebral meningeal syphilis may coexist with various forms of insanity, and cases have been cited in proof thereof. It is, of course, very probable that in some of such cases there has been that double lesion of membrane and gray brain matter which has just been demonstrated by report of autopsies; further, if we find that there is a syphilitic insanity, which exists without evidences of meningeal syphilis, and is capable of being cured by antispecific treatment, such insanity must be considered as representing the disease of the gray matter of the brain. Medical literature is so gigantic that it is impossible to exhaust it, but the list of cases given in the Table (see p. 224) is amply sufficient to prove the point at issue, namely, that there is a syphilitic insanity which exists without obvious meningeal disease, and is capable of being cured by antisyphilitic treatment.

A study of the brief analyses of symptoms given in the Table shows that syphilitic disease of the brain may cause any form of mania, but that the symptoms, however various they may be at first, end almost always in dementia unless relieved.

Of all the forms of insanity general paralysis is most closely and frequently simulated by specific brain disease. The exact relation of the diathesis to true incurable general paralysis it is very difficult to determine. It seems well established that amongst persons suffering from this disorder the proportion of syphilitics is not only much larger than normal, but also much larger than in other forms of insanity. Thus Dr. E. Mendel[5] found that in 146 cases of general paralysis 109, or seventy-five per cent., had a distinct history of syphilis, whilst in 101 cases of various other forms of primary insanity only eighteen per cent. had specific antecedents.

Various opinions might be cited as to the nature of this relation between the two disorders, but for want of space the curious reader is referred to the work just quoted, and to the thesis of C. Chauvet[6] for an epitome of the most important recorded opinions.

Those who suffer from syphilis are exposed in much greater proportion than are other persons to the ill effects of intemperance, sexual excesses, poverty, mental agony, and other well-established causes of general paralysis. It may be that in this is sufficient explanation of the frequency of general paralysis in syphilitics, but I incline to the belief that syphilis has some direct effect in producing the disease. However this may be, I think we must recognize as established the opinion of Voisin[7] that there is a syphilitic periencephalitis which presents symptoms closely resembling those of general paralysis. Such cases are examples of the pseudo-paralysie générale of Fournier.[8]

The question as to the diagnosis of these cases from the true incurable paresis is, of course, very important, and has been considered at great length by Voisin,[9] Fournier,[10] and Mickle.[11]

The points which have been relied upon as diagnostic of syphilitic pseudo-general paralysis are: —

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[1] Affect. Nerv. Syphilis, 1861, page 245.

[2] Journ. Ment. Science, July, 1875, page 271.

[3] Allgem. Zeitschrift f. Psychiatrie, xxviii., 1871-1872.

[4] Amer. Journ. Med. Sci., lxix., 433.

[5] Progres. Paral. der Irren, Berlin, 1880.

[6] Influence de la Syph. sur les Malad. du Syst. nervuex, Paris, 1880.

[7] Paralysie générale des Alienés, 1879.

[8] La Syphilis du Cerveau, Paris, 1879.

[9] Loc cit.

[10] Loc cit.

[11] Brit. and For. Medico-Chirurg. Review, 1877.

No	Reporter and Journal.	Symptoms.	Results.	Remarks.
1	Louis Sörensen. Die Lues als Ursache der Dementia. Inaug. Diss. Berlin, 1878	Epilepsy, delirium of exaltation, alteration of speech, headache, failure of memory.	Rapid cure with mercury.	
2	Ibid	Delusions, delirium, general mania, great muscular weakness.	Cure with mercury.	
3	Dr Muller, of Leutkirch. Journ. of Mental Dis., 1873 74, 561	Symptoms resembling general paralysis, and diagnosis of such made until a sternal node was discovered	Cure by iodide of potassium.	
4	Fr. Esmarch and W. Jessen. Allgem. Zeitschrift f. Psychiatrie.	Sleeplessness, great excitement, restlessness, great activity, incoherence and violence	Cure by mercury.	
5	M. Leidesdorf. Medizin. Jahrbücher, xx., 1864, 1.	Complete mania, played with his excrement, and entirely irrational.	Complete cure by iodide of potassium.	
6	Dr Beauregard. Gaz. Hebdom. de Sci. Med. de Bordeaux, 1880, page 64	Symptoms resembling those of general paralysis	Cure by iodide of potassium.	
7	M. Rendu. Ibid.	Loss of memory, headache, irregularity of pupils, ambitious delirium, periods of excitement, others of depression, embarrassment of speech, access of furious delirium, ending in stupor.	Mercurial treatment, cure.	
8	Ibid.	Hypochondria, irregularity of pupils, headache, failure of memory, melancholy, stupor.	Mercurial treatment, cure.	
9	Dr. Albrecht Erlenmeyer. Die luetischen Psychosen, Neuwied, 1877.	Melancholia, with hypochondriasis, sleeplessness, fear of men, and belief they were all leagued against him.	Iodide of potassium, cure.	
10	Ibid.	Religious melancholia, with two attempts at suicide, ending in mania.	Iodide of potassium, cure.	
11	Ibid.	At times very violent, yelling, shrieking, destroying everything she could get hands on, at times erotomania; no distinct history of infection, but her habits known to be bad, and had bone ozæna and other physical syphilitic signs.	Iodide of potassium, cure.	
12	Ibid	Epileptic attack, followed by a long soporose condition, ending in mental confusion, he not knowing his nearest friends, etc.; almost dementia.	Cured by mercurial inunction.	
13	Ibid	Great fear of gend'armes, etc., mania, with hallucinations, loud crying, yelling, etc, then convulsion, followed by great difficulty of speech.	Cured by mercurial inunctions, with iodide internally; subsequently return of convulsions, followed by hemiplegia and death.	
14	Ibid	Great unnatural vivacity and loquacity, wanted to buy everything, bragged of enormous gains at play, etc.; some trouble of speech.	Iodide of potassium, cure. Attended to business, and seems as well as before. Relapsed (See Symptoms.)	
—	Ibid. Relapse of Case 14	Fifteen months after discharge from asylum relapse; symptoms developing very rapidly, delirium of grandeur of the most aggravated type, with marked progressive dementia, failure of power of speech, and finally of locomotion.	Failure of various antispecific treatment.	
15	Dr. A. Erlenmeyer. Die luetischen, etc	Failure of mental powers, inequality of pupils, trembling of lip when speaking, uncertainty of gait, almost entire loss of memory, once temporary ptosis and strabismus.	Iodide of potassium in ascending doses failed. Recovery under mercurial inunctions.	
16	Ibid.	Failure of mental powers, pronounced delirium of grandeur, hallucinations of hearing, failure of memory, strabismus and ptosis coming on late.	Iodide of potassium, corrosive sublimate injections. Cure.	
17	Ibid.	Failure of memory and mental powers, slight ideas of grandeur, disturbance of sensibility and motility, aphasia coming on late.	Cure with use of iodide and mercurial inunctions.	
18	Ibid.	Melancholy, great excitability, ideas of grandeur, after a long time sudden ptosis and strabismus	Iodide of potassium failed; mercurial course improved; joint use cured patient.	
19	Ibid	Various cerebral nerve palsies, great relief by use of mercurial inunctions, then development of great excitement, delirium of grandeur, failure of memory and mental powers, and finally death from apoplexy; no autopsy.		
20	Dr J. B. Chapin. Amer. Journ. Insanity, vol. xv., p 249.	Melancholia, with attempted suicide, epilepsy, headache, somnolent spells.	Iodide of potassium, cure.	
21	Ibid	Acute mania, noisy, very destructive; syphilitic disease of tibia.	Iodide of potassium, cure.	
22	Dr. Steel	Maniacal excitement	Cured by specific treatment	
23	[illegible] Smith. Brit. Med. Journ., July, 1868, page 50	Apathetic melancholy, indelicate, speaking only in monosyllables, and much of the time not at all, sullen and menacing.	Rapidly cured by conjoint use of iodide and mercurial. The symptoms first developed three months after chancre.	

The occurrence of headache, worse at night, and present amongst the prodromes.

An early, persistent insomnia or somnolence; early epileptiform attacks.

The exaltation being less marked, less persistent, and, perhaps, less associated with general maniacal restlessness and excitement.

The articulation being paralytic rather than paretic.

The absence of tremulousness, especially of the upper lip (Fournier).

The effect of antispecific remedies.

When the conditions in any case correspond with the characters just paragraphed, or when any of the distinguishing characteristics of brain syphilis, as previously given in this memoir, are present, the probability is that the disorder is specific and remediable. But the absence of these marks of specific disease is not proof that the patient is not suffering from syphilis. Headache may be absent in cerebral syphilis, as also may insomnia and somnolence. Epileptiform attacks are not always present in the pseudo-paralysis, and may be present in the genuine affection. A review of the cases previously tabulated shows that in several of them the megalomania was most pronounced, and a case with very pronounced delirium of grandeur in which the autopsy revealed unquestionably specific brain lesions may be found in Chauvet's Thesis, page 31.

I have myself seen symptoms of general paralysis occurring in persons with a specific history in which of these so-called diagnostic differences the therapeutic test was the only one that revealed the true nature of the disorder. In these persons a primary immediate diagnosis was simply impossible.

Case XIV. of our table is exceedingly interesting because it seems to represent as successively occurring in one individual both pseudo and true general paralysis. The symptoms of general paralysis in a syphilitic subject disappeared under the use of mercury to return some months afterwards with increased violence, and with a new obstinacy that resisted with complete success antisyphilitic treatment. Such a case is some evidence that syphilis has the power to produce true general paralysis.

In conclusion I may state that it must be considered as at present proven that syphilis may produce a *disorder whose symptoms and lesions do not differ from those of general paralysis; that true general paralysis is very frequent in the syphilitic; that the only perceptible difference is one of curability; that the curable sclerosis may change into or be followed by the incurable form of the disease.* Whether under these circumstances it is philosophic to consider the so-called pseudo-general paralysis and general paralysis as essentially distinct affections each physician can well judge for himself.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

ANTHROPOLOGY.

A NUMBER of leading German anthropologists and anatomists have agreed to a scheme [1] determining a number of starting-points for measurements of the skull, which, if universally accepted, will do much to establish uniformity. The only feature of the scheme we will mention is the determination of the horizontal level of the skull, which is evidently of much importance, and which has already been referred to in these reports. The horizontal plane is the one determined by two straight lines which, on either side, connect the lowest point of the border of the orbit with the point in the upper border of the bony auditory meatus directly above the middle of the opening. It will be found that by this rule the face is thrown a little higher than by the simpler one, which is tolerably accurate, of making the upper border of the zygoma horizontal.

Dr. Paul Ricardi [2] has published a work in Italian on growth and stature, founded chiefly on observations made on the inhabitants of Modena and of the neighborhood. He finds that at birth there is little difference between the height and the breadth through the extended arms. Up to seven or eight years the latter measurement is almost always the less, but subsequently it is the greater. In the adult man, the height being 1000, the spread is 1045, and in woman 1015. On referring to Roberts' Anthropometry we find that he gives precisely the same proportions. According to Ricardi the maximum excess of the height over the spread is ten centimetres, while the maximum excess of the spread over the height may be as much as nineteen centimetres.

THE TOPOGRAPHY OF THE FEMALE THORAX.[3]

Professor Henke has written a paper to explain why, in his text-book on topographical anatomy, he has said but little of the difference of the relations of the thoracic organs in man and woman. It is well known that the sternum is absolutely smaller in woman, and it has been stated that the proportion of the manubrium to the body is characteristic of the sex. Hyrtl wrote: "I find the difference between the male and female sternum so clearly expressed by the proportion of the manubrium to the body that it is hardly possible to err in determining the sex. The manubrium of the female sternum exceeds half the length of the body, while the body in the male sternum is at least twice as long as the manubrium." According to Luschka "the body is usually twice as long as the manubrium in woman, and two and one half times as long in man." The writer of this report published [4] a series of measurements according to which the manubrium of the male sternum is to the body as 49 (—) is to 100, and the female as 52 (+) is to 100, thus apparently proving Hyrtl's rule, but the statistics showed that nearly half the cases were exceptions, and that thus the rule was too uncertain to be of value in any given instance. Henke refers to a paper by Strauch (which we have not seen) giving very different results. According to him in man the manubrium is to the body as 37.7 is to 100, and in woman as 71 is to 100. Henke suggests a new method, that of dividing the sternum into two pieces at the third costal cartilage. He finds the two about equal in man, and the lower smaller in woman. If it be true, according to whatever scheme of measurement be adopted, that the lower part of the bone is relatively smaller in woman, it would appear that the relations of the heart must be different in the sexes. Henke finds that there is a characteristic arrangement of the cartilages of the lower true ribs which practically supplies the deficiency of the sternum. We give a translation of his interesting description: "On the other hand, in the female thorax the lower half of the breast bone, without the ensiform cartilage, reckoning from the insertion of the third costal cartilage, is, as has been said, shorter than the upper, and at the same time more slender. The breadth does not increase below as in a well-developed male sternum. The insertions of the lower true ribs are necessarily crowded more together than in the male. There is no space even between the fifth and sixth; on the contrary their cartilages are usually united by a joint further out, which in the male only happens between the sixth and seventh. At the same time the arches of the two sides are so pressed together towards the middle that no place is left between them for the ensiform cartilage, which is consequently driven behind them. Instead of diverging they run here for some distance directly downwards, either close together or at least so near that, with the ensiform cartilage, they form a median continuation of the front wall of the chest, below the breast bone, and then diverge lower down. Even then their divergence is not so strong as in man, but such as to make a very sharp angle. Moreover, these cartilages of the lower true ribs are, relatively, much larger than in man, both longer and thicker, especially that of the seventh, which is most concerned in forming the border of the thorax below the angle. Thus, although their sternal ends reach higher, the points where they join the ribs are lower and nearer the middle line. As a whole they form a strong and steep border of the narrower and higher angle of the abdominal wall. The apex of the angle in which they meet above lies rather lower than the end of the breast bone, and yet about where it would lie in man, that is, twice as far from the top of the sternum as from the insertion of the third rib."

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[1] Archiv für Anthropologie, Band xv., 1883.

[2] Further statistics will be found in a review of the book in the Revue d'Anthropologie, deuxième série, tome vii., 1884.

[3] Archiv für Anatomie und Entwickelungsgeschichte, 1883, Heft 4, 5, and 6.

[4] Journal of Anatomy and Physiology, vol. xv., 1881.

From this it is clear that if in the male the lower border of the right ventricle lies across the lower border of the sternum, in the female it must be uncovered by that bone, but Henke points out that if instead of the lower end of the bone we speak of the thoracic angle the relations are practically the same. Professor Henke is, further, of the opinion that female clothing is the cause of this squeezing together of the ribs, although he admits that anatomical subjects for the most part are not of the class addicted to tight lacing. His arguments on this point fail to convince us.

THE FOLD OF THE NATES.[1]

Mr. Symington refers to the general view that the lower border of the gluteus maximus marks the fold of the nates or, according to some, forms it, and points out that Luschka has given a different and more correct account of the matter. Luschka, indeed, shows that the fold of the nates cannot be determined by the edge of the gluteus, which, in fact, crosses it, but that it is beneath a pad of fat, and that bands of connective tissue, passing through the fat, bind the skin to the tuberosity of the ischium and to the fascia lata. We will quote from Mr. Symington's description of the relations of the parts, which is accurate and instructive: "The lower border of the gluteus maximus passes from the coccyx downwards and outwards to about the juncture of the upper with the middle third of the shaft of the femur. As it passes rather more downwards than outwards the border is more internal than inferior. Taking the lower border as straight we found it formed an angle of about 145 degrees with the mesial line of the trunk. The gluteal sulcus, on the other hand, passes outwards and slightly upwards. It is continuous internally with the groove between the inner side of the thigh and the perinæum, and extends outwards below the ischial tuberosity towards the lower part of the great trochanter. It usually reaches about half way across the back of the thigh, and gradually disappears as it passes outwards; occasionally there are one or more transverse folds below it. Close to the middle line the gluteal sulcus will be found, in an average adult, three or four inches below the muscle, but, owing to the lower border of the muscle inclining downwards and outwards, while the gluteal fold extends transversely outwards, the two meet a little external to the middle of the lower border of the muscle, and then the fold passes on to the posterior surface of the muscle. The outer end of the lower border of the muscle reaches two or three inches lower down than the outer end of the gluteal fold." Mr. Symington shows this very prettily by fixing the fold to the deeper parts by pins, and then making a window through the skin both above and below it. He claims, moreover, that the fact can be demonstrated in the living subject. His theory of the production of the fold is essentially Luschka's, but he submits in addition that one factor is the prominence of the tuberosity of the ischium, and another the necessity of a fold in the skin behind the thigh to allow it to be flexed on the abdomen.

THE RELATIONS OF THE FISSURES OF THE BRAIN TO THE SURFACE.[2]

Mr. Hare offers a new method of determining the position of the fissure of Rolando. He has experimented on eleven heads by stretching a string over the vertex attached to pegs driven into the glabella and external occipital protuberance, then removing one side of the calvaria, and marking on the cord the position of the upper end of the fissure. He found that the distance from the glabella to the fissure was 55.7 per cent. of that between the pegs, of course, following the curves. The variations were slight, in no case amounting to one third of an inch, which is the more remarkable and important as the heads were of various shapes and sizes. The angle which the fissure makes with the median line ranged from sixty degrees to seventy-three degrees, averaging sixty-seven degrees. The parieto-occipital fissure was found in ten instances, on an average, five eighths of an inch in front of the lambdoidal suture. Its upper end, according to Mr. Hare, should be sought on the living subject one and seven eighths inches behind the top of the fissure of Rolando. The beginning of the fissure of Sylvius was found very constantly one and one eighth inches behind the external angular process of the frontal bone.

The author studied also the symmetry of the two halves of the brain. The fissure of Rolando was very symmetrical, that of Sylvius was symmetrical at its origin, but not throughout its course. The parieto-occipital fissure was much less regular. [We wonder, by the way, whether any part of the irregularity of the last-named fissure is at all owing to the blunder concerning it — emphasized by a foot-note — which has appeared in the recent editions of Gray's Anatomy.]

MOVEMENTS OF THE SHOULDER.[3]

We would call attention to a paper by Mr. Cathcart, of Edinburgh, on the movements of the shoulder girdle involved in those of the arm on the trunk, not so much by reason of its intrinsic importance, although it is valuable, as because it is a step in the right direction in the study of the actions of muscles. The actions of muscles are often deduced from their anatomical positions, or from the effect of stimulation, or by the study of paralyses, and though in this way we may ascertain tolerably accurately the action of individual muscles, we do not learn how many concur to produce any given movement, nor do we appreciate the relative importance of each. Mr. Cathcart has studied the question on the living model, and, indeed, on many. He pays a handsome compliment to Dr. Keen, of Philadelphia, who it will be remembered read a paper on this subject at the International Congress in London.

Mr. Cathcart points out that according to the usual teaching the action of raising the arm straight outwards as high as possible is divided into two stages: the first till it becomes horizontal, the second afterwards, and that we teach that in the first the humerus moves in the socket till it can move no more, and that in the second stage the shoulder girdle is raised, the scapula rotating at the same time. We omit his remarks on the action of the various muscles, and go on to his account of what actually takes place, which we give in part in his own words: —

"*First Stage.* It will be seen that while the arm is at rest the vertebral border of the scapula projects from the trunk, and that the venter is not closely applied to the chest wall, but that as soon as an effort is made to raise the arm the scapula is drawn more firmly against the ribs by the muscles passing to it from the trunk. When the arm in leaving the side reaches an angle of about 30°, the inferior angle of the scapula begins to rotate forwards, while the clavicle (best seen at the acromial end) moves upwards and backwards. From the beginning, the contraction of the deltoid and trapezius muscles can be seen and felt, as also that of the infra-spinatus, while that of the serratus magnus is with difficulty appreciated.

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[1] Journal of Anatomy and Physiology, vol. xviii., part 2, January, 1884.

[2] Journal of Anatomy and Physiology, January, 1884.

[3] Journal of Anatomy and Physiology, vol. xviii., January, 1884.

"*Second Stage.* The continued rotation of the scapula is at once evident, and on close examination it will be seen, that while the humerus moves with it at first, towards the end of the movement the scapula ceases to rotate, and the last part is performed by the humerus alone moving over the glenoid cavity; this will be rendered apparent if the direction of the spine of the scapula be compared with that of the humerus in the horizontal position and in the vertical above. The acromial end of the clavicle will be seen to rise and pass backwards, also to have a slight rotation on its long axis. The continued contraction of the trapezius, infra-spinatus, and deltoid muscles is apparent, while the increased contraction of the deltoid at its anterior part, and of the lower portion of the serratus magnus, is in each case perfectly clear."

Mr. Cathcart points out that the rotation of the scapula in the early part of the movement may be to some extent passive, that is to say, that it is drawn in part by the muscles passing from it to the humerus. He thinks that the movements of the clavicle lessen the strain needed to keep the body erect by bringing the weight of the arm more into line with the axis of the trunk. He says nothing of the action of the coracobrachialis, which Krause reckons as one of the muscles engaged in the movement when it is carried far, and it certainly seems plausible that it should act towards the end of the second stage.

THE VEINS OF THE PERINÆUM.[1]

Professor Tschaussow, of Warsaw, has made another contribution to the almost endless literature of the deep perineal muscles, which he has studied both by dissections and by microscopic sections. His results strike us as essentially similar to those of Holl, especially if we bear in mind that great regularity is not to be expected in the complicated web of fibres that surround the membranous urethra. Thus, although the work is undoubtedly good, we should hardly have noticed it had it not been for the part relating to the veins of the penis and to the mechanism of erection.

Dr. Tschaussow's experiments lead him to deny the old theory that these muscle serve "*ad refluentem sanguinem retardandum.*" He satisfied himself that the *tendinous* origin of the deep transverse perineal muscle is pierced by several of the *venæ profundæ penis.* He found that the plexus of Santorini has but little connection with the dorsal vein of the penis, depending chiefly on the internal pudic veins; which is quite opposed to Henle's statements. He found further that veins from the bulb of the urethra join the hæmorrhoidal plexus, and that the blood spaces in the corpus spongiosum and the corpora cavernosa communicate by short thin veins running between the latter and opening into the dorsal vein. The study of microscopic sections convinced him that few and small veins pierce the muscular layer, and that the rich plexus around the bulb runs chiefly into the trunk of the internal pudic and into the hæmorrhoidal veins. Thus the contraction of the muscles can have but little effect on the circulation.

The author made injections into the penis with the following results: An injection into the corpus cavernosum did not enter the corpus spongiosum nor the dorsal vein. An injection into the corpus spongiosum filled the dorsal vein very quickly but very little or none entered the corpora cavernosa. An injection into the peripheral end of the dorsal vein, however, filled both the corpora cavernosa and the corpus spongiosum.

The last of these injections demonstrates the communications between the dorsal vein and the other systems. If, therefore, when the corpora cavernosa are injected the vein remains empty it shows, according to Tschaussow, that the distended spaces compress the venous radicles, and this he believes is what occurs in erection. We hope the subject will receive further attention, for, convincing as these arguments appear, we are slow to accept views directly at variance with those of Henle.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

February 25, 1884. The President, Dr. Charles D. Homans, in the chair.

ANURIA FROM COMPRESSION OF THE URETERS BY CANCEROUS DISEASE.

Dr. Minot showed the specimen, which was taken from a woman fifty-three years old, who entered the Massachusetts General Hospital February 13th, and died February 21st. She was a widow; never had children or miscarriages. For about three years she had occasionally observed slight discharges of blood from the vagina. For the past six months there had been slight leucorrhœa, soreness above the pubes, frequent micturition, and occasional painful defecation. For four weeks there had been great thirst, polyuria, and itching of the arms and of the anus. She had lost much flesh and strength, but had been in bed only nine days. She was anæmic and sallow. Temperature 99.8° F., pulse 120, respiration 26. On the 14th she passed sixteen ounces of urine in twenty-four hours. This was examined by Professor Wood, who reported it as pale, specific gravity $1008\frac{1}{2}$, neutral, a slight trace of albumen, very large excess of bladder and vaginal epithelium, and also clumps and isolated large spindle-shaped and caudate cells, suggestive of morbid growth, a little blood and pus. On the 15th one ounce of urine was drawn by catheter, and from that time, during the remaining six days of her life, the patient passed no urine, except about two drachms with a dejection on the 18th. She vomited everything taken, and her breath had a urinous odor. The vomitus of the 20th, also examined by Professor Wood, was found to contain 6.7 grammes of urea to 912 cc. There was pain in the right flank. She retained consciousness to the last, although drowsy much of the time.

The autopsy, made by Professor Fitz, showed that the enlarged uterus filled the pelvis, and was adherent to the bladder and rectum and to the pelvic walls. The bladder contained half an ounce of turbid urine. On its posterior wall was an ulceration three quarters of an inch in diameter. The uterine cavity was four inches in depth; the os externum readily admitted the forefinger. The substance of the uterus was transformed into a uniformly opaque, white tissue, from which on pressure sebaceous-like plugs were squeezed. This change extended to the fundus, where there was a round, laminated nodule, easily crushed, but with no sebaceous-like plugs. The left ureter was dilated and tortuous, and obliterated for an inch and a half at the vesical end by means of a soft gray new formation. The left kidney formed a sacculated tumor of the size of the fist, only a thin seam of renal tissue being left. The right ureter was dilated, the vesical opening was of the size of a pin, and the course of the vesical end tortuous. The right kidney was half as large again as the left, its surface grayish-white, the cortex easily detached, increased in thickness, anæmic, not opaque; tubular regions indistinct; pelvis moderately distended. Lymph glands over promontory of sacrum enlarged to the size of an English walnut; on section white, and homogeneous, and numerous sebaceous plugs were squeezed out on pressure.

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[1] Archiv des Anatomie und Entwikelungcsgeschichte, 1883, Heft 4, 5, and 6.

An interesting feature of the case was the diagnosis of morbid growths by means of the microscopic examination of the urine; also the evidence of the partial elimination of urinary constituents by the lungs, and probably also by the mucous membrane of the stomach. The preservation of consciousness along with urinary suppression is remarkable, but not very unusual. Dr. Minot had before reported to the Society a similar instance. The treatment consisted mainly in the subcutaneous injection of pilocarpine, in the hope of relieving the kidneys through vicarious action of the skin. Dr. Minot showed two microscopic specimens kindly prepared by Dr. H. F. Vickery; one was taken from the enlarged glands in the lumbar region, and the other from the uterine tissue. They showed the characteristic alveolar structure of flat-celled cancer.

Dr. George F. Jelly read a paper on

CASES OF GENERAL PARALYSIS OF THE INSANE.[1]

Dr. Edes said that while the diagnosis of general paralysis was, as Dr. Jelly had stated, undoubtedly easy when characteristic mental symptoms accompanied, as in the cases reported, the bodily paralytic manifestations, he wished that Dr. Jelly had spoken more in detail of cases in which the diagnosis was difficult, and especially with reference to the possibility of the disease beginning and continuing for some time without delusions or melancholia.

He referred to the case of a man who had been rather a free liver, and whose general health rather deteriorated until he had a slight attack, characterized by a temporary aphasia and a just perceptible hemiplegia. He became better and worse, and again had a similar attack. His speech was indistinct, and his lips trembled, but there had never been any delusions whatever, and no greater melancholy than might be expected in a man who fully realized the seriousness of his case. He was rather inclined to be emotional, and often seemed ready to weep. His patellar reflex was exceedingly well marked, and there was ankle clonus.

Dr. Edes would like to hear the opinion of Dr. Jelly and Dr. Folsom as to this being a case of general paralysis.

Dr. Jelly stated that he intended saying in the paper that the diagnosis is easy when we have all the peculiar symptoms named, but that it is sometimes quite difficult. Mental symptoms generally precede those of muscular impairment. Where they do not he would await developments before making a positive diagnosis.

He did not mean that the post-mortem appearances which he described were found in all cases, but he thought those given were the ones most commonly found. There are none that are absolutely pathognomonic, so far as he can learn.

Dr. J. O. Green read a paper on a case of

INFLAMMATION OF BOTH TYMPANA AND BOTH LABYRINTHS IN SCARLET FEVER.

A girl aged ten years, never very strong, and who a short time before had an ill-defined illness, the diagnosis of which could not be ascertained, was seized fourteen days before with vomiting and other symptoms which developed a scarlet fever. For the first week the disease was not severe, and two brothers at the same time had the fever of a mild type. About the sixth day she was noticed to be deaf, and just before this spoke of very loud noises in the ears. In two or three days the deafness became total; no sound of other voices could be heard, nor her own, and the watch was heard neither on the ear, skull, nor when held between the teeth. At the same time the fever became very severe, and for several days the condition was such as to give much anxiety; there was no active delirium, and but very little complaint of pain in the ears. On the tenth day a discharge began from the left ear, and soon after from the right; this was composed of thin, very abundant clear serum, with a slight admixture of flakes of apparent pus. On the eleventh day the violence of the fever rapidly abated, the appetite returned, but the deafness remained the same. Throughout the disease the mucous membrane of the nose and pharynx was but moderately affected, and the tongue was never of the intense red so often seen.

On the fourteenth day of the fever, the ninth day from the beginning of the deafness, and the fourth or fifth day from the appearance of the discharge from the ears, I saw her in consultation on February 17, 1884.

Desquamation of the hands was just beginning; paresis of the left facial nerve was marked. Both meatuses were slightly excoriated by the discharge; each concha was filled with clear, limpid serum, which was removed with the syringe, as were also several large flakes of epidermis from the meatuses.

The left ear was inspected, but only a red mass of swollen tissue could be seen, without any of the usual landmarks. After thorough drying the serum was secreted so rapidly that but a momentary glimpse could be obtained. In the right ear was a similar mass of red swollen tissue, in the centre of which the manubrium of the hammer could be seen distinctly, and on the posterior wall of the meatus close to the tympanic ring were granulations bleeding to the touch. By Politzer's inflation no impression could be made on the ears. The child was then rapidly etherized in order to thoroughly explore and cleanse the tympana. In the left ear no traces of the membrana tympani or ossicles could be found, and the whole inner wall of the tympanum was distinctly carious. In the right ear the whole membrana tympani was gone, the swollen tissue was the inflamed tympanic mucous membrane, and the hammer was in its normal position but completely dissected out by the sloughing which had occurred. Both Eustachian tubes were catheterized, and the air passed freely with distinct whistles into the meatuses. The operation lasted scarcely five minutes, and the child came out of the ether rapidly and well with but slight nausea. Thorough douching with warm carbolic solution three times a day and Politzer's inflation once a day were advised.

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[1] See page 217 of this number of the Journal.

The case is interesting in several ways: First, from the involvement of both labyrinths as shown by the total deafness, the labyrinthine disease evidently occurring within two or three days of the first ear trouble, and probably being an inflammation secondary to the inflammation of the tympanum and an extension inwards of that inflammation; secondly, from the extensive caries which already existed on the ninth day after the first noticeable deafness.

Two or three other points are worthy of attention: Very loud noises were complained of before the deafness was noticed; in this case no description was given of them, but when loud "clashing," "ringing of small bells," or distinctly "musical notes" are heard during scarlet fever or cerebro-spinal meningitis, they are very apt to be the immediate premonitions of labyrinthine disease, whereas the subjective noises always accompanying acute purulent inflammation of the tympanum are described as "hissing," "singing," "buzzing," or "throbbing." In this case it will also be seen that the development of the ear-disease was accompanied by a great increase in the fever, and, in the absence of other reason, might be regarded as its cause, especially as the first discharge from the ears was followed the next day by a rapid abatement of the fever and of all the dangerous symptoms. The discharge in this case was almost entirely clear, limpid serum and the secretion more rapid than I have ever seen it. The usual serum of tympanic inflammation is wine-yellow; this was nearly as clear as water. In thinking of the case since, I fear that this may be a most serious symptom as indicating destruction of some of the membranes communicating with the labyrinth, and that the liquid is an escape of the labyrinthine peri- and endo-lymph. The few cases in which this has occurred, and of which I have seen one, show that the secreting power of the labyrinth is enormous, considering its size; all of these cases, however, with which I am familiar, were cases of injury, and not of inflammation.

The only means of differentiating labyrinthine fluid from the serum of an inflamed mucous membrane would be a chemical analysis which would show the absence of albumen in the labyrinth water.

The paresis of the left facial was undoubtedly due to the inflammation and caries of the left tympanum which had affected the Fallopian canal.

To a question by Dr. Minot, Dr. Green said that we have severe cases of disease of the ear in which the scarlet fever is light. On the other hand, severity of the disease by depressing the patient tends to enormous sloughs.

— A high official of England has resigned his post for the reason that while he had always hoped to die in office, he finds his failing health forbids. Such health as forbids one's dying is not so bad after all.

THE NEW YORK ACADEMY OF MEDICINE.

THE DIFFERENCES IN FORM OF THE ADULT HEAD.

At a meeting of the Academy held February 21st, Dr. John C. Dalton made an address on the above subject. A short time ago, he said, he had become interested in the method of comparing the differences in the adult human head which was afforded by the machines which hatters were accustomed to use for getting the exact size and shape of the heads of their customers at the level at which the hat was usually worn. He had secured a great variety of paper patterns representing different heads, and had been furnished with no less than 360 of these from one hat shop in New York. According to their shapes the heads were divided into medium, long, and round, heads. One hundred being taken as the standard of width, if the length were between 120 and 130, the head was a medium one; while if the length was under 120, it was a round one; and if over 130, a long one. In addition, the heads varied greatly in regard to the comparative width of the back and front parts and the symmetry of the two sides. Some, again, were perfectly curvilinear, while others presented angles and straight lines at some points.

Dr. Dalton now called special attention to eight of the paper patterns to which he had referred, which he had had hung side by side upon the wall. The first was regular in shape, presenting a curvilinear and comparatively symmetrical oval, which resembled in its general outline the section of an egg. The second presented a squaring of the front part of the head, there being a decided flattening of the temples. In many individuals there was actually a hollowing out of the head at the temples. In the third the square front was still visible, but the occiput was not rounded, as in the other two, but somewhat elongated. Consequently the long head was beginning to appear, instead of the medium, and in this instance the length was 135. In the fourth the extreme of elongation among all the heads whose outlines were taken was reached, namely, 153. In the fifth pattern, however, there was noted a round head, which was tolerably symmetrical, and had the proportion of 108 to 100 in its diameters. In the sixth the length was 117, and here the occiput was seen to be wider and the front part of the head narrower than in the others. Number seven was remarkable as being the most unsymmetrical of all, and in number eight the length was 128, while there was a very broad occiput.

The want of symmetry was one of the most prominent characteristics in almost all of them; although this was not always evident at a first glance. If, however, the pattern were doubled upon itself, the difference between the two sides at once became apparent. When this test was applied to all in turn, number six was found to be the most nearly symmetrical. Want of symmetry, then, was the rule; and the same thing, Dr. Dalton said, was true in regard to the brain. He had never yet met with a head or a brain that was perfectly symmetrical. In addition to other variations, the cerebellum was almost always more or less twisted as regards the axis of the cerebrum. But this was not surprising when it was remembered that no human face was symmetrical. Among other matters of interest connected with this subject was the fact that these diversities in the symmetry of the head were always in one direction. There was almost invariably a decided preponderance towards one side, which gave the head a certain amount of obliquity. Thus, if the occiput were flattened on one side, the temple would be found to be flattened on the other. In several cases a twist towards the left side was noted, and in nine out of twelve instances in which the head was perceptibly twisted the obliquity was towards the left, while in only three was it towards the right.

This seemed, at all events, to be true of heads in New York, and here there was also a decided preponderance of the long head. Dr. Dalton had found that sixty-four per cent. of the heads studied were medium, or with a long diameter between 120 and 130; ten per cent. round, or with a long diameter under 120; and twenty-six per cent. long, or with a long diameter of over 130. Consequently the long heads outnumbered the round ones in the proportion of two and a half to one. These differences between the two sides of the same head and between different heads were of interest also in connection with the hypothesis which was at the present time pretty generally accepted, that all parts of the brain did not have the same functions. The doctrine of cerebral localization recognized that the gray matter in some parts of the brain performed different nervous actions from that in other parts. There were motor centres and perceptive centres, and it was believed that this difference in function was connected with a difference in structure, the cells of the motor tract, for instance, being different from those of any other part in character and arrangement. From the external examination of a long head it might very naturally be supposed that there was a larger amount of gray matter in the cerebral substance than in a round one, because a long oval presented a surface of greater extent than a short one. This might, indeed, be true if the external surface of the hemispheres were smooth. On the contrary, however, we knew that the cortical layer of brain tissue was not smooth, but convoluted, and in the brain contained within a round cranium the fissures might be deeper and the foldings more numerous and complex than in one belonging to a long head. The shape also varied in other ways, as, for instance, a round head might be much deeper than a long one in a vertical direction, and, therefore, we could not conclude that because a head was round and compact the brain contained less gray matter than in the case of a long one. Still, again, the motor centres in two brains might be precisely the same in structure while the fissures might be deep and narrow in one, and shallow and broad in the other, so that there might be exactly the same amount of gray matter in the two, though their forms were entirely different.

These points were worthy of consideration, he thought, when it was remembered what differences in form might be due purely to external causes. In certain tribes of Indians it was well known that the head was compressed during infancy, and retained the distorted shape thus given it throughout life. Among the Chenook Indians the front part of the head was thus compressed, and among the Natchez the back part, yet as regards function there was no difference whatever between the brains in the two forms of heads.

Dr. Barker said that some fifteen or twenty years ago a great many papers had been written in the obstetrical journals in regard to the influence of parturition in forming the shape of the human head, and in connection with this subject he had instituted a series of inquiries in the lying-in department of Bellevue Hospital. The shape of the head immediately after birth and then again eight days later was noted by the members of the house staff in 132 infants during a service of nine or ten months. Dr. Barker then alluded to the compression, moulding, and change of shape which the head underwent in passing through the pelvis, especially in tedious labors, and said that in the case of left occipito-anterior positions of the vertex there was almost always a pressing out of the head towards the right on account of the space existing in the right oblique diameter of the pelvis, which permitted it to protrude in this direction, while in right occipito-anterior positions the bulging was towards the left. In consequence of this he could almost invariably tell simply by examining the head of a new-born infant, if he saw it within forty-eight hours after birth, whether the head had presented towards the left or the right. This applied only to anterior positions of the vertex, however, since in posterior positions the shape of the head was much changed by the rotation which it had to undergo. At the time referred to the question was discussed a great deal as to whether this compression during labor influenced the shape of the head permanently, and as to whether it affected the functions of the brain in after life. In the observations made at Bellevue Hospital it was found that the disproportion between the two sides of the head had almost always entirely disappeared by the end of the eight days, but in some instances this was more or less prolonged. There was another point to which he should like to call attention. If Dr. Dalton, ten years from now, were to present the outlines of the same heads, the diagram of which he had exhibited this evening, would they be precisely the same as at the present time? For himself he felt pretty sure that the form of the head changed more or less in adult life, and even at quite an advanced age, and this belief was founded on the fact that his hatter had found that his head had varied somewhat in shape from time to time.

Dr. J. Leonard Corning thought the paper of deep interest. The ideas that pressure upon a certain part of the head did not result in dwarfing and atrophy of the organs beneath, but simply in pressing them into a different location, and that form had not so much to do with the functions of the brain as the amount of surface presented by the gray matter, were certainly well worthy of consideration. As to the question of asymmetry, this was a point which had of late often been brought up in criminal trials to prove that the brain of the prisoner was not well balanced, especially in the case of Guiteau. Arguments to this effect based on the asymmetry of the head he believed were not supported by facts, and the investigations of Dr. Dalton showed that notwithstanding such extreme distortion as was caused by the custom in vogue among the Indians referred to the organs were preserved intact.

After a few remarks by Dr. David Webster, Dr. Dalton said that the idea of changes occurring in the adult head was entirely a new one to him, but as it was a well-known fact that other parts of the body changed very materially as life advanced, he did not see why this might not be the case with the head also. The twist of which Dr. Barker had spoken as occurring during labor no doubt disappeared, as a rule, shortly after birth; but in a few instances this obliquity probably remained permanently. As the result of his investigations he would say that we could not conclude from the existence of asymmetry in the cranium that there was a corresponding want of symmetry in the brain itself.

Dr. P. Albert Morrow then read a paper on

AN IMPROVED METHOD IN THE TREATMENT OF CERTAIN FORMS OF SKIN AFFECTIONS.

The method referred to was the application of various medicinal substances by means of fixed, adhesive dressings, such as collodion, gelatine, and gutta percha, which has received so much attention from dermatologists during the last one or two years, and the paper was discussed by **Drs. Bronson, J. C. Jackson**, and **Sherwell.**

FIRST AID TO THE INJURED.

Before adjournment **Dr. W. M. Carpenter** presented a resolution, which was adopted, giving the indorsement of the Academy to the Society for Instruction in First Aid to the Injured, which has been in existence for two years in New York, and which now proposes to extend its work to other parts of the country.

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MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

At a stated meeting of the Society held February 25th **Dr. William S. Halsted** read a paper entitled

THE EFFECTS OF ADDUCTION AND ABDUCTION ON THE LENGTH OF THE LIMB IN FRACTURES OF THE NECK OF THE FEMUR,

in which he contended that adduction or abduction always formed an important element in the length of the limb in these fractures, and that all statistics of measurements in which they were not taken into consideration were worthless.

The paper was discussed by **Drs. A. B. Judson** and **John A. Wyeth**, both of whom believed it was impossible to secure such exactness of measurement as the writer aimed at, and that the matter was not of as much practical importance as he claimed.

Dr. E. C. Spitzka then read a paper entitled

PATHS OF COÖRDINATION,

based on a case of pure unilateral ataxia without paralysis, which had been under his observation for several years, and in which there was found at the autopsy a secondary degeneration of the stratum intermedium, commencing about the lower third of the pons Varolii, just to the right of the median line, and crossing below the pyramids to the left side, where it extended for some distance down the cord. The symptoms and lesions were described with great minuteness, and the writer believed that the case threw a great deal of light on the tract concerned in the transmission of coordinating power.

The paper was discussed by **Dr. E. C. Seguin**, who thought that the results of physiological experiment were somewhat at variance with the conclusions of Dr. Spitzka.

COLLECTIVE INVESTIGATIONS.

Dr. David Webster, chairman of the Committee on the President's Address, reported that the committee had decided to recommend the carrying out of the President's suggestion in regard to collective investigations. They believed, however, that all abstruse subjects should be avoided, and only those considered which were of interest to every member of the profession. Intestinal obstruction was proposed as the first topic, and they recommended that to each member of the Society a printed slip should be sent by the secretary, requesting him to send in replies to the following questions, and to be present at the meeting of March 26th, when the subject would be publicly discussed: (1.) How many cases of intestinal obstruction have you treated, and what peculiar symptoms were manifested in each case? (2.) Have you ever performed an operation for the relief of intestinal obstruction due to peritoneal adhesions, and if so, what was the result in each case? (3.) Have you treated any cases of intestinal obstruction, partial or complete, where the so-called pathognomonic symptoms, such as stercoraceous vomiting and obstinate constipation, were absent? The recommendation of the committee was adopted.

THE REPORT OF THE DELEGATES TO THE STATE MEDICAL SOCIETY

was made by their secretary, **Dr. Dana**, who announced that three of the delegates had been elected permanent members of the State Society, namely, Drs. Lockrow, Gibney, and Lewis.

Dr. A. Jacobi, from the Committee on Hygiene, moved that the Society should give its official indorsement to

THE CHILDREN'S FACTORY BILL,

now pending in the Legislature. Adopted.

LICENTIATES IN MIDWIFERY.

Dr. P. C. Cole read the drafts of two bills which were to be brought before the Legislature, and moved that a resolution be passed to the effect that the Society approved of their general intent and object. The first was to incorporate the New York Maternity and School of Midwifery, for the instruction of women in midwifery and the giving of general clinical instruction in this department of medicine. The second was for the purpose of regulating the practice of midwifery in the State of New York. It provided that no person should practice midwifery unless a duly qualified practitioner of medicine or else a licentiate in midwifery. Licentiates in midwifery were required to receive at least six months' instruction and pass a satisfactory examination; though licenses could be granted also to such practicing midwives as should obtain a certificate from the Board of Managers of the New York Maternity and School of Midwifery. The penalty for infringement of this act, which was to be classed as a misdemeanor, was a fine not to exceed $1000. After some discussion, the whole matter was referred to a special committee of five, who were requested to report at the next meeting of the Society.

— A correspondent writes: "One man may steal a horse, while another may not look over a hedge; for example, the city may put heaps of unmixed salt over the numerous air or water covers in the streets (thereby causing holes in the ice, which endanger the lives and limbs of horses and their drivers, in addition to the other effects of salt), while a railway company may not put sand containing a fraction only of salt on their tracks without lawsuits and fines. Here 's official consistency for you!"

Recent Literature.

Voice, Song and Speech. A Practical Guide for Singers and Speakers from the Combined View of Vocal Surgeon and Voice Trainer. By Lennox Browne, F. R. C. P., Ed., and Emil Behnke. With numerous Illustrations by Wood Engraving and Photography. 323 pages. New York: G. P. Putnam's Sons. 1884.

There are few subjects which offer so many conflicting opinions as the questions relating to voice production. The volume before us, besides containing some original matter in regard to the formation of the registers of the voice, presents the views of one school, — in our judgment the correct one, — and is the joint work of a vocal surgeon and a vocal trainer, whose experience had convinced them "that wrong production of voice or abuse of its functions was the chief cause of most of the cases of vocal failure and even of throat disease," and "that the scarcity of fine voices generally acknowledged to exist was due less to dearth of material than to faults in its cultivation and exercise." The two chief faults are (1) attempting to use the voice with an insufficient amount of air or with imperfect control over the respiration, and (2) an undue forcing of the registers. How to avoid and correct these faults is explained in the chapters on the Hygienic Aspect of the Vocal Apparatus and on Voice Cultivation. These chapters consider in detail all the points bearing upon the care and preservation of the voice, and express the views generally held at present of the true methods for good voice production.

A voice register is defined as "a series of tones produced by the same mechanism," and the five registers into which the authors divide the human voice as a whole they claim are each produced by a distinct muscular mechanism.

The photographs of the larynx taken in the act of singing represent the glottic chink and the position of the vocal bands as they must always exist in the production of the respectively produced vocal tones. It is this portion of the book which relates to the photography of the larynx and soft palate which is of most interest to medical readers. The difficulties of photographing an object in such constant motion and so hidden from view as the larynx have at last been overcome, and the results contained in this volume are the most satisfactory of any yet obtained. One of the points brought out was the difference between the appearance of the arytenoid cartilages as seen in the photograph and that of the conventional image we are accustomed to see in books. This consisted in double outlines in the photograph, which were first considered to be a blemish, but was afterward determined to be due to the perspective view of the interior surfaces of the arytenoid cartilages.

Two photographs taken in the act of singing show the positions which the vocal bands assume in the upper thick and falsetto registers. In the "upper thick" they are approximated and everything is contracted, while in the falsetto the rima glottidis is open and all parts are loose and lax. The appearances in the other registers of the voice are represented by engravings. On ascending the scale and coming to the "thin" register there is nothing in the position of the vocal bands to distinguish the "thick" from the "thin" register. But by illuminating the larynx through the throat with a powerful light, as was done by Czermak, and then examining with the laryngoscope, it would seem that the vocal bands are in the "thin" quite transparent, while in the "thick" register they are opaque and bulky, "a difference brought about probably by a contraction of the vertical bundles of the thyro-arytenoideus externus." For the production of tones in the "small" register — the highest part of the soprano voice — the mechanism "consists in the formation of an oval orifice in the front part of the glottis which contracts the more the higher the voice ascends, the vocal ligaments being, in the hinder part, pressed together so tightly that scarcely any trace of a slit remains. No vibrations are here noticeable, while they are, on the contrary, so very marked in the anterior portion as sometimes to blur the outlines of the orifice to a considerable extent." The authors claim to have seen these appearances repeatedly in women as well as in boys. We regret that a photograph of this condition of things was not produced instead of the well-finished engraving which accompanies the text. Interesting and suggestive as are the authors' remarks in regard to the different ways the vocal bands arrange themselves to produce the different tones, we doubt if they will be accepted until verified by a large number of observations upon different individuals.

The series of photographs of the soft palate show the positions it assumes in the production of tones differing in pitch and quality. It rises with the ascending scale, and the quality of the voice depends upon the degree of tightness with which it closes against the posterior pharyngeal wall. In singing a high note with a pure quality the uvula contracts, the arch between the pillars of the fauces becomes higher and narrower, and the closure of the palate with the back of the pharynx is complete, while on producing the same note with a nasal quality the soft palate is relaxed, thereby allowing the passage of air through the nares, upon which the peculiar quality depends.

We agree with the authors in believing that their results should effectually silence objections to amputating the uvula or removing the tonsils when they interfere with the free action of the soft palate, which, as these photographs clearly demonstrate, is so important for good voice formation.

The book is written in a popular style, and is intended to be a complete manual for singers and speakers. As such we can recommend it as a safe and valuable guide.

A System of Human Anatomy, including its Medical and Surgical Relations. By Harrison Allen, M. D. Section V. Nervous System. Philadelphia: Henry C. Lea's Son & Co. 1883.

This volume confirms the high opinion we have already expressed of this work, and, moreover, strengthens our conviction that it is suited to the wants of the graduate rather than of the student of medicine. The anatomy of the brain is a most difficult matter to present, and we think that the distinguished author has been very successful, always with the reservation implied above, that the reader should be prepared by previous knowledge. It seems to us that the important subject of cerebral localizations in the cortex is rather lightly touched upon. We find nothing whatever of the relations of the convolutions to the skull, a very important chapter, which we hope will have a place in the final section of the work. The arachnoid is well described as separating the subdural and the subarachnoid lymph-spaces. The treatment of the peripheral nerves is very satisfactory. We are glad to find that the author recognizes twelve cranial pairs. The remarks on each nerve are very interesting, and contain much that is of practical value. Indeed, they constitute one of the charms of the book. The illustrations are good, but we own we should like to see a number of diagrams, which would help greatly in elucidating the anatomy of the brain. The volume offers throughout new instances of the learning and care of the author.

T. D.

Medical and Surgical Journal.

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THE RELATION OF LABORATORIES TO MEDICAL SCIENCE AND MEDICAL EDUCATION.

THE recent opening of the new biological laboratory of the Johns Hopkins University and the address then delivered by Professor Martin, in which he traces the rise and development of the laboratory as a revolution in and an aid to study within the past sixty years, and delineates somewhat the just expectations from the expansion of laboratory work in the future, offer an occasion which we must not neglect, to say a few words as to the relation of laboratories to medical science and medical education, especially as in a previous editorial we dwelt particularly upon the necessity of preserving the relative importance of clinical study pursued largely by laboratory methods, by methods yielding first-hand and not second-hand knowledge.

If our age in the world's history deserve any adjective at all it surely deserves the adjective progressive, and as we are in this age we also must be progressive, for the part may not rebel against the quality of the whole. Assuredly medicine has progressed, but to be with the time it must continue to advance higher and further. Now our advance as a profession depends very largely upon the teaching we get while students, for it is a matter of current observation that the active practitioner gradually falls behind as he grows older, his point of view is supplanted by a newer and better one, and he retains his preëminence only on the score of experience, which gives to his opinions a value which nothing else can insure. The practitioner may begin fully abreast with the knowledge of his time, freshly imparted to him by specialists, but he cannot remain abreast and practice too, and it is this which makes it a vital necessity to educate medical students to the highest medical level possible, for they will not rise with the elevation of medical science, save in rare exceptional cases. We must be honest about this, and conform our plans to the inevitable.

Let us admit, then, the antagonism between active practice and thorough acquaintance with the progress of medicine, and from this admission let us deduce the duty of educating medical students to the highest limit possible; it then still remains for us to decide how we may best fulfill our acknowledged duty. Now medicine is a scientific study, and in the methods of scientific teaching a vast improvement has taken place chiefly within the last quarter of a century. It has been recognized that the sciences deal with the things and occurrences by which we are surrounded, that a description of these facts by another does not constitute real knowledge, but that we know and can know only at first hand. The student must be brought face to face with the phenomena he is to study, he must have a personal acquaintance with the means by which a scientific law is demonstrated, and accordingly laboratories have been established for the instruction of students, at least in all the natural sciences. In these laboratories the student may make acquaintance with the facts and phenomena of nature. What is true of science at large holds also true of medical science; the chief improvement made in our time has been to secure to the student more direct and immediate contact with the facts of medicine; he works more in the dissecting room and physiological laboratory, and should also spend more time at the bedside of the sick. All our readers will doubtless acknowledge the value, or more than value, the imperative necessity of the most thorough and extended clinical instruction possible, and, as before said, we have recently had occasion to insist upon the importance of clinical teaching to the medical student. The clinics, with small classes, give of diseases that first-hand knowledge which laboratories afford of other departments; and, indeed, from this point of view the distinction commonly made in medical schools between laboratory and clinical instruction cannot be justified, where the term clinical is properly applied, however natural it appears as a matter of convenience. Nevertheless, for our present purpose, we accept the distinction, and wish to say a few words concerning the medical laboratories in the restricted sense.

The modern laboratory is a new thing, the invaluable culmination of that immense intellectual revolution which has nearly freed us from the thraldom of dead authority. Indeed, the progress of scientific education may be approximately measured by the number and character of the laboratories at its disposal. There is no more hopeful indication of the gradual elevation of our medical schools than is given by the improvement and multiplication of their laboratories. For a long time the anthropotomic laboratory, as Dr. Holmes with characteristic aptness has named the dissecting room, existed alone; all the other departments relied solely upon didactic instruction. Only in anatomy did the students get that direct practical training which was lacking in the other so-called scientific branches of medicine. At present new laboratories are organized from time to time, and especially for chemistry and physiology have many been recently formed. But even the best of our schools are still distant from the goal which must be attained before they can fully respond to the demands of thorough education, because each of the medical sciences needs its own laboratory, and until they are all provided for the goal will remain beyond reach. Anatomy may be granted the first claim, but the other claimants press quickly after it; physiology, chemistry, histology and embryology, pathology, experimental pharmacology, and hygiene, not one of them can do its best without its own large and expensive laboratory. We trust that it cannot be many years before every good medical school in the country will possess laboratories at least for physiology, pathology, and hygiene. For our own part we believe that hygiene is most unfortunately neglected in this country, and that no other addition to the current curriculums of our medical schools is so urgently needed as that of hygiene.

Our medical schools ought, however, to do something more than turn out so many diplomaed students per annum. Those, to be sure, that are carried on as commercial speculations for the financial benefit of the members of the Faculty, cannot be expected to sacrifice their profits to ideal aims, but the endowed schools ought to contribute to the promotion of medical knowledge, and offer ample facilities and hearty encouragement to investigators. In organizing their laboratories these latter schools should bear this higher duty in mind. The improvement of medical practice depends more largely than is perhaps commonly believed upon purely scientific researches, and it is indispensable to wise forethought to have in mind the duty of offering to those young men, who have the inclination and capacity, the opportunity to become investigators after a course of thorough training. This higher duty may be the more readily fulfilled because experience has amply demonstrated that instruction and investigation may be successfully and economically combined in one laboratory.

A good scientific laboratory, properly equipped for its double functions, is a far greater, more difficult, elaborate, and costly enterprise than is generally conceived. The fittings are necessarily numerous, varied, and expensive, even in those departments which need the very least; considerable space is required for the storage of the apparatus, and plenty of space and light for work, — we never heard of a laboratory that had too much room! The character and value of the laboratory will, however, be determined more by its officers than by all else, a fact amply exemplified by the first inspirations and the earlier work of the generation of physicists and biologists now passing off the stage. Perhaps we cannot better express what the officers should be and do than by the following extract from a recent editorial of *Science* upon laboratories: —

"The highest officer must be the responsible director, — a man of superior ability, extensive attainments, and prolonged experience; one, in short, who has mastered his department of science, knows its possibilities and deficiencies, and is, therefore, capable of judging what work is most feasible and instructive for students, and what problems are best adapted for investigation. It is sheer waste for a man of such high capacity to sacrifice his whole time to the arrangement of apparatus or the preparation of experiments for his lectures or his students; therefore it is desirable, we prefer to say indispensable, that he should have an assistant, preferably a young devotee of science, who will be fitted by his experience as an assistant to ultimately become himself director of a similar laboratory. The third person is the laboratory keeper (*diener*), who needs must be a man of some mechanical skill, so that the precious instruments may be safely intrusted to his care. He should be something more than a servant, and less than an assistant. A laboratory without this working force cannot do much for the promotion of science, although even more modest ones may be valuable for simple instruction. A first-class laboratory, and in Germany are many such, has always a larger number of officers. There are few persons among us who appreciate the magnitude of a scientific laboratory; were it otherwise there would not be so many petty substitutes for them."

A laboratory conformed to the high standard set must spend much money; therein lies the difficulty which prevents the immediate establishment of such, for our medical schools are not at all or insufficiently endowed, and have not the means wherewith to create the laboratories, however eagerly they may desire them. If there be any one who wishes to confer a great benefaction upon medicine and mankind by an endowment we should be very glad to see such a gift made for the support of a first-class laboratory at one of the accredited schools already existing.

Medicine, which is exclusively devoted to human welfare, has received in return but little from the generous in comparison with the liberal amounts bestowed for other purposes. The best form of gift would be without restrictions, but if the donor prefers to designate a special object his wisest choice, in our belief, would be, if the sum is *very large*, to found a hospital under the control of a first-rate school, or, if the sum is smaller, to endow a laboratory of physiology, hygiene, pathology, or histology, or such branch as he may elect, a biological institute being thus ultimately evolved.

PERIODICAL CHANGE OF COLOR OF THE HAIR.

A curious and apparently unique case of periodical change in the color of the hair is described by Dr. C. Reinhard in the last number of *Virchow's Archiv.* The subject exhibiting this interesting phenomenon was a female epileptic idiot, thirteen years of age, who was under careful observation at the Dalldorf-Berlin Asylum for two years. Very shortly after the reception of this girl at the asylum it was noticed that her hair, which was soft and thick, changed its color from time to time from a light yellow to a deep red, and back again. The process, beginning at the end of the hairs, was accomplished pretty rapidly — in two or three days, and each change remained seven or eight days. It was noticed that the changes of color were, in a general way, synchronous with the periodical changes in the psychical condition attendant upon the epileptic attacks, the dark color being assumed during the time of excitement and the lighter color during the succeeding period of stupor. These changes occurred in the same hairs, not being dependent upon the growth of new hair. There was no disease of the hair, nor of the scalp other than a slight dryness during the periods of stupor.

The writer, as the result of a careful consideration of this case from different points of view, supported by a thorough microscopical examination of the hair at various periods, and of the skin after death, advances as the most probable explanation of the phenomena described the occurrence of considerable and rapid changes in the amount of air contained in the hair shaft. The light color resulting from the presence of a larger quantity of air veiling the pigment, the darker color returning with the departure of the air. To these results the greater dryness and roughness of the hair, although slight, at certain times probably contributed in some degree by altering the refraction of the light, the drier the hair the lighter the color.

The presence of an abnormal quantity of air in the hair is the explanation offered for those cases in which a permanent and sudden change from dark to gray or white hair is reported, and notwithstanding Hebra's and Kaposi's dissent the occurrence of such is well established by Charcot, Bichat, Lélois, Raymond, and other trustworthy authorities, the last of these recording a case in which, apparently in consequence of severe neuralgia of the head, a patient's hair turned, in five hours, from black to white, passing through an intermediate stage of red. Landois describes one of these cases in *Virchow's Archiv*, April, 1866, and Wilson credits these sudden changes as authenticated. In these cases of permanent change some other influence than the mere increase of air must come into play, and it is probable that trophic nerve changes contribute to the result in the cases of sudden and permanent change, as also in the singular case of our author, the changes in the first class of cases being carried to an irreparable point.

The air may penetrate the hair shaft from the atmosphere or may have its origin from the gases present in the blood, and probably may be drawn from both sources. However acceptable these hypotheses may prove to account for the facts recorded, and in regard to which it would seem that there can be no question, the facts themselves may be fairly used to emphasize the following conclusions: (1) Trophic disturbances in the domain of the nerves supplying the scalp may accompany other cerebral phenomena; (2) these trophic disturbances may extend even to the hair; (3) such disturbances may, like many other nervous processes, assume a periodical character; (4) the attendant changes in the hair manifest themselves by a loss of color; (5) the same phenomenon also probably depends upon an abnormal storing up of air, and, as this case shows, may be transitory.

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NEW NATIONAL PHARMACOPŒIA.

THE bill providing for the preparation of a new pharmacopœia, to which we referred in a late issue, attracts no little attention, and the comments are by no means favorable to the introduction of a new standard. The *Medical News*, of Philadelphia, returns to the charge, however, in a manner which does it little credit. It opens its last editorial on the subject as follows: "The proposition for a national pharmacopœia appears to meet with general professional commendation, and the only unfavorable criticism which we have seen is based on trivial grounds or on erroneous views of the power of Congress in the premises." As the only favorable comments are found in the *News* itself and the *Journal of the American Medical Association*, we fear that the *News* does not take great pains to learn the views of others. Whether the *News* acquaints itself with the views of others or is satisfied with its own is a matter of slight importance, but both the manner and the matter of its plea for the bill are noticeable. The editorial mentioned closes as follows: "The authority granted to that body (Congress) does not extend to fixing a standard of drugs and preparations which shall be imperative on the medical and pharmaceutical professions. It can, however, provide a standard for its own departments, and this is all that Mr. Randall's bill proposes to do. If, as is to be expected, that standard should prove free from the imperfections of the existing Pharmacopœia, the latter would be naturally superseded; but, in any case, it would be for the professions to determine which of the two should be recognized."

That is exactly the reason for the strongest opposition: Congress cannot fix a standard which is imperative on the profession, and as to the departments, we showed in a recent editorial that the existing Pharmacopœia had been already adopted by the Treasury Department, and by several States as a legal standard. Further action of this sort is easy, but in the choice between the professional and the proposed Congressional Pharmacopœias confusion must inevitably result.

The *American Druggist* makes the following contribution to history: —

"It is rather remarkable . . . that, when Dr. E. R. Squibb proposed, a few years since, to change the method of organizing the Convention so as to place the revision of the work, practically, under the auspices provided for in the above act (Randall's bill), the leading opponents of the plan were Philadelphians, and that their principal effort was to show that the plan already in operation is the one to be preferred. The Convention of 1880 was called, and the subsequent revision was conducted accordingly; but the

Convention adopted measures which reformed the methods of revision and removed the control of the work from Philadelphia. It becomes, therefore, of interest to inquire whether the 'change of base' manifested in the 'City of Brotherly Love' can have any relation to the acts of the Convention of 1880."

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MEDICAL NOTES.

— M. Perier, at l'Hôpital St. Antoine, has used for some years with good effect (*Journal de Médicine*, January, 1884) an aqueous solution of chloral, 1–100, for wounds involving the buccal cavity. The sedative action of the drug is added to its antiseptic effect. It should be employed after every ingestion of food, even of milk or bouillon, for the residue of such substances, undergoing fermentation, has an unfavorable action on the raw wound. In cases of fistulous tracts following necrosis the use of this solution by means of the irrigator is found to relieve all fetor, thereby increasing the appetite, and to have a prompt action on the pain and inflammation. Details are given of a gun-shot wound carrying away the whole of one cheek which healed very kindly under the chloral irrigations.

— Dr. Samuel Wilks, senior physician to Guy's Hospital, writes to the *Medical Times and Gazette* (February 9th) commending a recent paper by Dr. Matthews Duncan on Vicarious Menstruation and Amenorrhœa, and protesting against the belief in vicarious menstruation as an "old-wives' fable." He has never seen a case, and considers that the references to the subject in the text-books are a mere repetition of groundless traditions. He also declares against the use of the term amenorrhœa as referring to a substantive complaint. "For my own part," says he, "I know nothing of such a disorder, nor of such remedies as emmenagogues. I believe myself that amenorrhœa, like many other complaints, is the remnant of a popular delusion, and if so it should be eradicated, like the other disorder, from the medical minds.

— The London Society of Compositors has called the attention of the trade to the excessive mortality prevailing among the members of their craft. In the quarterly journal of the Union, *The Printer*, statistics are given concerning funeral allowances, which for the year amounted to seventy-four. Out of this number twenty-two compositors died from phthisis, and thirteen from bronchitis, etc., thus giving a total of thirty-five deaths out of seventy-four due to diseases of the respiratory organs. The causes to which this mortality is ascribed are the irregularity of the hours of work, and especially the lack of ventilation in the composing rooms. These things, however, do not seem sufficiently peculiar to the printer's trade to account for such a large mortality, nor do we know that as a class these workmen are personally especially careless. The limited figures given are not enough to base a general conclusion upon, and perhaps observation among American compositors would not show any worse results than among other in-door workers.

NEW YORK.

— The official report of the annual collection and distribution by the Hospital Saturday and Sunday Association for 1883 has just been published. The sum total of the collection was $42,803.69, against $30,681.52 the year previous, showing an increase of over $12,000. Of this, $27,040.50 was contributed by the churches and synagogues, and of this latter sum the Protestant Episcopal Church alone contributed $12,962. The Presbyterians came next, with $6,715.50, an amount just double that contributed by them in 1882. The Jewish synagogues gave $1,693.99, and the only other denominations giving over $1000 were the Reformed (Dutch) and Methodists. Sixty-nine Protestant Episcopal Churches contributed, against forty-nine in 1882; thirty-five Presbyterian, against seven in 1882; and thirty-seven Methodist, against seven in 1882. Ten thousand seven hundred and thirty-five dollars and sixty-eight cents was designated to particular institutions through churches and other sources, and the remaining sum (less about $3000 for expenses) was distributed to nineteen hospitals. Of these, the Mount Sinai Hospital gets the largest amount, $4,580.57, as affording the greatest number of days of hospital care for free patients for the year. The German Hospital receives $3,628.23, St. Luke's $3,323.14, the Presbyterian $2,321.82, and the Hospital for the Relief of Ruptured and Crippled $3,718.47.

CHICAGO.

— The graduating exercises of the forty-first annual course of lectures of Rush College were held at Central Music Hall on the 19th ult. One hundred and sixty-seven gentlemen received the degree of Doctor of Medicine. On Dr. A. L. Justice the honorary degree was conferred. Dr. Justice lives at El Paso, Texas, and is well and favorably known in the Western States, he having practiced for a considerable time at Denver, Col. Prof. Norman Bridge delivered the doctorate address at the commencement exercises. The alumni of the college, to the number of about four hundred, were entertained in the evening at a banquet given by the Faculty at the Grand Pacific Hotel.

— At the annual meeting of the Alumni Association of Rush College, held on the same day, Dr. William Fox, of Milwaukee, was elected president for the ensuing year. The Committee on Prize Essays reported that no essay had been received which in their judgment was worthy of either the first prize of $100 or the second of $50. They recommended, however, the essay entitled Inhibitory Forces for honorable mention. The Association voted to offer, instead of the two prizes heretofore offered, one of $500 for the best essay embodying original investigation, by an alumnus of the college; essays to be presented to the committee by or before February 1, 1886.

— The medical staff of the Charitable Eye and Ear

Infirmary have established a school of ophthalmology and otology for practitioners. Its courses of instruction will be four weeks in length, thus corresponding to the practitioners' courses at the colleges. The clinical facilities of the infirmary are unexcelled. More than a hundred out-patients come to the dispensary for treatment each day, and there are nearly a hundred resident patients. The fee for the course is twenty dollars.

Correspondence.

LETTER FROM BALTIMORE.

Baltimore, *February* 28, 1884.

Mr. Editor, — As some months have elapsed since a letter from Baltimore has appeared in the Journal, perhaps a brief account of the most important medical events which have occurred in that city during the interval will not be uninteresting to your readers.

The health of the city has, on the whole, been better than that of last year for the same time, and we have had no epidemics, unless a mild type of measles, which has been very prevalent here during the last three or four months, may be called epidemic. The secretary of our city Board of Health says it may not.

Our *four* medical schools (to which number a *fifth* has recently been added) began the session of 1883–1884 with about the usual number of students, and in a few weeks that goodly number of American physicians already dispensing good (or evil) will be increased by some three hundred or more "doctors of medicine."

The *fifth* school, to which reference has been made above, was chartered under the title of The Baltimore Polyclinic and Post-Graduate Medical School. Its *raison d'être* is the fact that the four medical schools previously in existence require for graduation attendance on but two sessions of lectures (of less than six months each in the University of Maryland and the College of Physicians and Surgeons, and less than nine months in the Baltimore Medical College and the College for Women), and none of these schools offer special facilities for post-graduate students. Indeed, the classes of under-graduates at the two schools which are connected with hospitals and large dispensaries are so full, and the time of the students so closely occupied by the didactic lectures, not to mention dissecting and parallel study, that individual clinical observation is well nigh impossible.

The incorporators of the Polyclinic do not intend to confer diplomas, but to supplement the instruction given by the other schools in order to attract to Baltimore some of that large number of physicians, notably from the South, who go for post-graduate advantages to New York or Philadelphia when not deterred by distance from going anywhere. The following are the professors and their departments: Alan P. Smith, surgery; J. Edwin Michael, genito-urinary surgery; B. B. Browne and T. A. Ashby, gynæcology and obstetrics; Samuel Theobald, diseases of the eye and ear; H. Clinton McSherry, diseases of the throat and chest; Robert B. Morison, dermatology and syphilis; Randolph Winslow and John W. Chambers, operative surgery; T. Barton Brune, practice of medicine; William A. Moale, orthopædic surgery; Thomas S. Latimer and Ferdinand E. Cleatard, diseases of children. Diseases of the nervous system and pathology are not yet represented, but are expected to be in a short time. Many of these gentlemen are connected with one or more of the other schools, so that the Polyclinic will not be considered by them "a rival in the field."

During November and the early part of December Dr. Billings delivered, in Hopkins Hall, a very interesting series of lectures on Municipal Hygiene. The lectures were given under the auspices of the Johns Hopkins University, and were intended for the students of the university, physicians, and the general public. In forming his statistics regarding the healthfulness of Baltimore and the expectation of life of its inhabitants, Dr. Billings took as a basis for calculation the United States, and not the city police, census. Of course, therefore, his conclusions are somewhat different from those of the city Board of Health, which latter, as you, Mr. Editor, remember, are based upon the police census, and re-enforced by certain curious and ingenious methods of enumeration. He states that the mean-after-life-time of a white male infant born in Baltimore is but little over thirty-six years, and of a colored male infant only twenty-one years.

In an amusing way he ridiculed the present ward boundaries, which he thought were entirely worthless (except, perhaps, from a political point of view), and showed that they would much impair the value of the ward sanitary statistics.

One of the subjects, to which he devoted nearly the whole of two lectures, and which is particularly interesting to Baltimoreans, was that of sewerage.

We have in Baltimore upwards of 60,000 cess-pools, and our soil is pretty well honeycombed and polluted by them. How to abolish these and establish a first-rate system of sewerage, without undue expense, is the most important sanitary question with which we, at present, have to deal. Dr. Billings, after mentioning the objects and principles of sewerage, spoke in a general way about some particular systems, especially those of Waring, Liernur, and Berlier. Of the latter he said it had but recently been introduced into Paris, and it was too soon to speak of its merits. He spoke approvingly of Colonel Waring's system, and mentioned the advantages which a separate has over a combined system. He also said it was the urgency of the occasion and the cheapness of the Waring system which had occasioned its adoption for Memphis. The Liernur plan he considered had some merits, but it "is a very costly one, both for construction and maintenance, . . . and it is condemned by the leading engineers of England, France, Germany, and America." His opinion has the more weight because it is in accordance with the views expressed by Colonel Waring and City Engineer Latrobe, at the State Sanitary Convention, held in this city the 21st and 23d of last November; and because it is directly opposed to the opinion of Dr. Chancellor, the secretary of our State Board of Health. The latter, some eighteen months ago went to Europe, to investigate sanitary matters, and came back very much impressed with the advantages of Captain Liernur's system of sewerage; so much so, that at the last annual meeting of the State Medical and Chirurgical Faculty he read a paper in which he warmly praised this system, and spoke of it as "destined to supersede all other systems now in vogue." In answer to the views of Dr. Billings and the other above-mentioned gentlemen he has published quite a lengthy article in the *Mary-*

land Medical Journal for December 15th last. This question of the best system of sewerage and the necessity for increasing the powers of the State Board of Health and establishing local boards throughout the State, as well as several other topics of less local interest, were considered at the Sanitary Convention mentioned above. This convention was composed of physicians prominent in the State, engineers, and others interested in sanitary matters. Its proceedings have been published in full in the Fifth Biennial Report of the State Board of Health; and, inasmuch as the practical outcome of the meeting has been the drafting of certain laws to be submitted to the Legislature now in session, it would be better to make them the subject of a future communication than to add an abstract of them to what, I am afraid, is an unduly long letter.

Before concluding, however, allow me to summarize briefly a striking report of ninety-nine lithotomies performed by Dr. Caleb Winslow of this city. This report has been published in full in the *Maryland Medical Journal* for the 23d of this month, but it seems to deserve an even more extended notice.

Of these operations ninety-eight were successful, one unsuccessful; in the latter case the patient, a negro, aged eighteen years, died from dysentery and peritonitis. Of those operated on ninety-eight were males, one a female; seven were adults, ninety-two children; the oldest was seventy years, the youngest three years; ninety-three were whites, six blacks. The number of stones removed was 109, three being the largest number removed from any one person. Stone recurred in but one case, in the patient aged seventy years, and it was successfully removed.

His method of operating was the left lateral. At times a bilateral incision was made to facilitate the removal of large stones. In the female case a stellar incision was made into the urethra, and this was dilated, a large stone being removed. The instruments used by him were curved staff, with gorget eight times, with scalpel ninety-one. Most of the stones were removed entire, a few had to be crushed. One measuring four and a half inches in its shortest, and five and a half in its longest, diameter was removed entire. The weight and dimensions of other calculi are not given.

The larger number of these operations were performed in eastern North Carolina and within a period of eighteen years, and before the development of Bigelow's operation.

Very respectfully, B.

A PLEA FOR CONSISTENCY.

Mr. Editor. — Can you tell me why it is, now that so many of the great nations are adopting the weights and measures of republican France, that the world continues to be disgraced by a division of time so absurd as that which has come down to us from the dark ages of antiquity? Why should civilized humanity reckon twelve months to each year simply because a lot of Chaldees and Egyptians chose to reckon twelve arbitrary signs to their zodiac? Why split the day into twelve hours and each hour into five times twelve minutes and seconds merely because these same primitive star gazers saw fit to carry out their whimsical subdivision to this extreme length? Why, finally, should a man worship God just one day out of seven because the ancients happened to be acquainted with only just that number of planets? Yet such is the system under which we all live and die to this hour.

They managed these things so much better in France, in the early days of the first republic, when the philosophers and emancipators had it all their own way, before the "*rois conjurés*" of Europe stepped in and delivered them up again to the tyranny of established usage!

You remember well, Mr. Editor, the history of the republican calendar, that brilliant effort of the human reason to free itself from the trammels of traditional superstition; its *decimal* Sunday, its scientific nomenclature, its commemoration of the heroes and philosophers of every age. Why did it die? Why do we not revive it and place it side by side with its twin sister the metric system as an example and model for future generations? Certainly they are both of a piece, and one is as philosophical and worthy to be adopted as the other. W.

Miscellany.

THE AMERICAN PRACTITIONER ON THE LOUISVILLE MEDICAL COLLEGE.

The February issue of the *American Practitioner* contains an article by one of its editors, Dr. David W. Yandell, to which those who are interested in maintaining any professional or educational medical standard in this country are particularly referred. The practices there exposed, if truthfully reported, — and we see no reason to doubt it, — make, at this distance, very unpleasant reading, and in Louisville itself can hardly result otherwise than in degrading both the teachers and the students directly concerned in them.

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INOCULATION OF TUBERCULOSIS.

At a recent meeting of the Académie de Médecine, M. Verneuil related the following history: In July, 1877, a house surgeon (interne) at the St. Eugénie Hospital, who performed all the post-mortem examinations, one day noticed a papule at the base of the nail of his third finger. The apex presented a white spot, and a few drops of pus escaped from it. It was frequently cauterized, but the phalanges became attacked, and a cold abscess spread over the back of the hand. After three years' treatment, having failed to produce any improvement, M. Verneuil amputated the finger. The house surgeon was believed to be cured, and practiced in the provinces. Quite recently he has been again attacked by cold abscesses in the lumbar region, causing intense pain; during violent attacks of pain the arms exhibit clonic convulsive movements. M. Verneuil has operated a second time. He is convinced that his patient became inoculated with tuberculosis when performing a necropsy. A similar misfortune happened to Laennec. One day, when operating on a tuberculous patient, he slightly cut himself with a saw. A swelling appeared on the wounded part. Laennec cauterized it with antimony-chloride. The swelling disappeared, but twenty years subsequently he died from tuberculosis. — *Paris Corr. Brit. Med. Journal.*

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 23, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Typhoid Fever.
New York	1,340,114	592	209	15.81	19.72	5.95	2.04	.68
Philadelphia	927,995	379	137	15.86	7.54	8.08	3.28	2.86
Brooklyn	644,526	238	90	9.89	18 06	4.30	1.72	.43
Chicago	632,100	201	91	24.01	13.72	8.33	4.41	4.41
Boston	423,800	170	46	9.44	21 24	3.54	1.18	1.77
Baltimore	408,520	176	80	19.25	11.40	2 85	.57	—
St. Louis	400,000	126	42	18.96	15.80	8.69	—	.79
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	140	31	21.42	4.28	1.43	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	92	36	17.44	16.35	2.18	5.45	2.18
Pittsburg	180,000	80	34	8.75	32.50	2.50	2.50	2.50
Milwaukee	142,400	45	26	20.00	11.11	8.88	2.22	8.88
Providence	119,405	38	14	10.52	13.15	5.26	—	2.63
New Haven	62,882	33	16	12.12	3.03	6.06	3.03	—
Nashville	54,400	22	4	—	22.70	—	—	—
Charleston	52,286	34	10	11.76	14.70	—	—	8.82
Lowell	71,447	25	5	16.00	16.00	—	—	—
Worcester	69,442	25	13	24.00	12.00	4.00	—	8.00
Fall River	62,674	24	9	8.32	29.12	8.32	—	—
Cambridge	60,995	21	8	14.28	14.28	9.52	—	—
Lawrence	45,516	22	4	4.54	—	—	—	4.54
Lynn	44,895	8	3	12.50	—	—	—	—
Springfield	38,090	11	6	27.27	—	27.27	—	—
Somerville	31,350	9	2	—	11.11	—	—	—
Holyoke	30,515	10	7	30.00	10.00	—	—	10.00
New Bedford	30,144	6	1	16.66	—	16 66	—	—
Salem	29,503	11	3	—	—	—	—	—
Chelsea	24,347	10	4	10.00	20.00	—	—	—
Taunton	22,693	6	3	—	16.66	—	—	—
Gloucester	21,400	7	0	14.28	28.56	—	—	14.28
Haverhill	20,905	3	0	—	—	—	—	—
Newton	19,421	6	1	16.66	—	—	—	—
Brockton	18,323	3	0	—	—	—	—	—
Malden	15,273	3	1	—	—	—	—	—
Newburyport	13,947	8	2	—	12.50	—	—	—
Fitchburg	13,433	2	1	—	—	—	—	—
Massachusetts towns	316,954	66	16	12.16	—	9.12	—	—

Deaths reported 2652 (no reports from Cincinnati and Buffalo): under five years of age, 1055: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 386, lung diseases 384, consumption 374, diphtheria and croup 145, scarlet fever 50, typhoid fever 47, measles 31, diarrhœal diseases 29, cerebro-spinal meningitis 25, malarial fevers 24, small-pox 20, whooping-cough 12, erysipelas 12, puerperal fever 11. From *measles*, Baltimore 12, New York six, District of Columbia five, New Orleans and Nashville three each, Chicago two. From *diarrhœal diseases*, New York 11, Chicago four, Brooklyn, Baltimore, St. Louis, and New Orleans three each, Lowell and Cambridge one each. From *cerebro-spinal meningitis*, New York five, Philadelphia, Lowell, and Worcester three each, Chicago and St. Louis two each, Boston, Charleston, Lynn, Holyoke, and Newton one each. From *malarial fevers*, New York 12, St. Louis four, Baltimore and New Orleans three each, Brooklyn two. From *small-pox*, New Orleans 17, Philadelphia, Nashville, and Holyoke one each. From *whooping-cough*, New York three, Boston two, Philadelphia, Brooklyn, Chicago, Baltimore, St. Louis, Pittsburg, and Chelsea one each. From *erysipelas*, New York, Chicago, New Orleans, and District of Columbia two each, Brooklyn, Boston, St. Louis, and New Haven one each. From *puerperal fever*, New York and Chicago three each, Philadelphia, Brooklyn, Boston, St. Louis, and Providence one each.

Three cases of small-pox were reported in St. Louis; diphtheria 20, scarlet fever 48, typhoid fever seven, and measles one in Boston; scarlet fever 14 and diphtheria four in Milwaukee.

In — cities and towns of Massachusetts, with an estimated population of 1,411,763 (estimated population of the State 1,955,104), the total death-rate for the week was 16.72 against 16.28 and 19.26 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending February 2d, the death-rate was 20.5. Deaths reported 3448: acute diseases of the respiratory organs (London) 367, whooping-cough 126, scarlet fever 101, measles 75, fevers 38, diphtheria 36, diarrhœa 29, small-pox (Birmingham seven, Liverpool three, Sunderland two, London and Wolverhampton one each) 14. The death-rates ranged from 13.1 in Derby to 28.1 in Oldham; Leicester 14.9; Bradford 18.4; Liverpool 19.2; Blackburn 19.4; Sheffield 20.3; Nottingham 20.6; London 20.7; Manchester 23.9; Newcastle-on-Tyne 24.1; Leeds 24.9. In Edinburgh 22.8; Glasgow 23.6; Dublin 29.7.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending February 9th, the death-rate was 20.6. Deaths reported 3466: acute diseases of the respiratory organs (London) 347, whooping-cough 124, scarlet fever 94, measles 53, fever 44, diarrhœa 35, diphtheria 28, small-pox (Birmingham nine, London four, Liverpool and Sunderland three each, Wolverhampton and Manchester one each) 21. The death-rates ranged from 15.3 in Wolverhampton to 27.9 in Manchester; Blackburn 19.4; London 19.5; Birmingham 19.6; Nottingham 20.3; Leeds 21.4; Sheffield 22.1; Liverpool 23.3; Newcastle-on-Tyne 23.8; Leicester 24; Birkenhead 24.1. In Edinburgh 22.2; Glasgow 26.7; Dublin 30.

For the week ending February 9th, in the Swiss towns, there were 39 deaths from consumption, lung diseases 28, diphtheria and croup 12, diarrhœal diseases 10, whooping-cough three, measles one, small-pox (Winterthin one) one. The death-rates were at Geneva 18.3; Zurich 15.8; Basle 14.7; Berne 27.8.

For the week ending February 2d, in the Swiss towns, there were 32 deaths from lung diseases, consumption 20, diarrhœal diseases 16, whooping-cough seven, diphtheria and croup six, measles, scarlet fever, puerperal fever, and typhoid fever two each, small-pox one. The death-rates were, at Geneva 22.4; Zurich 13.8; Basle 18.6; Berne 24.4.

The meteorological record for the week ending February 23d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Feb., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 17	30.249	34	39	29	94	96	100	96	S	E	NE	4	6	11	O	R	R	—	—
Mon., 18	29.823	36	40	34	100	89	94	94	N	NE	NE	15	15	10	R	R	O	—	—
Tues., 19	30.208	30	35	26	88	88	100	92	NE	NE	SE	15	20	10	O	O	S	—	—
Wed., 20	29.675	32	54	25	100	80	70	83	SE	NW	NW	21	24	25	R	O	C	—	—
Thurs., 21	30.155	28	34	17	61	83	90	78	NW	S	SW	15	9	9	O	C	C	—	—
Fri., 22	30.200	29	39	24	73	78	94	81	W	SE	S	10	16	8	C	C	O	—	—
Sat., 23	29.606	32	41	20	100	100	75	92	NW	NW	NW	5	14	28	R	S	C	—	—
Mean, the Week.	29.988	32	54	17				91										63.04	1.99

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OBITUARY.

Dr. George Engelmann, the oldest practitioner in St. Louis, and the father of Dr. George J. Engelmann, died of pneumonia on February 4th, in the seventy-sixth year of his age. He was born in Frankfort-on-the-Main in 1809, and came to the United States in 1832, after having received his education at the Berlin, Heidelberg, and Würzburg Universities. He was one of the founders of the Western Academy of Science in 1836, and, later, one of the originators of the St. Louis Medical Society. In 1856 he was largely instrumental in founding the St. Louis Academy of Science, and was for many years president of that body. He had a high reputation as an authority in botany, and for forty-seven years he made it a part of his occupation to take meteorological observations several times a day, and only discontinued this practice two days before his death.

Dr. John Hutton Balfour, Emeritus Professor of Medicine and Botany in the University of Edinburgh, Regius Keeper of the Royal Botanic Garden, and Queen's Botanist for Scotland, is dead at the same age, seventy-six. He was a member of many learned societies, both at home and abroad, and was the author of a variety of books and articles on botany, including the Manual of Botany and Botany and Religion.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM FEBRUARY 22, 1884, TO FEBRUARY 29, 1884.

Brown, Joseph B., lieutenant-colonel, and **Billings, John S.**, major, surgeons, directed to attend the International Health Exhibition in London, and, as delegates, the International Medical Congress at Copenhagen, to be held in May and August next, respectively; also to include Berlin in their route to or from Copenhagen, and to be governed by special instructions from the Surgeon-General in complying with this order. S. O. 44, paragraph 8, A. G. O., February 21, 1884.

Woodward, Joseph J., major and surgeon. Leave of absence still further extended six months on account of sickness. S. O. 44, paragraph 11, A. G. O., February 21, 1884.

Horton, S. M., major and surgeon. Having reported at these headquarters, from leave of absence, ordered to Fort Hays, Kansas, for duty. S. O. 40, paragraph 2, headquarters, Department of Missouri, Fort Leavenworth, Kansas, February 20, 1884.

Patzki, Julius H., captain and assistant surgeon. Leave of absence extended one year on surgeon's certificate of disability, with permission to go beyond sea. S. O. 43, paragraph 9, A. G. O., February 20, 1884.

Maddox, T. J. C., first lieutenant and assistant surgeon. Assigned to temporary duty at Meyer's Springs, Texas. Per post orders, No. 27, paragraph 1, Fort Clark, Texas, February 13, 1884.

Dietz, William D., first lieutenant and assistant surgeon. Assigned to temporary duty at U. S. Military Academy, West Point, N. Y.

Phillips, John L., first lieutenant and assistant surgeon. Assigned to temporary duty in Department of the East

Meams, Edgar A., first lieutenant and assistant surgeon. Assigned to duty in Department of Arizona.

Kneedler, William L., first lieutenant and assistant surgeon. Assigned to duty in Department of Dakota.

Black, Charles S., first lieutenant and assistant surgeon. Assigned to duty in Department of Texas.

S. O. 46, paragraph 1, A. G. O., February 25, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MARCH 1, 1884.

Whitaker, H. W., assistant surgeon, from the Portsmouth, and on sick leave.

Green, E. H., passed assistant surgeon, from Museum of Hygiene, and waiting orders.

Death. — Died, at Lawrence, Mass., February 10, 1884, Michael Roberts, M. D., M. M. S. S.

Suffolk District Medical Society. Special Meeting. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, March 12th, at 7.45 o'clock. The following papers will be presented: Dr. G. Liebmann, Spinal Irritation and Neurasthenia. Drs. S. G. Webber and J. J. Putnam will open the discussion. Dr. T. A. DeBlois, Tonsillitis. Drs. J. W. Farlow and Morton Prince will open the discussion.

Albert N. Blodgett, M. D., *Secretary.*

Gynecological Society of Boston. — The next regular meeting will be held at the Medical Library Rooms, on the second Thursday of March, at four o'clock P. M. Subject: The Discussion of the Best Methods of Wound Treatment. Dr. H. O. Marcy will open the discussion with a brief paper upon Aseptic Surgery. Dr. H. C. White will report a Case of Recto-Vaginal Fistula treated by a New Method. Profession invited.

Henry M. Field, M. D., *Secretary.*

Providence Medical Association. Election of Officers. — The annual meeting of the Providence Medical Association was held in the Medical Library, March 3, 1884, and the following officers elected for the ensuing year: President, Dr. W. J. Burge. Vice-President, Dr. E. T. Caswell. Secretary, Dr. Frank B. Fuller. Treasurer, Dr. Byron Whitford. Standing Committee, Drs. H. G. Miller, G. Radcke, G. D. Hersey, G. A. Pierce, G. W. Porter. Committee on the Reading Room, Drs. G. D. Hersey, H. G. Miller, G. W. Porter.

Books and Pamphlets Received. — Tribute to the late James Marion Sims, M. D., LL.D. By W. O. Baldwin, M. D., of Montgomery, Ala.

Cooper Medical College, San Francisco. Annual Announcement. Session of 1884.

Original Articles.

MODERN LEGISLATION RELATIVE TO ADULTERATION OF FOOD AND DRUGS.

BY SAMUEL W. ABBOTT, M. D.,
Health Officer of Massachusetts Board of Health, Lunacy, and Charity.

HOWEVER appropriate the customary historical review of a subject may be in an elaborate treatise, I shall devote but a brief portion of this paper to the discussion of the ancient practices relating to food and drug adulteration. The usual history of petty crimes, traced back through centuries to the classic days of Greece and Rome, is repeated in the matter of adulteration. Pliny and Vitruvius and others tell us that opium was adulterated with the juice of other plants, and tests were prescribed for the detection of the fraud. Bread was adulterated with white earth obtained near Naples, and frauds in the making of wine were so common at Athens as to require the appointment of inspectors to prevent and expose the practice.

The disposition of many of the human race to cheat their neighbors has proved to be the mainspring of a continuous and an increasing industry from the earliest times up to the present. Just so long as avarice shall continue to be a ruling passion among men so long will legislation be needed to prevent adulteration, sophistication, and other forms of debasement.

The first English law on record relative to adulteration was enacted in the eleventh century, in the reign of Henry III. By the provisions of this law the pillory and the tumbril[1] were prescribed for the punishment of dishonest bakers, brewers, and others.

Dr. Blyth quotes the following quaint passage from an old paper entitled A Quip for an Upstart Courtier: —

"For you, goodman baker, you that love to be seen in the open market-place, upon the pillory, the world cries out on your wiliness. You buy your corne at the best hand, and yet will not be content to make your bread weight by many ounces. You put in yeaste and salt to make it heavie, and yet all your policie cannot make it. The poor crie out, the rich find fault, and the lord maior, and the sheriffs, like honourable and worshipful maiestrates, every daie walk abroad and weigh your bread and yet all will not serve to make you honest men. But, were extremities used and the Statutes put in the highest degree in practice, you would have as few eares on your head as the collyer."

An ordinance of 1316 prescribed that "no one shall mix any manner of wares, that is to say, shall put old things with new, or new things with old, by reason whereof the good thing may be impaired by the old, nor yet things of one price, or of one sort, with other things of another sort. . . . Also that no man shall moisten any manner of merchandise such as saffron, ginger, alum, cloves, and such manner of things as admit of being moistened."

During the following three centuries groceries and drugs were sold in the same shop, the two trades being combined until 1617, when the apothecaries formed a separate body, and have since remained a distinct trade or occupation.

In France similar laws were in force from early periods relative to bread, wine, and other articles of food. As long ago as 1396 an ordinance was in force in Paris forbidding the coloring of butter with herbs, flowers, or drugs.

The sophistication of drugs was forbidden, and apothecaries also were forbidden to use exhausted drugs under a heavy penalty. Adulterated articles were to be seized and burned in front of the house where they were found.

In Germany likewise for several centuries severe penalties have been inflicted for the sale of adulterated bread, wine, and drugs. For the former a similar penalty was inflicted to that employed in England. The offender was put in a basket at the end of a long pole and plunged in a muddy pool.

MODERN ENGLISH LEGISLATION.

A select parliamentary committee on the adulteration of food was appointed in 1855, and began its labors by a careful investigation of the whole subject, many persons being summoned before the committee who were supposed to possess special information as to the various forms of adulteration which were common at that time. Dr. Hassall, whose careful work had formed a fitting prelude to this inquiry, contributed much valuable information. On the report of the commission the first general Adulteration Act was drafted, and became a law in 1860. By this act it was provided "that every person who shall sell any article of food or drink, with which, to the knowledge of such person, any ingredient, or material injurious to the health of persons eating or drinking such article, has been mixed, and every person who shall sell as pure or unadulterated, any article of food or drink which is adulterated or not pure, shall, for every such offense, on summary conviction of the same, pay a penalty not exceeding £5. with costs."[2]

A second offense was punishable by publishing the offender's name, place of abode, and offense, in addition to the fine.

The analysts under this act were at first appointed by the secretary of state, and afterward by the local government board.

In 1872 the act was remodeled, and other provisions were substituted, especially relating to willful adulteration and criminal intent.

These acts were crude, and during the fourteen years of their operation much dissatisfaction was expressed at the want of standards of common articles of food, at the disagreement of analysts, and at the conflicting decisions of magistrates as to the exact meaning of the term *adulteration* and other legal technicalities.

A new committee was therefore appointed in 1874, witnesses were again examined, greater care being taken to summon merchants, manufacturers, milk dealers, and other persons specially interested in the operation of the act. This committee recommended certain important amendments, and summed up the inquiry by stating that the public was "cheated" rather than "poisoned."

As the result of this inquiry other statutes were enacted in 1875, 1878, and 1879, these constituting the acts now in force in England. As these acts are lengthy the chief points of interest need only be referred to at this time.

The first two sections repeal all previous legislation upon the subject, and define certain terms employed in the act. All offenses under the act are then specified. Ten sections provide for the appointment of analysts, and define their duties. Eight sections prescribe the modes of procedure against offenders. Section 29 provides for the expenses of executing the act. Sections 30 and 31 relate to the special inspection and analysis of tea. Sections 33 and 34 provide for the application of the law in Scotland and Ireland.

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[1] Ducking-stool.

[2] Blyth. Foods, their Composition and Analysis, London, 1882.

The amendment of 1879 provided in addition that it should not be alleged in defense that the purchaser, having bought only for analysis, was not prejudiced by the sale. Other amendments of minor importance were made in the same year.

As a result of these acts there were examined in England, in 1881 and 1882, 32,708 samples specified as follows:[1] —

Year	Milk.		Butter.		Groceries.		Drugs.		Wines, Spirits, and Beer		Bread and Flour.		Waters.		Sundries.		Totals.	
	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.
1881	6821	1361	1081	137	4328	420	487	93	1967	471	1134	48	1403	383	580	29	17,808	2960
1882	5518	1123	945	144	5026	399	328	55	2151	454	1017	44	689	195	626	44	14,900	2458
	–	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32,708	5418

In France a new impetus has been given to the work of food inspection by the establishment in all the important cities of municipal laboratories and the appointment of inspectors, who, in accordance with the statutes, have power to punish offenders against the laws. Laboratories have been established in Paris, Lyons, Marseilles, Bordeaux, and other large cities. The officials appointed for each are a director, inspectors, and chemists.

Samples are obtained at the markets and shops by the inspectors, in which duty they are assisted by the commissaires de police. They go in pairs to such places as are indicated by dissatisfied purchasers, and, where it is practicable, make cursory examinations at the place of sale. If adulteration is detected two samples are taken, sealed, numbered, and certified by them and also by the tradesman. One is taken to the laboratory, and the other reserved in case of a dispute. Special notice is taken of the condition of the establishment or place of sale as to cleanliness, etc.

The public are invited by notification to take advantage of the statutes, and to request analyses as often as they shall choose to exercise the privilege. Qualitative analyses are made gratuitously, and quantitive analyses are paid for by a fee of five to thirty francs, according to the cost. Statements relative to qualitative analyses are confined to the terms *good*, *passable*, *bad* (not injurious), and *bad* (injurious).

Quantitative analyses must define the exact composition of the article in question.

The laboratory receives two classes of samples, those contributed by the public and those received from the inspectors, while many samples are also analyzed which are obtained from the hospitals, prisons, and other public institutions. From the results of the laboratory work reports are sent to the public prosecutor, who institutes proceedings against offenders.

Much care is given to the work of ascertaining the normal composition of the different articles of food.

The laboratory is amply provided, and has a special photographic department for the purpose of showing clearly to a judge or a jury the palpable proof of adulteration, as in the case of spices, cereals, trichinæ, and other objects requiring ocular demonstration.[2]

The following table[3] shows the work of the laboratory for 1881: —

Total number of samples examined	6517
Percentage of adulteration, total of all samples	50.43
Percentage of adulteration, milk	50.67
Percentage of adulteration, wine	59.17

The samples were also classified as follows: —

Good	1565
Passable	1523
Bad (not injurious)	2608
Bad (injurious)	562
	6258

The remainder (259) were in process of examination at the time of the report.

The samples included, besides wines and milk, spirits, syrups, waters, butter, bread, chocolate, preserves, coffees, confectionery, spices, toys, and various other articles.

The German statutes regulating the sale of food and of drugs are at present not like our own, combined in one statute, but are entirely distinct. The principal law relating to the supervision of the sale of drugs bearing date March, 1872, and the latter, the food law, being enacted May 25, 1879. The drug law of 1872 regulates the sale of medicines, and establishes the German Pharmacopœia as the standard in place of those in use before the union and consolidation of the Empire. The food law regulates the sale of food and drink, dyes, carpets, toys, cooking utensils, and petroleum. Careful attention has been bestowed upon the subject in Germany. In 1878 231,478 samples of different articles were analyzed, and upon the evidence of these analyses 5552 convictions were obtained.

Switzerland also has stringent laws for the prevention of adulteration, especially in the Canton of Zurich.

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[1] The Analyst, vols. vi. and vii.

[2] Analyst, vol. vii.

[3] Documents sur les Falsifications des Matières Alimentaires. Paris. 1882.

Canada has made commendable progress in the same direction, as shown by the reports issued annually since 1876 by the Inland Revenue Department. A summary of the work there accomplished for the six years beginning in 1876 is as follows:[1] —

No. of Analyses.	Genuine.	Adulterated.	Doubtful.	Total.	Per Cent. Adulterated.
1876	87	93	—	180	51.66
1877	241	247	—	488	50.61
1878	523	271	19	813	33.33
1879	619	235	42	896	26.22
1880	728	295	20	1043	28.28
1881	749	260	38	1041	24.97

UNITED STATES.

The thorough investigations of the Parliamentary Committee, and the subsequent legislation in England, were soon followed by similar inquiry in the United States.

Special work had already been accomplished by State Boards of Health, notably those of Massachusetts and Michigan, in the examination of food, during the past ten or fifteen years.

It needs but a passing reference that volumes of sensational and exaggerated statements have been written upon this subject. Column after column of wild assertions as to special articles of food have appeared in the public prints, until the timid consumer is almost driven to starvation as a last resort.

The first movement in the United States toward general legislation for the prevention of this existing evil was initiated by the National Board of Trade in 1879.

DRUG INSPECTION.

It should be said, however, in relation to the department of drug inspection, that valuable work had already been accomplished by the formation of the American Pharmaceutical Association, which for many years exerted a powerful influence in the direction of a pure supply of drugs.

A law had already been enacted by Congress in 1848, providing for special examiners of drugs at important sea-ports. At one port alone (New York) the examiner rejected in nine years 900,000 pounds of adulterated drugs. Political influence interfered very much with the efficiency of this law, and at some ports rendered it inoperative. The amount of adulteration of drugs previous to the enactment of the law referred to was very great. On the authority of Dr. Bailey, the United States drug inspector for the port of New York from 1848 to 1857, nearly one half of the drugs imported were adulterated. Establishments existed in England, Germany, Belgium, and France, where drugs were "prepared with special reference to their sale in the United States." The existence of establishments in this country where adulterations have been systematically practiced has also been demonstrated, especially with reference to powdered drugs.[3]

Reasons for the existence of such practice are by no means wanting. Many dealers enter upon their business with the sole idea of profit. Competition naturally follows until profit is no longer possible. As a further consequence adulteration and the sale of inferior substitutions follow. The manufacturer is sought who sells at the lowest price without regard to quality.

The actual effect of such practice on the health of the people is plainly stated in a recent report to the National Board of Health by Prof. C. L. Diehl, of Louisville, Ky., who says: "One need not be a physician to appreciate the fact that satisfactory medication is impossible when the medicine administered is not that designed by the prescriber. It is not sufficient that the medicine should be '*very nearly*' that which is designed; it should '*absolutely*' correspond to the standard, which the physician has before his mind at the time when he finds it necessary to prescribe it. It is therefore the duty of the dispenser to see to it that the medicines he dispenses conform in every respect to the standard that has been framed for his guidance as well as for the guidance of the physician. The fulfillment of these conditions depends not alone on the integrity of the dispenser, it depends equally on his knowledge and skill; and unless these are combined with integrity the prescriber cannot hope for results which the nature of the disease may justify him to expect. Finding that the medicine has not the expected effect, the prescriber may be led to increase the dose or to replace that originally prescribed by another, without, however, ameliorating the disease or causing it to yield to his treatment. He now perchance begins to suspect that the medicine supplied is not as it should be, and changing his apothecary, soon cures his patient.

"If all cases of bad medication were as simple in their development as the one illustrated there would perhaps be no necessity for this report. Unfortunately, however, such is not the case. It quite often happens that, the diagnosis being well established, it is urgent that the proper medicine should be properly administered. If in a case of this nature the medicine should happen to be of indifferent or inferior quality the life of the patient is placed in jeopardy, and under some circumstances sacrificed. Again, the prescriber, conforming the medication to his diagnosis, may be led to reject that originally made, because he fails to obtain the effect which an abundant experience justifies him to expect from the drug administered. In a case of this kind he may for a time be completely at fault, while the illness of his patient is vexatiously prolonged, or, it may be, aggravated. In short, the use of inferior and adulterated medicines may be the cause of protracted disease, of increased suffering, and in some instances of death; and failing to mitigate and cure diseases in which pure medicine is unequivocally indicated they may lead the physician to errors in diagnosis, cause him to acquire the habit of prescribing large doses of active medicines, and, in fact, seriously affect his success and reputation."

Let me not be understood in this connection as considering drugs to be the *sine qua non* of therapeutics. The physician who uses them to the exclusion of such important remedial measures as heat and cold, light, fresh air, electricity, massage, diet, etc., has hardly learned the alphabet of practice. But if we must use drugs at all, and especially such important remedies as opium, and quinine, and ether, and alcohol, let us be assured that they are of a definite strength, and when the physician prescribes a gramme of quinine or twenty-five drops of laudanum let him know that the pills for which he writes, on the one hand, contain just the amount of the alkaloid prescribed, and that the laudanum also has been made from opium of a standard strength, and not from a cheap or exhausted article.

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[1] Inland Revenue Report. Ottawa. 1881.

[2] Prof. S. P. Sharples, Supplement to Fourth Annual Report State Board of Health, Lunacy, and Charity.

[3] Sixth Supplement to National Board of Health Bulletin, 1880, article by Prof. C. L. Diehl.

Special laws relating to certain articles of food and drink have existed in this State for many years. Fish, meat, milk, cocoa, vinegar, butter, and cheese have all been the objects of legislation, and provision has been made for their inspection by local officers. But in later years the need of a general, comprehensive law, which should include everything used as food, or drink, or medicine under one statute, has been urged as a necessity both of national and of State legislation.

The inquiry of the National Board of Trade, inaugurated in 1879, resulted in the recommendation of a law, which, with but few modifications, has been adopted in the States of New York, Michigan, Massachusetts, and New Jersey. This law was enacted in our own State in May, 1882, and took effect in the following August. The law as then enacted is as follows: —

[CHAP. 263.]

An Act relating to the Adulteration of Food and Drugs.

Be it enacted, etc., as follows:

SECT. 1. No person shall, within this Commonwealth, manufacture for sale, offer for sale or sell any drug or article of food which is adulterated within the meaning of this act.

SECT. 2. The term "drug" as used in this act shall include all medicines for internal or external use, antiseptics, disinfectants and cosmetics. The term "food" as used herein shall include all articles used for food or drink by man.

SECT. 3. An article shall be deemed to be adulterated within the meaning of this act, —

(*a.*) In the case of drugs, — (1.) If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality or purity laid down therein; (2.) If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia, or other standard work on *materia medica*, it differs materially from the standard of strength, quality or purity laid down in such work; (3.) If its strength or purity falls below the professed standard under which it is sold:

(*b.*) In the case of food, — (1.) If any substance or substances have been mixed with it so as to reduce, or lower, or injuriously affect its quality or strength; (2.) If any inferior or cheaper substance or substances have been substituted wholly or in part for it; (3.) If any valuable constituent has been wholly or in part abstracted from it; (4.) If it is an imitation of, or is sold under the name of, another article; (5.) If it consists wholly or in part of a diseased, decomposed, putrid or rotten animal or vegetable substance, whether manufactured or not; or, in the case of milk, if it is the produce of a diseased animal; (6.) If it is colored, coated, polished or powdered, whereby damage is concealed, or if it is made to appear better or of greater value than it really is; (7.) If it contains any added poisonous ingredient, or any ingredient which may render it injurious to the health of a person consuming it.

The State Board of Health, Lunacy, and Charity may from time to time declare certain articles or preparations to be exempt from the provisions of this act; and the provisions hereof shall not apply to mixtures or compounds recognized as ordinary articles of food, provided that the same are not injurious to health, and are distinctly labeled as mixtures or compounds.

SECT. 4. The State Board of Health, Lunacy, and Charity shall prepare and publish from time to time lists of the articles, mixtures or compounds declared to be exempt from the provisions of this act, in accordance with the preceding section. The said board shall also from time to time fix the limits of variability permissible in any article of food, or any drug, or compound, the standard of which is not established by any national pharmacopœia.

SECT. 5. The State Board of Health, Lunacy, and Charity shall take cognizance of the interests of the public health relating to the sale of drugs and food and the adulteration of the same, and shall make all necessary investigations and inquiries in reference thereto, and for these purposes may appoint inspectors, analysts and chemists, who shall be subject to its supervision and removal.

Within thirty days after the passage of this act the said board shall adopt such measures as it may deem necessary to facilitate the enforcement hereof, and shall prepare rules and regulations with regard to the proper methods of collecting and examining drugs and articles of food. Said board may expend annually an amount not exceeding three thousand dollars for the purpose of carrying out the provisions of this act.

SECT. 6. Every person offering or exposing for sale, or delivering to a purchaser, any drug or article of food included in the provisions of this act, shall furnish to any analyst or other officer or agent appointed hereunder, who shall apply to him for the purpose and shall tender him the value of the same, a sample sufficient for the purpose of the analysis of any such drug or article of food which is in his possession.

SECT. 7. Whoever hinders, obstructs, or in any way interferes with any inspector, analyst, or other officer, appointed hereunder in the performance of his duty, and whoever violates any of the provisions of this act, shall be punished by a fine not exceeding fifty dollars, for the first offense, and not exceeding one hundred dollars for each subsequent offense.

SECT. 8. This act shall take effect at the expiration of ninety days after its passage. (Approved May 26, 1882.)

This law has certain points in common with that now in force in England, and also some notable points of difference.

Each law distinctly defines certain terms which are used therein. This feature of the law has the obvious advantage of saving an endless discussion in the courts upon the meaning of terms in the statute. The words *drug* and *food* are clearly defined in each law, and in the Massachusetts law (or rather the United States) the definition of *adulteration* is also stated with unusual clearness and precision.

In the case of drugs, the terms *differ* and *differ materially* are employed, the former relating to officinal preparations of the United States Pharmacopœia and the latter to others not officinal. The former is plainly a more stringent provision than the latter, and justly so, since the officinal preparations are the most commonly used and are by far the most important. Useful preparations when discovered, or proposed, are usually admitted to the Pharmacopœia at each decennial revision of the work. It would seem that a manual compiled with and by the consent of a commission of representative physicians and druggists from the entire country should be admitted as undoubted authority.

In the case of food the various modes of adulteration or debasement are carefully stated. Either one or several of these may exist in a given sample or article, as in the case of milk, in which either the first, third, fourth, fifth, sixth, seventh, or all of them may exist at the same time.

Certain exceptions are made in the British law: —

(1.) In the case of ingredients not injurious to health, *added* to render an article fit for carriage or preservation, and not to fraudulently increase its bulk, weight, or measure, or to conceal its inferior quality.

(2.) In case of patent medicines.

(3.) Where a drug is unavoidably mixed with some extraneous matter in the process of preparation or of collection.

Another clause provides that compound foods or drugs must be in accordance with the demands of the purchaser, with reference to the ingredients contained.

A legible descriptive notice or label attached to an article, stating that it is mixed, exonerates the seller.

The British law also provides that a buyer who purchases with intent to submit an article for analysis must notify the seller of such intention, and offer to divide the article into three parts, each part to be sealed, and one part delivered to the seller, one part he retains, and the third is submitted to the analyst. If the seller does not accept the offer of the buyer to divide the article, the analyst on receiving it divides it into two parts, one of which he delivers to the purchaser to be reserved by him in case of prosecution.

The French Code also provides for a division of each article purchased into two portions.

In addition to the general law passed by the Legislature of Massachusetts in 1882 an amendment was enacted in the following year providing that the State Board should make prosecutions of offenders, and that a definite portion (two fifths) of the appropriation should be expended in the enforcement of the laws for preventing milk adulteration.

With these two laws upon the statute books we may now inquire what has been accomplished towards an improvement of the food and drug supply in Massachusetts, though such an inquiry may be deemed somewhat premature since less than eight months have elapsed since the enactment of the amendment of the statute.

In compliance with the law, two analysts were appointed soon after the date at which it took effect, and after the passage of the amendment the number of analysts was increased to four, two of whom were appointed for the sole purpose of milk analysis.

The period between the passage of the law of 1882 and the amendment of 1883 was chiefly occupied in the inspection and analysis of samples with reference to ascertaining the actual condition of the supply of the State. Samples have been collected in all parts of the State, chiefly in the cities and large towns.

The whole number analyzed has been about 1400. This number includes over 300 samples of milk.

The percentage of adulteration among drugs has been found to be forty per cent.

Among articles of food forty-seven per cent. were found adulterated within the meaning of the statute.

Of milk seventy-eight per cent. were found adulterated within the meaning of the statute.

Seventeen prosecutions have been entered in the courts on complaint of the Board, one of which was withdrawn in consequence of the death of the defendant. In all the other cases adulteration was satisfactorily proved, but in two of them the defendant escaped conviction in consequence of minor technicalities, while the remaining fourteen were convicted.

As a salutary result of the work thus far accomplished druggists have been stimulated to use greater care in the selection, the purchase, and the manufacture of pharmaceutical preparations. Grocers have appealed to their manufacturers to furnish a better and a purer supply, and milkmen have been taught a useful lesson. We do not pretend to say that Boston has yet a pure milk supply, but we do know that in many cases where we have made repeated analyses from the same establishments there has been a marked improvement.

Within the past six months, or since the prosecutions made by the Board, assayed drugs of definite known strength have become a recognized department of trade. Manufacturers doing business outside of the State have sent to their agents in Massachusetts requesting the return of all preparations which did not conform to the pharmacopœial standard. Wholesale dealers have employed chemists to examine their goods in order to insure a pure stock, and one which should conform as far as possible to recognized standards.

We venture the assertion that the amount of chemical analysis and assay has been far greater in Massachusetts during the past year than ever before, without reference to the official work of the Board.

Certain objections, amendments, and substitutes have been presented to the Act of 1882. These may be enumerated as

(1.) Local Inspection. While, on the one hand, this mode of operation may have certain theoretical advantages, such as a distribution of the work of supervision and a greater convenience to sparsely-settled districts, on the other hand the practical operation of local inspection in Massachusetts has been a failure for many years past. The reasons may be stated briefly: the petty influence of local politics, frequent changes in office, inadequate compensation, and incompetency. Nothing illustrates this better than the habitual use of the lactometer by milk inspectors to the exclusion of thorough chemical analysis. The fallacy of this instrument is so well known that further reference to it is unnecessary.

(2.) Proof of criminal intent on the part of the seller. The insertion of this provision in the present law is all that is desired by the men who sell water in place of milk, or gypsum for cream of tartar, or inferior grades of drugs for those of standard strength. Such a provision would render the law practically inoperative.

(3.) The insertion of a limiting word like "essentially" or "materially" after the word "differs" in the first clause relating to drugs. By this amendment a loose construction of the law and a sliding scale would result; drugs could be sold of a quality corresponding to the price paid, and standards would be ignored. The prescriber might find the one-grain, or two- or five-grain quinine pills containing three fourths or one half these quantities. In some of the preparations examined by the analysts of the Board the strength has been found to be less than one third of that required by the statute.

No better amendment has been proposed to the present law than such as shall provide for its more thorough and rigorous enforcement, such, in fact, as shall protect the honest manufacturers and producers, and at the same time give to the people, the consumers, everywhere and at all times, the opportunity to test for themselves, for a reasonable fee, the quality of the goods which they use. Such a result might be secured in Massachusetts by the establishment of a State laboratory, such as has recently been organized in Paris for the same purpose. At such an institution, properly equipped with chemical apparatus for analysis, with microscopes for food and drug examination, with apparatus for photography, and all other departments requisite for food and drug inspection, all the work now done by the analysts could be performed; and, also, any individual desiring a certificate of analysis of an article could have the work done at the mere cost thereof. The number of persons presenting material for analysis is by no means small. Scarcely a day passes in which some one does not bring to the office of the Board a sample of food or of drugs for this purpose. These people represent the consumers and the retailers who cannot know with certainty the character of the goods which they purchase.

A public laboratory might also be used for the analysis of all the public water supplies of the State, both for the chemical and for the biological work which they might demand, and also for the inspection of the food and drug supplies of all its hospitals, prisons, almshouses, and other public institutions.

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GENERAL PARALYSIS OF THE INSANE.[1]

BY GEORGE F. JELLY, M. D.

Case IV. S. S., aged forty, married, admitted November 12, 1870, native of Duxbury, Mass. Grandfather and grandmother insane. Said to have had a sunstroke eighteen years before admission to hospital. Habits said to be good. One year since, after hard work and unusual anxiety, he was dull, sluggish, and inactive; would rise in night and wander about in a bewildered manner. In many things seemed changed. Was indifferent to family. Several attacks of partial insensibility. Frequently tripped in walking. Became unable to attend to business, and was finally excited and bombastic. When first seen at asylum was feeble, dull, and bewildered, and he seemed like a rapid case, but he soon rallied, and became much more active mentally, though extravagant and tremulous in speech. He never had convulsions, and only slight semi-conscious attacks.

After two months he passed into a very comfortable state; he was quiet, his speech and gait scarcely affected, and to his friends he seemed almost well. In four months from his admission he left the asylum. He remained quite comfortable for a long time, but mentally weak. After a few months I lost sight of him, but have no doubt that he died some years since.

Case V. E. A. L., aged forty-eight, married, cooper, a stout, vigorous, coarse, profane man, who has used tobacco and whiskey to excess. Has worked very hard, and has had much trouble with his wife. Six weeks before admission became irritable in manner, very unreasonable, and neglected his business to make foolish bargains; developed delusions of great wealth, but no tremor of lips and no unsteadiness in walking. Very indignant because brought to the asylum, but soon settled down, and declared he would not leave. Very extravagant, declaring he had bought the Fitchburg railroad, and would build a city at his home next summer which would be a "ripper." He failed quite rapidly, but never had convulsions. After some months he developed the usual paralytic symptoms in speech and walk. Ten months after admission he was transferred to Worcester, and died within two years from the inception of the disease.

The next case, No. 6, differs from those already described on account of the sudden and early death of the patient.

Case VI. D. P. S., aged thirty-nine, single. Admitted February 16, 1872. Coal salesman; native of New York. Father "monomaniac" on subject of religion. His friends said that he had no excesses, but his subsequent history proved that he was somewhat addicted to wine and women. Had worked very hard, and had been subject to severe mental annoyance. He was a little excited one year since, after which he was somewhat melancholy. Within a few weeks had been extravagant, and inclined to make foolish bargains. On admission to asylum very voluble, somewhat incoherent, very happy and extravagant, and had a decided trip in speech. His talk was as follows: "Sheather, in New York is an old friend of mine. My friend Sheather is worth thirty millions. Ed is worth thirty millions, carried on by importing furs. He lives on Fifth Avenue. I have one hundred and fifty millions under my own control. I am the gayest boy out." Soon became entirely contented. Was continually making money; said he could make more money in the asylum than out in the world. He became more quiet, grew stout, but never gave up any of his extravagant ideas or lost the paralysis of speech or in his walk. Each meal was a feast fit for a king, and his room a palace. Seven months after admission he had his first epileptic convulsion, which was repeated several times during the first day, and for a time he was unable to swallow. For a week he had one or more fits every day, and then rallied, and was somewhat clearer. November 24th, nine months after admission, he was again seized with convulsions, but after three hours seemed pretty well. At nine P. M. he retired, and at ten he was dead.

The autopsy showed no gross changes in brain, except excessive congestion. Other organs normal.

Case VII. J. W. C., aged forty-eight, married, retired sea captain. Admitted June 27, 1873. Said to have had a sunstroke six years before, and had always been a coarse, licentious man, addicted to excessive use of liquor. His friends say that he has been wrong mentally for two years. For thirteen months before admission to asylum had been a patient at Worcester Lunatic Hospital. Was very violent and homicidal at first. He was taken from Worcester on a writ of habeas corpus, attacked Dr. Fisher in court, was remanded to the hospital, and remained till his admission to the McLean. When he entered the latter institution he was mixed, confused, thick in speech, unsteady in gait, and extravagant, but pretty quiet.

He soon became very restless, and three months after admission had violent epileptic seizures, the convulsions being chiefly confined to left arm and leg, though there was marked twitching of both arms and legs. Following these attacks he never recovered his coherence, his left arm and leg became paralyzed and helpless, and he gradually failed. He became filthy, and with his right hand was very destructive. In this condition he was placed under the care of Dr. Mead, and in a few weeks died. An autopsy was made by Dr. Fisher (of which I have no copy).

By a singular coincidence the wife of this patient developed the most characteristic symptoms of general paralysis. I saw her but once, but the extravagance, tremor, and peculiarity of gait were all present. She was sent to the asylum at Concord, N. H., and Dr. Bancroft afterwards told me that hers was a typical case. She survived her husband less than a year.

Case VIII. E. B. O., aged fifty-three, married, lawyer. Admitted May 23, 1875. One brother had been insane. He had lived very freely, using a good deal of wine, and had had great business anxiety. His was an entirely characteristic case, with more than usual incoherence and confusion. Paralytic symptoms very marked. He improved and left the asylum in six months, still quite weak, but comparatively clear mentally. He is living, his difficulty in articulation is quite marked, and his gait unsteady. He is always cheerful and exhilarated, but is able to live most of the time outside of an insane hospital, though sometimes placing himself under restraint voluntarily. He reads a good deal, and is able to make himself useful about his home. He resembles an overgrown child. He has had several apoplectiform seizures. It is more than eight years since the commencement of his disease. I think that there can be no mistake in the diagnosis as it has been confirmed by several physicians familiar with general paralysis.

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[1] Concluded from page 22[illegible].

Case IX. C. D. W., aged thirty-seven, married, architect. Admitted September 16, 1877. Had been subject to chronic diarrhœa. Had worked very hard, and has been made very anxious in settling an estate. For two months has seemed changed and strange. Developed extravagant delusions three weeks before entrance to the asylum, and for three days had been much excited. On admission his speech was thick, his lips tremulous, and he was very extravagant. He offered me at once a million dollars for the asylum. He soon became more excited, and had a long run of maniacal excitement, in which he was violent and homicidal. He was full of the most extravagant delusions, owned all the money and diamonds in the world, all the railroads could go round the world in two minutes, he could raise the dead, banish death, etc. After a few months became more quiet, but still deluded and threatening. He was taken through persistency of friends to Probate Court, where he manifested great excitement, but by advice of judge went away on a trip to California. Returned much more excited and much worse. After a time was more quiet; but gradually grew more dull and feeble, and died February 4, 1879, nineteen months after inception of disease, of exhaustion and lung symptoms.

Autopsy by Dr. E. G. Cutler: —

Rigor mortis well marked, body in good condition; not emaciated.

Nothing special about calvaria except that it was somewhat dense.

Vessels of dura mater full of blood. Membrane itself of normal thickness. Considerable increase of subarachnoid fluid. Pia mater much thickened, especially over apex; more marked over left convolutions than over right; at base of brain considerably adherent. Thickening at base less marked than at apex. Vessels at base showed no change.

Convolutions of brain, especially at vertex and in frontal region, decidedly atrophied, and on the left side at Isle of Reil quite a cavity had formed in marked contrast to condition of the brain on the corresponding portion of right side, which, however, was quite atrophied.

Pia mater quite firmly adherent to surface of brain, especially at vertex, producing slight lacerations of brain substance when removed.

Brain firm on section.

Amount of blood in brain not excessive.

Nothing abnormal in corpus callosum, pons, or medulla. No increase of blood or fluid in lateral ventricles.

Nothing abnormal in lateral sinuses.

Diaphragm on right side at fifth rib; on left side at fifth intercostal space.

Lower lobe of left lung adherent anteriorly over a limited space. Right lung adherent universally (old and dense adhesions). Some consolidation of lower lobe of left lung, and œdema of both lobes.

Red hepatization of a portion of lower lobe of right lung and considerable œdema.

Right side of heart distended by fluid black blood. Mitral valve admits two and one half fingers. Nothing remarkable about heart.

Spleen of normal size and color. On section dark and full of blood.

Left kidney normal in size. On section rather cyanotic. Capsule strips easily, leaving a smooth surface. Cortical portion healthy. Right kidney healthy. Nothing abnormal in intestines, liver, stomach, or bladder.

Case X. G. G. K., admitted December 10, 1870, aged forty-six, married, agent for express company. Uncle died insane.

A very active, healthy man, and an athlete. Very licentious, and has drank freely. One year before admission was dull and indifferent, irritable and suspicious. Soon afterwards he became excitable and pugnacious. Within three days talked very extravagantly, thinks himself irresistible to women. Two days after he entered the asylum, very happy and contented, and said that $10,000 would not tempt him to leave, and was full of suggestions of wonderful improvements in the institution. He said that he would deliver a lecture in Music Hall, and would issue one million tickets at $100 each.

Six weeks after admission very noisy and extravagant, violent and filthy. He frequently said, "I am God Almighty; I can do everything." In three months he was more quiet. In six months bland, effeminate, quiet, and demented. In fifteen months he was much troubled with hallucinations of hearing, his dementia was far advanced, and he was constantly muttering incoherently to himself. He was losing strength, but at that time manifested no paralysis whatever, and though this symptom was constantly looked for it never appeared, causing some doubt as to the diagnosis. In twenty months he was transferred to the Worcester Hospital, where he died about four years after the inception of the disease, or from his first exhibition of mental symptoms. The superintendent sent me this copy of the autopsy: —

Right pupil dilated to twice the size of left. Scalp torn off with great difficulty. Skull dense and of normal thickness. Dura mater abnormally adherent to calvaria, cloudy, and greatly thickened. On removal of skull-cap the brain appeared in color like healthy pus, especially over the openings into the convolutions. Subarachnoid spaces contained serum, normal in amount. Pia mater of the thickness of vellum writing paper, peeling off without difficulty from the substance of the brain. Convolutions not deep or numerous. Brain substance more than ordinarily firm. Corpus callosum, fornix, velum interpositum, and corpora quadrigemina healthy. Corpora striata and thalami symmetrical and normal in consistence and color, both on their surface and in their substance. Amount of fluid in the ventricles normal. Pons varolii, medulla oblongata, and cerebellum healthy. Cerebral arteries full of blood and their coats healthy.

Microscopical examination of the membranes of the brain shows great increase of fibrous tissue, infiltrated with an abundance of young cells. No appearance of fatty degeneration or other change in the brain substance itself.

Kidneys enlarged, their capsules easily torn off; vessels enlarged and injected. Extravasations frequent. Cells cloudy and granular. Connective tissue slightly increased. Other organs healthy.

Case XI. Mrs. S. J., aged thirty-five, married, native of Massachusetts, was admitted to McLean Asylum in a state of great physical prostration, mental depression, and hypochondria, with a history of long-continued ill health. For weeks there were no indications of general paralysis. She manifested great mental distress, believed that she had been very wicked, thought that she must soon die, and that she could never see her husband again on account of her unworthiness. As she gained in physical strength she became somewhat exhilarated, at times very talkative, at other times emotional and tearful.

This state continued till nine months after she came to the asylum, when she seemed much confused, and became very extravagant in her ideas, believing herself some great and important personage. She then for the first time manifested tremor of lips and tongue and difficulty in articulation. Her conversation was as follows: —

"I would give all the world to tell you who I am. I cannot tell you who I am. I have but one husband, and he who is my husband writes his name through my head, my heart, my toes. It is God. I am a goddess. There is no more death. I don't wish to go into the yard with attendants. I am above them. I cannot associate with them. My associates are queens. God claims me." She would go on in this way for hours, accompanying her words with gestures, and articulating with difficulty.

During the next month she became more silly, entirely chaotic, and very untidy, and was much given to masturbation. She sat by herself giggling and smirking, and staggered very badly when she attempted to walk, swaying to either side, and using her hands to keep her equilibrium.

This state of things continued for five months, when she again seemed depressed, refused food, and was fed for some time with the stomach tube.

During the next four months she failed steadily, the paralytic symptoms increased, and she died in two years and nine months from the first appearance of mental symptoms. There were never convulsions, but several apoplectic seizures.

An autopsy by Dr. Fitz showed marked atrophy of brain, especially of middle lobe, with a few small cysts of the arachnoid.

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PROTRACTED LETHARGY AFTER THE USE OF BROMIDE OF SODIUM BY ONE HAVING THE MORPHIA HABIT.[1]

BY E. G. CUTLER, M.D.

On the 29th of April, 1880, I was called to see a man, said to be a morphia taker, who in trying to break himself of the habit had followed out sombody's "cure" for several days, and in consequence lay in a stupor.

The following history was obtained: —

The patient, a physician, had taken morphia subcutaneously for perhaps twenty years. Several times he got down to very small doses, and twice had left it off altogether for months. He had served in the army as a surgeon, and been honorably discharged several years before. Recently he had been an inmate of Dr. Day's Washingtonian Home, but all the time while there took opium surreptitiously, obtaining it without any difficulty, he said, from the engineer of the establishment. (In justice to Dr. Day it should be said that this employee is said to have been soon discovered and promptly discharged.)

On the 19th of April Dr. ——, my patient, commenced to follow out the cure laid down by Dr. Mattison in the *Quarterly Journal of Inebriety*, June, 1879. He took *sixty* grains of the bromide of sodium three times for the first twenty-four hours, and each day for the next seven days he increased the dose by ten grains over the dose of the preceding day, thus making an increase of thirty grains every twenty-four hours. When he had taken the dose one hundred and twenty grains thrice the cure was to be complete. This programme was carefully followed out for a whole week. On the first day he diminished the quantity of morphia he had been taking by one quarter (I think). The next day he did the same. The third and fourth days he rapidly diminished the morphia to a very small fraction, and on the fifth he omitted it entirely. To return to the history of the bromide. He got along well enough till the fifth day, feeling no special inconvenience, retaining his appetite and digestion, sleeping well, and attending to the calls of nature. On the fifth day he began to be somnolent, and prepared his doses of bromide for that and the next two days, and gave directions to be roused at the proper times to take his medicine and food in case he should be asleep, and requested his attendants to give him small doses of nitre daily. On this day he first kept his bed for the greater part of the time. The sixth day it was quite difficult to rouse him sufficiently to take his drugs and feed him; and on the seventh this difficulty had very greatly increased so that it was nearly impossible to give the last dose of the bromide. The act of swallowing was very slow.

From this time, the 25th of April, till I saw him on the afternoon of the 29th, his sopor progressively increased to lethargy, he had taken no food or drink of any kind into the stomach, but very little urine had been passed, and there had been no movement of the bowels. I found him in bed lying in a natural position, inclined towards the left, with a sunken countenance and a dusky earthy color of the skin. The pulse was very feeble and quite slow and the surface of the body cool. The temperature, though taken at the time, I unfortunately do not remember exactly; it was a little below the normal standard. The respiration was slow, rather superficial, and accompanied by no adventitious sound. The pupils were neither contracted nor dilated, and did not respond to the stimulus of light. There was no unpleasant odor to the breath, the mouth and lips were dry. The tongue could not be seen. Reflex motion could not be excited either by touching the conjunctiva, thrusting a feather up the nose, pinching, or otherwise irritating the skin. He could not be roused to consciousness, or to make any, even the slightest, movement. About four ounces of highly concentrated urine free from albumen were drawn by the catheter. Nothing had been swallowed for four days, though repeated attempts had been made to feed him. As his vitality seemed to be pretty low, enemata of milk, beef tea, and alcoholic stimulants were given at first, and at night small doses of strychnia were carefully tried, alternating with nitre.

The following day he looked less sunken and had a shade better color, the breath had the faintest trace of the unpleasant odor usually observed after large doses of bromide, the pulse was fuller and stronger, the temperature a little above the normal. The urine drawn by the catheter was about the same in character and less than two ounces in quantity. The eyelid was slowly closed once on touching the conjunctiva, but only after repeated efforts at rousing the patient. As nothing could be felt in the rectum, and efforts to feed by the mouth remained fruitless, the enemata were continued.

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[1] Read before the Boston Society for Medical Observation, December 3, 1883.

The faradic current was then employed, one pole being placed at the feet and the other at the hands; again the current was run from the back of the neck to the lower part of the abdomen and in various directions. The same treatment was continued, and the patient remained asleep and unconscious, though evidently gaining, till the 10th of May, when the eyelid began to answer irritation of the conjunctiva pretty constantly. A few days later the legs would draw up on sharply irritating the feet, and the bowels were moved by an enema. On the 12th he could be fed by the mouth, though the act of swallowing was slow, and took place only after repeated urging on the part of his attendants. He quickly relapsed into sound sleep after being roused. During the next day or two he moved his legs a little in the bed and coughed slightly. On the 15th he remained awake a good part of the daytime and voluntarily moved about in the bed. He could not hold a cup or any article in his hands nor feed himself, though he could make slow, awkward movements with the hands and fingers when requested to do so. The unpleasant odor of the breath increased in intensity till about the 6th of May, when it began to diminish, and by the 15th had entirely disappeared. The catheter had to be employed till this date (the 15th), when he passed his water voluntarily; at no time was it necessary to use the catheter more than once in the twenty-four hours, so little urine was secreted. The bladder contracted very slowly indeed, and it was only after calling attention to the matter that the urine was passed at first. The throat remained dry for some days after the swallowing of food was resumed. The legs could be moved before the arms and the feet could always be manipulated better than the hands, which did not recover the power of executing such complicated movements as feeding himself, buttoning the collar, and so forth, for a fortnight or more after he was thoroughly awake.

The first reflex observed was the eyelid on irritating the conjunctiva, next the facial muscles, and then the legs and other parts of the body; the hands and arms apparently last. About the 12th he would mutter a few words unintelligibly when strongly roused; they had a far-off, tired, sibilant sound, as is often observed in severe illness with dry lips and tongue, and it seemed to be a difficulty of articulation from incomplete muscular control; later a wrong word was sometimes used or a whole one forgotten. The senses of taste and smell seemed to be blunted for quite a time; sight and hearing were apparently not much affected. No cutaneous eruption was observed at all, though the skin had the dusky, dirty color mentioned above.

The patient lay sound asleep from April 25th till May 12th, a period of eighteen days, and for three days longer was asleep most of the time.

The treatment consisted of the exhibition of nutritive enemata, electricity, strychnia, alcoholic stimulants, diuretics, frictions of the skin, and baths, quinine, iron, and, later, cod-liver oil. Altogether 1890 grains, or about four ounces, of bromide of sodium were taken in one week.

The patient assured me the latter part of the month of May that he had lost all desire to resume his morphia, but he was left in such an apathetic state from his bromide that I felt that his statement was of little value then. I understand that he faithfully kept his promise not to use morphia for several months, but that he resumed it again, I know from having been called to him later. As I had little hope of doing him any permanent good, I referred him to Dr. C. F. Folsom. Since then, within two years, I have received notice from a "specialist" in Lawrence of his "permanent cure." Yesterday I called at the house where he lived, and learned that he had resumed his morphia and was taking with it at the same time small doses of atropia. He is entertaining the idea of beginning another "cure."

It has fallen to my lot to treat but few cases of morphia or opium taking. Those whom I have seen have mostly been at the Carney Hospital, where we could perfectly control their movements. The chief difficulty the patients have experienced has been a restlessness and sleeplessness which was at first hard to control. The opiate has been left off by rapidly diminishing the dose during the course of a week. I have never seen a very bad case, and so am little able to judge of the comparative merits of the method by Mattison and the ordinary ones. That his method as laid down in the paper referred to is not devoid of danger in some cases I am convinced. In fact, I am told of a fatal result in one case treated by the gentleman himself. That, properly watched, and the drug suspended when the patient becomes soporose, and elimination encouraged, it may prove of some service, I should think possible.

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REPORT ON THEORY AND PRACTICE OF MEDICINE.

BY GEORGE B. SHATTUCK, M. D.,

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I.

COMA (THE SO-CALLED DIABETIC COMA) THE RESULT OF AUTOCHTHONOUS INFECTION THROUGH ABNORMAL PROCESSES OF DECOMPOSITION.

Last year[1] we gave an abstract of an important contribution from Dr. Fr. Th. Frerichs to the clinical history of the so-called "diabetic coma" and of sudden death in diabetes, in which he describes three quite different forms of sudden death in diabetes arising from different causes not understood, the acetonuria, when present, being regarded merely as a symptom. Since then Dr. H. Senator, in an address[2] before the Berlin Medical Society, has approached the subject from a still broader point of view, and argues, not only with Frerichs, that the term acetonæmia should be discarded, but that the adjective "diabetic" should be given up as in any way characterizing the picture, and that we should retain simply the term Coma from Self-Infection. Senator is led to take this position from having on various occasions observed much the same picture as that presented in "diabetic" coma in several other diseases, and notably in pernicious anæmia. He acknowledges the same ignorance as Frerichs as to the nature of the poisonous products evolved within the economy, but does not think that they should be regarded as peculiar to diabetes. There are probably a number of these products, and it is also probable that one or more of them are common to several different diseases.

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[1] Journal, vol. cviii., p. 295.

[2] Zeitschrift fur Klinische Medicin, vol. vii., p. 235, 1883.

Senator sums up his consideration of the subject in the following propositions: —

(1.) Acute and chronic dyscrasias may arise not only by the retention of normal excreta, but also by the absorption of abnormal (poisonous) products of metamorphosis formed in the body itself, as well as by an abnormal collection of otherwise common substances.

(2.) The most common source of such autochthonous dyscrasias springs from anomalies of the digestive apparatus, and next from diseases of the bladder[1] and from extreme anæmias.

(3.) The consequences of such dyscrasias impress themselves especially upon the nervous system and the kidneys.

(4.) Next to uræmia the most characteristic of these acute nervous affections is the group of symptoms described by Kussmaul as "diabetic coma," the cause of which is to be sought in various toxic agents.

(5.) This group of symptoms of Kussmaul's may develop itself in the course of other serious maladies besides diabetes mellitus, as, for instance, in pernicious anæmias, and is not necessarily associated with the development of the wrongly so-called "aceton reaction" of the urine, the red reaction to chloride of iron.

COMA CARCINOMATOSUM.

Under the above title v. Jaksch,[2] Professor Nothnagel's assistant, contributes to this subject of "coma from self infection" a case of carcinoma of the stomach in which death was preceded for seventy-four hours by a coma resembling in all respects the "diabetic coma," the urine containing aceton and diacetic acid in large quantities, but no sugar. The patient's strength was good at the time the coma made its appearance, and the cachexia was not marked. At the autopsy the kidneys were found to be healthy, and although changes were present in the lungs they were not of a character to account for the coma and peculiar respiration; such pulmonary changes, however, suggest Penzoldt's view that deficient excretion by the lungs — the usual channel — favors the poisonous action of the aceton upon the economy.

V. Jaksch had previously seen three cases of diabetes terminating in coma, and, although in each of these cases the pathological conditions revealed by the autopsies were entirely different, the symptoms preceding death were the same. In these cases, also, diacetic acid was present in the urine in large quantities for a considerable time. V. Jaksch himself has elsewhere[3] reported numerous instances of diaceturia unattended by coma, but in regard to these he states that the diaceturia was present only during a limited period of a few days, and accompanied by high fever. Whether the lungs were crippled in any of these he does not state. He assumes a non-committal attitude as to the connection of the diaceturia with the coma, and is engaged upon a further study of the subject.

In a previous paper,[4] the result of studies in the chemical laboratory at Prague, v. Jaksch divides pathological acetonuria (a small quantity of aceton is common in the urine of health) into four forms: (1) febrile acetonuria; (2) diabetic acetonuria; (3) acetonuria in certain forms of carcinoma, of which he had observed three cases at that time, ending in rapid dissolution though not in coma; (4) acetonuria resembling that present in the so-called acetonæmia of Kaulich and Cantani.

ACETONURIA. IS ACETON A POISON CAUSING INTOXICATION AND COMA.

Professor Penzoldt,[5] of Erlangen, not satisfied with the negative conclusions drawn by Frerichs from the laboratory studies of his assistant, Dr. Brieger, as to the poisonous properties of aceton, pursued the subject by further experiments upon rabbits. Frerichs found that large quantities of aceton could be introduced into the circulation of men and of dogs without visible effect, and concluded it was probably an innocuous resultant of a chemical process, although decided effects were produced upon rabbits, Penzoldt finds with rabbits that by retarding excretion, which takes place largely through the lungs, after its exhibition intoxication, hebetude, and coma follow; he also obtained less marked effects without influencing excretion. The disabling effect of diabetes at certain stages upon the lungs is well known, and Penzoldt's experiments indicate a legitimate comparison between uræmia attendant, under suitable conditions, upon renal incompetency and acetonæmia attendant, under suitable conditions, upon pulmonary incompetency. Penzoldt merely claims, as the result of his study, an increased probability, but by no means a proof, that aceton is an active agent in producing diabetic coma.

Dr. Mackenzie, on the other hand, in commenting on the analysis of the cases at the London Hospital (printed below) says: There is another circumstance that influences the occurrence of coma, though I am not aware that any one has drawn attention to this point, and that is freedom from, or only slightly developed, affection of the lungs. Thus in my series, in the nineteen fatal cases, the lungs were found after death unaffected in seven; in three, in which there was no necropsy, there were no signs of disease in the chest during life, and the mischief in the lungs was only recent in four; so that there was either no pulmonary disease, or only recent, and in some slight mischief in fourteen out of nineteen cases of diabetic coma. This has very important prognostic significance, for when well marked signs of disease of the lungs are discovered in a case of diabetes the probability is that the case will assume the characters of a rather rapid form of (pneumonic) phthisis, the sugar lessening as the pulmonary disease advances, and usually disappearing from the urine prior to the death of the patient. On the other hand, when pulmonary disease is absent or slight the occurrence of coma is more to be feared, especially the younger the patient, and the more acute the disease. It is necessary, in order to understand the pathology of diabetic coma, to consider its mode of oncoming and special characters.

ANALYSIS OF FATAL CASES OF DIABETES AT LONDON AND GUY'S HOSPITALS.

Dr. Stephen Mackenzie,[6] with the assistance of Dr. Gabbett, medical registrar, has recently analyzed the records of all the fatal cases of diabetes in the

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[1] Sir Andrew Clark's catheter fever.

[2] Wiener Med. Wochenschr., Nos. 15 and 16, 1883.

[3] [illegible]

[4] Zeitschr. f. klin. Med., v., p. 346, 1882.

[5] Deutsches Archiv f. klin. Med., vol. xxxiv., p. 127.

[6] British Medical Journal, April 7, 1883, page 665.

London Hospital during the last eight years and a half, and the results are given in the following table: —

Analysis of all the Fatal Cases of Diabetes in the London Hospital, from the beginning of 1874 to Midsummer, 1882.

Death by coma; no gross disease found post mortem			7
Death by coma: no post-mortem examination	No signs of pulmonary or other visceral diseases during life	3	4
	With pulmonary disease during life	1	
Death by coma	Recent pneumonia or phthisis	4	8
	Old pneumonia or phthisis	4	
Cerebral hæmorrhage			1
Cerebral meningitis; coma			1
Cerebral tumor			1
Spinal cord disease and phthisis			1
Stricture of urethra; suppurative nephritis; coma			1
Scrofulous nephritis			1
Pneumonic phthisis			9
Scirrhus of pancreas; sudden collapse			1
Gangrene of foot: death rather sudden			1
Dermoid ovarian cyst: calcified mesenteric glands			1
			37

Dr. Frederick Taylor[1] gives an analysis of fatal cases of diabetes at Guy's Hospital as follows: —

Coma	No visceral lesions	14	26
	Visceral lesions inactive	3	
	Visceral lesions active	7	
	No post mortem	2	
Coma (diabetic ?): renal disease			3
Pneumonia: influence of coma doubtful		1	3
Coma absent; no post mortem		2	
Phthisis, pneumonia, Bright's disease, peritonitis without coma			11
			43

French clinicians seem to meet with diabetic coma but rarely, and are inclined to regard the greater number of cases reported from Germany and England as due to the greater consumption of alcohol.

SUMMARY.

As the result of the contributions of Frerichs, Senator, v. Jaksch, Penzoldt, and others, the following statements may be made: —

(1.) The so-called "diabetic coma" is only one of several similar forms of intoxication in different diseases.

(2.) Aceton, or diacetic acid,[2] may still be proved to be a poisonous agent in the production of this condition, but it can in any case be but one of a number of such agents evolved within the system, and the name "acetonæmia" is unsuitable at present. Other substances, it should not be forgotten, also give the red reaction to chloride of iron.

(3.) Certain pathological conditions (of the lungs?) *may* be necessary to allow the poisonous action of diacetic acid upon the economy.

(4.) A better knowledge of the whole subject of the formation of poisonous agents within the economy under favorable conditions may reasonably be expected from physiological chemistry, and of their mode of action from further clinical observation.

(5.) The physiological hypotheses explanatory of the sense of fatigue as being the result of such agents, and the evolution of the so-called "ptomaines" in dead bodies point in this direction.

HEREDITARY POLYURIA.

M. Weil[3] reports a striking instance of polyuria as a family characteristic. He investigated the medical history of ninety-one members of the family of a patient, the subject of polyuria (diabetes insipidus), of whom seventy were living at the time, and found that no less than twenty-eight were polyuric. These polyurics had, as a rule, enjoyed good health, and many reached advanced age without any treatment. Weil expressly excludes imitation (canine polyuria) as an explanation in these cases, but it is difficult to avoid a suspicion of it.

II.

MYXŒDEMA AND CRETINISM AS DEPENDENT UPON CHANGES IN THE THYROID GLAND.

At a recent meeting[4] of the Clinical Society of London (November 23, 1883) the exhibition of a typical case of myxœdema in a female by Dr. Drewitt gave rise to a discussion, and especially to some remarks by Dr. Felix Semon, who was present, which were certainly interesting, and may eventually throw more light upon the now obscure ætiology and pathology of this disease, which clinically is already pretty accurately mapped out. The gross resemblances of myxœdema and cretinism have struck many observers, and Sir W. Gull in describing the former disease, in 1873, was so much impressed by them that he termed it "a cretinoid state supervening in adult life in women," his cases having occurred — as is most often the fact — in women and those well advanced in the child-bearing period. Since then atrophy of and changes in the thyroid body have been observed by Dr. Ord, to whom we owe the name myxœdema, and others incidentally in not a few cases of the disease.

At this meeting of the Clinical Society Dr. Semon referred to a paper by Dr. Kocher, Professor of Surgery at the University of Berne, read at the twelfth Congress of German Surgeons held in Berlin last April, on the Extirpation of Goître and its Consequences. His experience was based upon 101 total or partial extirpations, and he discussed in the second part of the paper the consequences of the operation. His attention having been called by the subsequent medical adviser to the marked cretinoid condition of a patient upon whom he had operated some years previously, in 1874, he was so much struck by the extraordinary changes which had taken place that he immediately communicated with all those upon whom he had operated to secure an examination. He was able to obtain the attendance of only thirty. In sixteen of these cases a partial extirpation only had been made, that is, one lobe with or without the isthmus had been removed. In all the cases belonging to this category the result of the operation had been an excellent one, that is, the dyspnœa for which the partial extirpation had been performed had disappeared, and the general health had suffered in no respect. Matters, however, were entirely different with regard to the eighteen patients on whom total extirpation of the thyroid body had been performed, and who put in a personal appearance. Of these eighteen, two only showed an undeteriorated, or even improved, state of health. But it was a most remarkable circumstance that in one of these two cases a small accessory thyroid gland had undergone a hypertrophic change, and that in the other a recurrence of the goître had taken place. All the remaining sixteen patients showed more or less considerable derangement of their general health, the changes being much more developed in the oldest cases than in those more recently operated upon. These changes were therefore of a distinctly progressive character. As to the nature of the changes themselves, they were, in the order as related by Professor Kocher, the following:

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[1] Guy's Hospital Reports, xxv., p. 147.
[2] Diacetic acid = aceton and carbonic acid.
[3] Wien. Med. Presse, No. 40, 1883.
[4] Lancet and Times and Gazette, December 1, 1883.

A few months after the operation early fatigue, weakness, and sensation of heaviness in the limbs were complained of. In many cases these were preceded by actual pains in different parts of the body. Soon afterwards a sensation of coldness, especially in the extremities, was superadded. In winter time the hands and legs swelled, became bluish-red and cold, and the patients suffered from chilblains. The mental activity decreased; thought, speech, and movements became slower. At the same time the patients were themselves painfully aware of these facts. Simultaneously with the above symptoms swellings of the face and body made their appearance. They were sometimes at first only transitory, but soon became lasting features. The parts most and earliest affected were, as a rule, the infra-ocular region and the eyelids, which showed a somewhat transparent swelling; later on, the nose became thick, the lips coarse, hands and feet swollen, and the waist stouter; the skin became dry, desquamated a little, was infiltrated, and its elasticity lost; it could only be lifted in thick folds; the hair fell out. A most marked symptom in the more progressed cases was anæmia. Examination of the blood showed a relative richness of leucocytes, inasmuch as the number of the red blood corpuscles was greatly diminished. In the cases in which the patients at the time of the operation were still growing the development became most markedly arrested after the operation. Rarer symptoms were slight dysphagia, giddiness, and headache. Ophthalmoscopic examination, made in a number of cases by Professor Pflüger, did not reveal anything abnormal beyond remarkable narrowness of the arteries. Professor Kocher concluded his description, of which the most prominent features only were given in this epitome, by the remark that the relationship of the above complexity of symptoms to idiocy and cretinism was unmistakable. Being himself unaware of the existence of myxœdema, he proposed for the affection he described the name of cachexia strumipriva.

Dr. Semon pointed out that observations similar to Professor Kocher's had been made by Professor Revardin, of Geneva; that scarcely a symptom was present in myxœdema which was not met with in the cases of total extirpation, and, on the other hand, one symptom only had been observed in a certain number of these cases which was not present in myxœdema, namely, the arrest of the growth of the body after total removal of the gland in children, but this was explicable by the fact that myxœdema was essentially a disease of adult life. Professor Kocher's observations seem to indicate that there are three conditions closely allied to each other, and having in common either absence or probably complete degeneration of the thyroid body, namely, cretinism, myxœdema, and the state after total removal of the thyroid body.

A committee should be appointed by the Society to investigate and report upon this subject. Its report would naturally be awaited with much interest. In the course of the subsequent discussion of myxœdema Dr. Ord said in regard to treatment that in more than one case he had recently seen progressive improvement up to apparent cure under jaborandi; in about fifteen other cases he had seen also progressive improvement under this treatment, and he now used it in all cases, giving the tincture of jaborandi in half-drachm and drachm doses for months. Others, however, have been much less fortunate.

In connection with the subject of myxœdema it may not be amiss to record, as a matter of bibliography, the report of another typical case by Dr. Robert Kirk.[1] The patient was a woman in middle life who had borne six children, and been subjected to a good deal of suffering, mental, moral, and physical, a history which corresponds with a large number of previously reported cases. There had been a syphilitic exposure, which is an exceptional feature and may be considered incidental. All the other clinical features correspond closely with the type of the disease as now recognized.

III. ACUTE GONORRHŒAL RHEUMATISM.

Dr. Davies-Colley[2] records a number of cases of this affection, varying somewhat in character and in their history. The obstinate resistance to treatment and chronic course of some of these rheumatoid cases make welcome any well-considered contribution to their ætiology and treatment. The present writer uses the limiting adjective in so wide a sense that it should not be understood that the discharges from the genital organs which give rise to these inflammations are necessarily gonorrhœal; he suspects that a balanitis or even a leucorrhœal discharge may be sufficient cause. His experience coincides with that of several French observers as to the not infrequent occurrence of cardiac complications, especially in the chronic cases.

He believes that several distinct affections are often confused together under the name gonorrhœal rheumatism, which he enumerates as follows: —

(1.) *Gonorrhœal synovitis*, a chronic affection, occurring in the male, generally in the knee-joints. Very rarely it is acute, and goes on to suppuration.

(2.) *Gonorrhœal arthritis* (attacking especially the ligaments), an acute affection, occurring in the female quite as often as in the male; as a rule, attacking at the outset several joints, and afterwards confined to one, most frequently the elbow-joint, affecting especially the fibrous tissues of the joint, and only secondarily the synovial membrane and cartilages.

(3.) *Gonorrhœal inflammation of fibrous structures not connected with the joints*, for example, the plantar fascia, sclerotic, iris, the peri- and endocardium; this gonorrhœal inflammation of the plantar fascia sometimes occurs in the acute form. Inflammation of the first three structures usually occurs in connection with chronic gonorrhœal synovitis. In the last two situations inflammations seem to be generally associated with gonorrhœal arthritis.

With regard to the second class his remarks are summarized in the following résumé: —

(1.) It usually occurs during the acute stage of gonorrhœa, or some purulent discharge from the genital organs, in adult patients under middle age.

(2.) It occurs as often in females as in males, if not more often. Of twelve cases recorded by the writer nine were in females.

(3.) It may attack any joint, but most often the elbow-joint. Eight of the writer's twelve cases were in the elbow.

(4.) At first it attacks several joints, like acute rheumatism, and then confines itself, as a rule, to one.

(5.) Its seat is the fibrous tissue of the joint. There are great œdema, redness, pain, and tenderness. The ligaments are softened, and the cartilage may be disorganized. There is but little synovial effusion, and constitutional disturbance is but slight.

[1] Glasgow Med. Journ., January, 1884.

[2] Guy's Hospital Reports, vol. xii., p. 187, 1883.

(6.) It may be confounded at first with acute rheumatism, later on with phlegmonous erysipelas, bursitis, lymphangitis, phlebitis, gout, and pulpy disease of the synovial membrane.

(7.) It rarely, if ever, suppurates, but is especially prone to set up fibrous anchylosis.

(8.) The best treatment is to cure the discharge, keep the joint perfectly still, and apply uniform pressure as long as the acute stage lasts, and then to use passive motion.

(*To be concluded.*)

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

February 13, 1884. Meeting called to order at eight o'clock. **Dr. R. T. Edes**, chairman, presiding. The records of the last meeting were given in summary, and approved.

The paper of the evening was presented by **Dr. S. W. Abbott**, Health Officer, Massachusetts State Board of Health, Lunacy, and Charity, on

MODERN LEGISLATION IN REGARD TO THE ADULTERATION OF FOOD AND DRUGS,

which is printed in full on page 241 of this number of the Journal.

Dr. B. F. Davenport, State Analyst, then described the means employed in the detection of impurities in various medicinal substances as follows: —

As analyst under the Adulteration Act I have, as the result of my first year's work, reported to the State Board upon 680 samples of about 100 different kinds of pharmacopœial drugs, of which I found 284, or 41.76 per cent., to be adulterated within the meaning of that act. This defines as an adulteration in drugs, including all medicines for internal or external use, antiseptics, disinfectants, and cosmetics (1) if when sold under or by a name recognized in the United States Pharmacopœia it differs from the standard of strength, quality, or purity laid down therein; (2) if when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia or other standard work on materia medica, it differs materially from the standards of strength, quality, or purity laid down in such work; (3) if its strength or purity falls below the professed standard under which it is sold.

Those drugs have principally been selected for examination which were of the greatest importance as medicines, and which were known to be especially liable to vary from the standard quality, the profit of debasement being great, and detection thereof difficult from requiring special technical knowledge.

Of chiefest importance, therefore, are opium and cinchona bark, with the many preparations made therefrom.

Of the forty-six samples of powdered opiums examined hardly one of the not evidently reduced samples fell below the twelve per cent. of morphine, the minimum limit of variability allowed by the United States Pharmacopœia, 1880, and but one exceeded the maximum limit of sixteen per cent. Thus the limits of the United States Pharmacopœia seem to cover all fair samples likely to be found in our market, of which the average morphine content is about fourteen per cent. The 1880 Revision of the United States Pharmacopœia seems, upon a superficial view, to have raised the minimum limit of morphine strength of powdered opium two per cent., but it is not really so. The minimum limit of twelve per cent. required by the Revision of 1880 is by an excellent process of assay, in which all the requirements are given in full detail, while the minimum of ten per cent. required by the Revision of 1870 is by a totally different process in which many of the details needed for obtaining any definite results are totally omitted. For instance, the concluding sentence of the method is, when speaking of the crude crystals which have been obtained, "To purify these boil them with two pints of alcohol until they are dissolved, filter the solution while hot through animal charcoal, and set aside to crystallize." Now according to my own experience in working upon an average opium this amount of alcohol of that strength will not dissolve all the morphine crystals obtained, but it requires about half as much more alcohol. Then the amount of the animal charcoal to be used is not mentioned, a very material point considering that it absorbs quite a per cent. of the morphine, which cannot be afterwards all recovered from it even by repeated additions of boiling alcohol, yet the 1870 United States Pharmacopœia does not provide for the addition of the alcohol even once. Then there is no limit given of the time to set it aside to crystallize, another very important defect, considering that the given amount of alcohol would hold in solution, even when cold, about one quarter of all the morphine from a ten per cent. powder. All this would be lost to the assay unless the alcohol be set aside long enough to deposit it by evaporation. It can thus be very readily seen that the process of assay by which the United States Pharmacopœia, 1870, required a powdered opium to yield at the least ten per cent. of morphine might be honestly conducted so as to require a considerably higher morphine per cent. than the United States Pharmacopœia, 1880, requires for its twelve per cent. by a very definite method. Conducted, however, even to the best advantage for the sample of opium, I think that the two standards will be found to be just about the same. In other words, that although the Revision of 1880 seems to have raised the minimum standard for powdered opium two per cent. it has not really raised it at all.

Now in regard to tincture of opium there prevails much unfounded apprehension on account of the great supposed increase in its strength. This, according to the last edition of the United States Dispensatory, is not sustained by the real facts. It is founded, I believe, principally upon the assertion of Dr. E. R. Squibb that he will, since the last Revision of the United States Pharmacopœia, put now six grains of morphine into one fluid ounce of his laudanum instead of only four grains as formerly, thus making an increase of fifty per cent. in *his* morphine strength, according to the Dispensatory, "allowing the opium to be wholly exhausted of its active principles, one grain would be represented by very nearly eleven minims. According to the United States formula of 1880, while in the United States Pharmacopœia, 1870, one grain was represented by 12.8 minims." This represents an increased strength of only fourteen per cent. of morphine between the tincture opii, United States Pharmacopœia. 1870 and 1880, that is, the grain dose is given in about twenty-two drops instead of twenty-five as formerly. This difference of three drops only is a less variation in quantity than would probably be made by successive attempts of the same or different persons to drop out the old twenty-five drop dose. So that I think physicians need not under *ordinary* circumstances have any anxiety as to whether it will be a tincture made according to the United States Pharmacopœia 1880 or 1870 that will be dispensed in their prescriptions. Yet it would be well, for a while at least, to write (U. S P., 1880) after the name of any pharmacopœial preparation which physicians particularly desire to be *surely* of the full strength, as what would thus be likely to be dispensed would more probably be of the proper quality, and the writing thus would show the pharmacist that the physician was observant and particular in such details. This is a much more reasonable way than writing the name of any particular manufacturer after pharmacopœial preparations, for it allows the pharmacist to put up his own or any one's make that he is ready to guarantee, but holds him to the full responsibility of that which he dispenses. He could not, however, be thus held if he put up a particular make which was ordered, even if this was not more than a quarter of the full proper strength.

In my examination of 100 samples of laudanum collected from all over this State, the pharmacopœial limits being between 1.2 and 1.6 per cent. of morphine, I have found samples containing all the way from 0.33 to 1.87 per cent. of morphine, thus one six times as strong as another, and with specific gravity varying from 0.921 to 0.997. Four samples exceeded the 1.6 per cent., and eighty-two fell below the 1.2 per cent. The average per cent. was 0.965, and the specific gravity 0.953. Forty-five samples contained about one per cent. of morphine as was required by the United States Pharmacopœia, 1870, if assayed by the modern process of United States Pharmacopœia, 1880. The best pharmacists of this city are now generally making up their tincture to the average United States Pharmacopœia standard of 1.4 per cent. morphine, or about the six grains to the fluid ounce. The ten samples of morphine salts examined have all come up to standard.

Of citrate of iron and quinine forty samples were examined, and were found to contain all the way from 3 per cent. to 14.37 per cent. of quinine, the present United States Pharmacopœia requiring 12 per cent. only, while the previous one required 16 per cent. Of these samples 82.5 per cent. fell below the present standard, two makers alone having been found to have their preparation generally fully up to standard. Of about thirty samples of quinine salts examined 28.5 per cent. contained an excessive amount of the cheaper cinchona alkaloids.

Only two out of a dozen powdered jalap samples contained the proper amount of resins, while out of ten samples each of the bromide and iodide of potassium not one came up to standard; trade absurdly demanding that the crystals should be, not translucent and colorless, and therefore *possibly* pure, but opaque and porcelain white, and therefore *of necessity* impure, with excess of alkali, which renders them unfit for use with alkaloids, syr. ferri iod., or any other like combination which might be desired.

Dr. Ernst remarked that by employing the more recent manufactures by Squibb the physician would obtain a much larger dose than in the earlier preparations. In the case of tincture of opium the present preparation contains fifty per cent. more opium than the former tincture.

Dr. George B. Shattuck asked what were the poorest results obtained by analysis of laudanum and citrate of iron and quinine.

Dr. Davenport stated that the most common result was to find a content amounting to from one fourth to three fourths the amount required by the Pharmacopœia in analysis of tincture of opium, and in citrate of iron and quinine any amount from one third to the normal quantity.

Dr. Morton Prince suggested that if the firms who manufacture and dispense standard goods were made known to the profession it might be the means of protection from imposition on the one hand, and aid in driving the spurious articles out of the market on the other hand, both of which objects it would seem desirable to accomplish.

Dr. C. Harrington, of the Harvard Chemical Laboratory, gave a somewhat detailed account of the analyses of various articles of food under the auspices of the Board of Health, as follows: —

About three hundred samples of milk have been subjected to analysis. The milk was obtained from all parts of the State, and was secured in each instance from the regular supply furnished to customers. Milk should contain under normal conditions about thirteen per cent. solids. In some specimens the solids were present only to the extent of nine per cent. The first one hundred samples of milk and the greater part of the second and third hundreds were obtained in Boston, and of these samples more than seventy per cent. were adulterated. The milk from the western parts of the State, particularly from Berkshire County, was found to be uniformly freer from adulteration than that from the eastern counties. The poorest samples of milk were invariably those obtained from the shops and groceries in which it is sold at retail. Milk directly from the cart was always of better quality. In certain large towns the milk supply was far superior to that in certain other towns of equal population. Thus Lawrence, Worcester, and Springfield enjoy purer milk than do Lynn, Chelsea, and Somerville. In Worcester the solid constituents of milk averaged from twelve to sixteen per cent., while in ten cases which were prosecuted the proportion of solids was in none more than nine per cent.

Various articles of food were found to be adulterated in fifty per cent. of the samples. Butter was occasionally found adulterated with oleomargarine. Tea was adulterated to a greater or less extent, one sample containing twenty-six per cent. of sand. One specimen of coffee was found to contain twenty per cent of chicory. Two hundred samples of spices were examined and all were found to be bad. Of twenty-four samples of mustard only two were found to be good. Fifteen different brands of mustard in boxes were found to consist of wheat flour, and turmeric in a greater or less degree. Various samples of pepper were analyzed and found to contain chiefly only dirt. Spice mixture is found to consist mainly of similar material, and sells for forty cents per pound. Several specimens of pure olive oil from Leghorn were analyzed, and were found without exception to consist entirely of cotton-seed oil from the Providence Oil Company.

In cereals and bread no adulterations were detected. Bread contained neither alum nor copper. Some specimens contained an excess of moisture, but this can hardly be called an adulteration. Cocoa and meals, sago and tapioca were not found to be adulterated.

Dr. J. C. White asked the minimum standard of milk solids in cases which were prosecuted.

Dr. Harrington stated that no case had been prosecuted in which there was a solid content of eleven and one half per cent.

Dr. White alluded to a case in which no adulteration could have possibly taken place, in which the amount of solids reached only nine per cent.

In reply to a question, Dr. Harrington stated that none of the milk examined was rendered in any way injurious by adulteration, that nothing but the cream had been removed, and nothing but water had been added to it. Neither of these changes would make the milk directly injurious or dangerous.

Mr. G. F. Piper, attorney for the Board of Health, who was present by invitation, spoke as follows: —

Prior to the passage of the statute of 1882, entitled "An Act relating to the Adulteration of Food and Drugs,"[2] the legislation upon that subject was confined to fraudulent adulterations and adulterations injurious to health. The fraudulent conduct, or the guilty knowledge, or the fact that the adulteration was injurious to health, therefore, became elements, upon a complaint, which the government was bound to prove, and the great difficulty of proving these elements virtually made the statutes upon that subject a nullity. Very few prosecutions accordingly resulted. This form of legislation was not broad and stringent enough to reach the many cases of substitution of one article for another, or, as in the case of a drug, its manufacture below the ordinary standard of strength and purity usually adopted and recognized, or a case where some valuable constituent may have been removed and a poorer one substituted, and the many other various forms of commercial frauds existing. The statute of 1882 broadened and extended this class of legislation, its purpose being to reach all cases which the previous legislation did not reach.

In the case of drugs it adopts a standard and makes it an offense if the party selling sells an article varying from that standard, if sold under a name which carries with it a recognized standard. If the drug sold is one recognized in the United States Pharmacopœia, it adopts that standard. For instance, tincture of opium, according to the Pharmacopœia of 1880, contains 1.20 percentage of morphine. A druggist therefore who sells tincture of opium of less morphine strength than that standard is liable to prosecution.

If the drug is sold under a name not recognized in the United States Pharmacopœia, but which is found in some other Pharmacopœia or other standard work on materia medica, it would be an offense under the statute if it differed materially from the standard of strength, quality, or purity laid down in such work. And again, it would be a violation of the statute if the strength or purity of the drug fell below the professed standard under which it was sold.

In the case of food, the statute defines also what shall be deemed an adulteration; for instance, mixing any substance or substances with the article so as to reduce, lower, or injuriously affect its quality or strength; substituting any inferior or cheaper substances; abstracting any valuable constituent, or selling an article under the name of another article.

The statute absolutely prohibits the sale of any article of food or any drug adulterated within the meaning of the act.

The element of fraudulent conduct, or guilty knowledge, or criminal intent, does not enter into the offense. If the party selling violates any of the provisions of the statute he is liable to the penalty therein set forth, without regard to the question whether he knew or did not know what the article was he sold. For the protection of the public, the statute imposes upon the tradesman the most extreme caution in selling his goods. He is bound to know what he is selling. This, certainly, is no injustice, for the purchaser buying and paying for a pure article is entitled under the law to the greatest protection.

The tradesman by the exercise of proper caution can inform himself of the nature of the article sold, while the purchaser must rely, and does rely, wholly upon the good faith of the tradesman. There is every reason, then, why the burden should be placed upon the seller and not upon the purchaser.

The statute imposes the duty of enforcing the provisions of the statute upon the State Board of Health, Lunacy, and Charity. The enforcement of similar laws, for example, the laws against the adulteration of milk, and the laws against the adulteration of vinegar, have heretofore been left with local inspectors, appointed by the different towns and cities throughout the Commonwealth. This mode of enforcing a law has proved generally to be an utter failure.

The local inspector is usually some individual who has been appointed for some political service rendered, who may have no qualifications for the office, and whose only purpose and desire often are to make the greatest money's worth out of his office. The salary is usually very meagre, and generally no appropriation is made for the expense of enforcing the law. Accordingly little work is usually done and the adulterator flourishes.

The milk inspector of Boston recently testified before the Legislative Committee on Public Health that he had made six hundred examinations of milk during the past year, and thirteen persons had been convicted of selling adulterated milk. His practice was, he said, to go around the city early in the morning, carrying with him his lactometer, and placing it in the milk he in that way decided whether the milk was adulterated. It is well known that this method of determining whether milk is adulterated is very unreliable and unsatisfactory. This may to some extent account for the few prosecutions and the condition of the milk market in Boston, in which, according to the statement of Dr. Charles Harrington, chemist to the State Board of Health, ninety per cent. of the milk sold during the past year was adulterated, and badly adulterated.

The State Board of Health, Lunacy, and Charity, by reason of the qualifications of its members and its freedom from local and political influences, is more likely to be a much more efficient agency to be intrusted with this work.

In November last the State Board commenced its prosecutions. The first prosecutions were against grocers and provision dealers in Boston for selling adulterated milk, and these were subsequently followed up by others.

Ten convictions have been secured.

Complaints were entered during the same time against several parties for selling adulterated tincture of opium, and in one case for selling adulterated citrate of iron and quinine.

The analysis of the tincture of opium sold showed the following percentages of morphine: .38, .63, .79, .72, .81, where the Pharmacopœia standard of 1880 required 1.20. They were all convicted, with one exception, and in that case the adulteration was clearly proved, but the firm prosecuted testified that the tincture was sold by a young man in their employ who had no authority to sell, his duties being not those of a salesman but pertaining to another department. This firm escaped conviction in that way.

The first prosecution for selling adulterated tincture of opium was before the Central Municipal Court of Boston, and developed the question which Pharmacopœia was the standard by which these cases should be governed, whether that of 1870 or that of 1880.

The Pharmacopœia of 1880 was not published and in use in August, 1882, when the Food and Drug Act took effect. It was accordingly contended by the parties prosecuted that the Legislature must have had in view the standard of 1870, and that these cases should be tried and judged by that standard. On this first prosecution the tincture of opium was, in its morphine strength, below both the standard of 1870 and 1880, and the judge who tried the case found as a fact that the drug was adulterated, but did not rule upon the question which standard was in force. On the next prosecution before the chief justice of that court the question was again raised and presented, and a decisive ruling was made to the effect that the Pharmacopœial standard by which the drugs sold should be judged was that which was in use at the time when the sale was made, and accordingly ruled that the standard of 1880 must govern existing cases. This ruling has been followed by the other judges of that court.

On the prosecution for selling adulterated citrate of iron and quinine it appeared that the article sold varied from the standard percentage of the quinine according to the formula of the Pharmacopœia of 1880. The parties were convicted.

A prosecution was made against a dealer in vinegar, in Somerville, for selling a vinegar as a pure cider vinegar. The statute makes it an offense to sell as cider vinegar a vinegar not the legitimate product of pure apple juice, known as apple cider.

The chemist for the government testified that in his opinion the sample sold was a cider vinegar which had been watered. The chemist who was summoned by the defendant before the trial had been given full opportunity to test the sample. Upon the witness stand he testified that he had had a large experience in the manufacture and analysis of cider and cider vinegar, but he had in his experience never seen a cider vinegar with the small amount of acetic acid and residue which this sample contained. He further testified that the sample was to him very suspicious.

The judge, contrary to all precedents, ruled that it did not appear that any criminal intent existed or any fraudulent conduct. The counsel for the government suggested that it was not necessary for the prosecution to prove either elements, that the sale itself, under the statute, was a violation of law, and that no criminal intent, or guilty knowledge, or fraudulent conduct need be shown. He replied that that would be unconstitutional.

The defendant was discharged.

This principle has been decided time and again by our supreme court, and the ruling of the Somerville court in that respect was clearly and beyond question wrong.

I have been very much surprised at the position taken by the press of Boston in reference to these prosecutions. The reporters of three of our newspapers have told me that they have received orders not to report facts in reference to these prosecutions, and that articles that have been written by them for publication have been refused publication. I had supposed that in a matter of this kind that it was the duty of the press to advocate what seems to me to be the cause of the people. The purity of food and the purity of drugs should and must be a matter of great moment and importance. The reason of this course pursued by the press of Boston we may not know, but I think we can, each one of us, very clearly draw our inferences what that cause may be.

The physician is largely interested in the enforcement of this law. When he writes his prescription it is of the greatest moment to him as well as to his patient that it shall be filled out as he has written it, and according to the existing standard. A fixed standard is absolutely necessary, and the physician and the druggist must in unison adopt that standard.

At the recent hearing before the Legislative Committee on Public Health it was testified by one who had been a defendant in one of the prosecutions for selling adulterated tincture of opium that he did not believe in the Pharmacopœia, and he would leave it to the discretion of each druggist to fill out a prescription. Comment upon such a statement is unnecessary. Let, then, the physicians of Boston give their strong moral support and encouragement to the State Board of Health, Lunacy, and Charity in the enforcement of this law, and make it an efficient law, and not a dead letter.

(To be concluded.)

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

JANUARY 7, 1884. DR. E. G. CUTLER read a paper on a case of

PROTRACTED LETHARGY AFTER THE USE OF BROMIDE OF SODIUM

by an individual having the morphia habit.[1]

DR. BUNDY said that he had a case twelve years ago where the patient took two and a half ounces of bromide of potash with similar result; the patient was unconscious for two weeks, but gradually recovered. The disease was a habit of drinking whiskey and ether, but the bromide did not cure the trouble. There was entire loss of the power of coördination, and at the end of two weeks he was moved into another house without knowing it.

DR. CUTLER mentioned one fatal case where the drug was pushed to its limit, in which the patient sank and died in one week. In this case the kidneys did not work well.

DR. EDES referred to two cases reported by Dr. Schweig in the *New York Medical Record*,[2] in which excessive doses of bromide of potash produced similar results to those reported. Anæsthesia of the conjunctiva is rare.

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[1] See page 258 of this number of the JOURNAL.

[2] Vol. xi., page 841.

Dr. Folsom had seen a case where there was much physical depression, boils, etc. After excessive doses of bromide he gave large quantities of water to help eliminate the drug. After the effect passed off there was much insomnia. For three weeks after the taking of the bromide the patient had no desire for morphia, but it returned later. After this he had an interval of five months during which he gave up the morphia, but his suffering was so great that he began using it again, and says he shall never make another attempt to break up the habit. Dr. Folsom had seen cases where bromide of potash had been given for other purposes where the torpor had lasted as long as this. It seems to vary with different persons. In epileptics the bromides sometimes do good, but sometimes harm, as in the case of a young lady who was taking fifty grains three times a day without effect on the epileptic attacks, but who was suffering from the excess of bromide. When pushed to excess it may cause a mild form of silly mania.

Dr. Channing had seen cases of morphia habit where large doses of bromide of potash had been used, but without good result, and he considered the excessive doses as dangerous. He also thought chloral was not of much service in these cases.

After the shock of the bromide of potash passes off there may be a temporary relief, but the desire for opium returns. The treatment must be largely moral, and must depend on the patient. It is best to break off the opium as rapidly as possible, best in one week. Then bromides may be used occasionally for sedative effect.

Dr. Edes mentioned Laport, Indiana, as a headquarters for "morphia cures."

Dr. Davenport said that all the so-called morphia cures manufactured there contained opium, often in solution in glycerine, and colored with aniline. He spoke of the increase in the strength of the tincture from nine in one hundred to ten in one hundred, but said that the increase was not great enough to produce much effect in ordinary doses. He mentioned the assays which he had been making for the Board of Health of the strength of the tincture of opium sold in the shops. Variations had been found all the way from one quarter of the standard strength to fifty per cent. over this standard, but in the latter case a single druggist had made a mistake in compounding.

Dr. C. H. Williams read a paper on Intraocular Changes in Cases of Cerebral Tumor.

Dr. E. H. Bradford reported

A SUCCESSFUL CASE OF AMPUTATION AT THE HIP-JOINT.

The patient was a boy eight years old, whose hip-joint had been excised in July by Dr. A. T. Cabot for caries. The femoral shaft was found so extensively diseased that amputation was advised, but the parents' consent could not be obtained, and the patient's condition became gradually worse from long-continued diarrhœa. This, however, stopped in October, and in November amputation at the hip-joint was performed by Dr. Bradford. No shock followed the operation, and the boy steadily improved, at the present time, three months after the operation, having nearly doubled in weight, and being able to walk about with crutches freely. Sinuses persist from the pelvic disease, but the boy's condition is such as to justify the belief in a cessation of the carious process. Dr. Bradford mentioned that there were no less than forty-two methods described for amputation at the hip-joint. The chief anxiety is in regard to hæmorrhage. The method employed was suggested by Dr. C. B. Porter, who himself has employed it. The amputation is performed in two steps, — first an amputation of the femur as high up as is practicable, using Esmarch's bandage and tourniquet to control the bleeding. The vessels are then tied, and there is no fear of hæmorrhage while performing the second step, namely, the removal of the head and upper part of the shaft, which is done by a lateral incision and subperiosteally. The difficulty in disarticulation in the case reported was slight. Only a portion of the head remained. Where this is not the case disarticulation, as for excision, can be performed before the amputation is begun.

Dr. Cabot said the same operation might be applied to the shoulder-joint, for patients are often much benefited by the removal of these diseased parts and the constant drain on the system caused by their suppuration.

Recent Literature.

Hints on the Drainage and Sewerage of Dwellings. By William Paul Gerhard, Civil Engineer. New York: Wm. T. Comstock, 6 Astor Place. 1884.

This excellent work of three hundred pages contains much valuable information for all who are interested in the sanitation of dwelling-houses.

Physicians, householders, and plumbers will find in it many useful hints. The chapters on Traps, Plumbing-fixtures, and on the Removal and Disposal of Household Waste are especially full and well illustrated. The defects of various contrivances are clearly indicated, and modes of remedy suggested. The book contains nearly three hundred illustrations, which are sufficiently shorn of extraneous detail to render them intelligible to the non-professional reader.

Handbook of Eclampsia. By E. Michener, M. D. and Others. Philadelphia: F. A. Davis, Att'y, 1883.

This sextodecimo book of sixty-eight pages contains notes of forty-four cases of puerperal eclampsia, being "all which have occurred during the present century within a radius of several miles around Avondale, Chester County, Pennsylvania, so far as can be ascertained." The ostensible object of the book is the advocacy of blood-letting in all cases of puerperal eclampsia without discrimination.

Deference to the age of the chief author, who was an interne in a Philadelphia dispensary in 1816, and whose views of the pathology and ætiology of eclampsia do not conform to those held by modern authorities on this subject, forbids that freedom of criticism which the book should otherwise receive: and we will simply say that while we believe in the efficacy of blood-letting in certain selected cases, we do not believe in its indiscriminate use, especially in the cases of eclampsia occurring post partum. We cannot recommend the manual even "to the young and isolated physician" to whom it is inscribed; but we heartily approve of the advice given on the last page that "for the last three months of her term" a pregnant woman "should be kept under the observation of a competent medical adviser." C. M. G.

Medical and Surgical Journal.

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REPORTS ON CHOLERA FROM SURGEON-GENERAL HUNTER AND DR. ROBERT KOCH.

The fifth cholera report of Dr. Robert Koch to the German government, this one from Calcutta, and the report of Surgeon-General Hunter to the British Foreign Office on cholera in Egypt, the essence of which is contained in a paper read by him before the London Epidemiological Society on January 9th last, have again turned medical attention to the discussion of this disease. Dr. Koch's report, which was first published in the *Deutsche Med. Wochschr.*, February 14th last, and in the Berlin daily papers of the same date, is being republished and commented on by the medical periodicals, and Sir W. G. Hunter's remarks were made the special subject of debate at the adjourned meeting of the Epidemiological Society held February 13th.

There is one thing in common between the report of the German and that of the English investigator, each seems pretty well satisfied that he has found what he went out to seek, and the results in each case confirm the investigator in the preconceived views with which he departed on his mission. Surgeon-General Hunter is probably but little more certain to-day that cholera is endemic in Egypt than he was when first commissioned by government to ascertain the cause of the outbreak last June; and Dr. Robert Koch, notwithstanding his really scientific cast of mind and methods of work, would probably have been more surprised and disappointed than he was prepared to be had not the Imperial German Commission confirmed and enforced, wherever cholera was actually to be found, the results of the study in the Berlin laboratory on the cholera intestines imported from India.

The two reports have at least one other thing in common, namely, that whatever coloring they may lend or appear to lend to the views advocated or expressed by the respective writers, neither the one nor the other can impress the impartial reader, of whatever nationality, — and we are sorry the influence of nationalities should be felt in such questions, — as by any means conclusive of the correctness or value of the positions assumed.

The similarity in the attitudes of the two investigators toward the common subject, cholera, ceases with their both having preconceived views confirmed by their investigations. Hunter asserts that cholera is a non-contagious disease (typhoid fever may also be called non-contagious); hence he disbelieves in the existence of a specific germ, and consequently in the necessity of importation, and therefore seeks for, and believes he finds, the cause and origin of epidemic outbreaks in the condition of the country itself, the disease being endemic. Telluric influences foster the disease as an endemic, and favorable climatic or meteorological conditions light up an epidemic. What he learned in Egypt convinced him that cholera had been continuously present there in one form or another at least since the great epidemic of 1865. The following curious extract from Lord Bacon concerning the climatic and telluric peculiarities of Egypt was unearthed for the benefit of Dr. Hunter: —

"It is recorded, by competent observers, that if you take earth from the side of the Nile, and protect it from wet or waste, and weigh it every day, you will find that it remains always of the same weight until June 17th, when it begins to increase in weight, and continues to increase in weight during the whole time that the river is rising. This can be due to nothing but the air, and this is the more extraordinary, because it has been observed that just at that date it is the habit of grievous plagues to make their appearance at Cairo."

The Surgeon General had previously expressed himself on the point thus: —

"The frequency with which atmospheric phenomena have been observed in connection with outbreaks of cholera leads to the conclusion that they stand in close relation one to the other. Whether that be as cause and effect is perhaps hard to say. It is probable that it is to a combination of certain conditions of a cosmo-telluric character, of air, soil, and water (filth, as in Egypt, being a powerful factor), that the development of an epidemic is due. Given, as in Egypt, endemic centres, the peculiar atmospheric state noticed would probably act as an exciting cause in the immediate production of the epidemic outbreak."

The German Commission went out, not to find the cause of any one outbreak of cholera, but to study the disease and to find its ultimate *causa causans.* Koch evidently regarded the disease *à priori* as specific — whether contagious in any degree or not — exhibiting a specific germ, whose habitat was probably the bowel; this may be fairly presumed from his general attitude toward other epidemic diseases, and from his investigations at the laboratory of the Sanitary Bureau at Berlin. Instead of studying the Egyptian *circumfusa*, Koch devoted himself to the *dejecta* and especially, among the internal organs, to the bowel. The limited Egyptian experience (twelve cases of cholera, and ten autopsies) confirmed the observations made at home in regard to the presence of a certain *bacillus* in the walls of the small intestine without affording satisfactory proof of its specific character. The last and fifth report of Koch, dated Calcutta, January 7th, is based upon a further study of eight cases of cholera, and nine autopsies. The bacillus has continued a constant feature, and has been successfully isolated and cultivated, and its distinguishing characteristics carefully noted. Furthermore this bacillus has not presented itself except in the intestinal contents or walls of cholera victims.

The report offers no further evidence as to the relation of this micro-organism to cholera, and, though vague on that point, it is pretty plain that attempts to reproduce the disease by inoculation still remain unsuccessful. It is therefore in order to restrain excessive enthusiasm in regard to the "cholera-bacillus" of the small intestine, no less than it was in regard to the cholera microbion of the blood reported by the French Commission in Egypt, which Koch now with fine irony suggests in his report is probably nothing more nor less than the well-known "blood-plates," figured as far back as 1872 by Lewis and Cunningham in a report on microscopical and physiological researches concerning cholera.

It is not probable that the Germans will allow themselves to abdicate their judgment as to the bearing of Koch's observations, and we need not be overhasty to immolate ours in this country; the English are criticising Hunter's position very judicially; but it is pretty safe to predict that both Koch and Hunter will be ruled out of court by French scientists.

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ACTINOMYCOSIS OF THE PERITONÆUM AND ABDOMINAL ORGANS IN MAN.

Five cases of actinomycosis affecting the peritonæum and abdominal organs are reported from Vienna by Dr. Adolf Zemann,[1] assistant at the Pathological Institute there. The characteristic fungus colonies were found in all cases both in the purulent contents of the abscesses and in the tissues of the affected parts. The number of previously reported cases is small. Ponfick collected sixteen in all of his own and others, and these were published in his monograph on the subject, which appeared in 1882. These cases Ponfick divided into two groups, those which recovered and those which were fatal. The former group consisted of cases where the malady made its first appearance on the jaws, — preferably on the lower jaw, — and spread downward along the neck to the clavicle. The second group of cases comprised those in which the process announced itself by pains in the limbs or, more generally, along the spinal column and neighboring parts of the back, succeeded by pneumonia or pleuro-pneumonia of the left lower lobe. In a few cases these pains precede a prevertebral gathering which becomes a psoas abscess.

These five cases now reported seem therefore to be, not only a considerable addition to the existing observations of a but little-known pathological process, but also to enlarge the clinical description of the disease. Some of these cases ran their course with fever and others without. Zemann concludes from his study of them that the important point in the diagnosis of actinomycosis is the discovery of the pathognomonic fungus. Apart from such identification the disease can neither be diagnosticated from the part affected nor from the course which it runs, since the process may be febrile and acute, or almost without fever and chronic; in which latter case it manifests itself as an induration, as a chronic inflammation of serous membranes, as an inflammation in the bones or periosteum, or as an inflammation attacking the internal organs. All of which is demonstrated by the varied points from which the fungus gains access to the body, and by almost innumerable complications attendant on its presence.

Zemann's cases certainly tend to show that by no means so simple a picture as that given in Ponfick's monograph will suffice to represent actinomycosis.

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THE REFLEX EFFECT OF DEALING IN "FUTURES."

There can be no doubt that the character of the habitual mental occupation exerts a considerable influence upon the physical condition of men. That a very high degree of intellectual activity is not inconsistent with excellent general health and long life is a fact familiar to common observation, and is confirmed by published mortality records, from which it appears that the longevity of the members of the so-called learned professions is hardly exceeded by that of any other class in the community. It seems to be also well established that an alternation of the character of one's studies often is equivalent to a positive recreation. Thus we have recently met with the statement of an Englishman, eminent at once in the law and in literature, to the effect that after what would be a fair day's work in the former field he turned to his historical writing with a feeling of actual refreshment even greater than that to be obtained from mental inactivity. Thus dividing his time he was able to accomplish, without fatigue, fifteen hours' work per day.

The amount of actual labor of which the human mind and body are capable under well adjusted conditions is certainly very great. In all men of affairs of whatever calling, it is of course unavoidable that anxiety (whose exhausting tendencies are generally admitted) should to some extent be present. But it seems to be the fact that so far as the uncertainty has to do with affairs which are controlled by one's own powers it is less wearing than when such affairs are independent of one's own control, and entirely the sport of extraneous chance. Thus while the conductor of a legitimate business project is, perhaps, working under a higher pressure than the student of a pure science, his calling is yet more favorable to longevity than that of the stock operator. And, indeed, it is, perhaps, not unlikely that the great stock manipulators, some of whom have certainly reached a green old age, are more favorably situated in this respect than the smaller speculators, in that the former are really able to a considerable extent to make the market, and that to them Fortune is not altogether a blind goddess, but gives a knowing wink as she turns her wheel. Thus in judging of the effects of these occupations one should remember that even as many physicians are not given to dosing themselves, so some stock brokers do not themselves speculate. To buy and sell for the account of others, even to collect a wide "margin" from one's client, do not involve any personal risk-taking. If business is brisk the pool seller may be equally content whichever horse wins, and we believe that in certain other games of chance, however the cards turn, the "bank" makes its earnings without interruption. There may, then, be a class even of professional gamblers who while sitting in the very vortex of the giddy whirl are quite at rest in their own minds. Not so with those who are fairly in the current.

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[1] Wien. Med. Jahrbuch., 1883, page 477.

Of the moral effect of gambling, of course in this connection we have nothing to say. Its disastrous influence upon the mental and physical nature of its votaries was emphasized in a recent lecture by Dr. Crichton Browne, of England, on the Gospel of Recreation. Those amusements which depend for their zest upon the element of chance certainly have a strong attraction for the average man, as is shown by the frequency of betting on all sorts of subjects. The sporting papers and the sporting column of the daily press add fuel to this flame, which needs little to keep it alive. Dealings in futures are made easy by the widely published quotations of all sorts, and despite the heavy chastisement which has recently been inflicted on hundreds of small operators by the merciless depreciation of values, yet the public is still ready at every opportunity, whether at a club table, in politics, in athletics, or even over the great staple commodities of life, such as cotton, petroleum, or grain, to bet on events yet to occur. As a producer of intense emotional excitement perhaps no other amusement has the power of gambling, and it requires no demonstration that profound and repeated emotional excitement is a frequent precursor of nervousness, sleeplessness, and insanity, even if we do not go to the extent of Dr. Browne in attributing to this cause "numerous cases of dyspepsia, . . . heart disease, diabetes, paralysis, and apoplexy."

Dr. Browne, alluding to the effects of a vice or habit on the faces of those addicted to it, and quoting Mr. Francis Galton to the effect that the sight of a bundle of photographs of criminals will excite from their ugliness a sense of aversion or disgust in a spectator, says: "But the next best place to a prison in which to see the English physiognomy at its coarsest and worst is the platform of a London railway station on the day of a suburban race meeting, when the special trains are just starting. There may be seen a pushing, chaffing crowd of betting men, or bookmakers, and their dupes, with rascality stamped on their features in a way that cannot be matched in any other spontaneous assemblage of their countrymen. In almost every face may be discerned cruelty and greed, in many be recognized a hideous mixture of imbecility with low cunning, and in a few may be caught glimpses of infra-human or mere animal rapacity. There may be seen faces that are congenitally and radically bad, and with them others that bear the faded traces of better things almost blurred out, perhaps by the blotches of dissipation and the hard lines carved by this soul-destroying vice." A glimpse by Bulwer-Lytton, when a young man, in Paris, of his own face in a mirror after a night of successful gambling, was such a revelation to him, in its haggard and sinister lines, of the effect that gaming was exerting on his whole nature that he thenceforward abandoned it completely.

There is ground for the physician and hygienist as well as the moralist to discountenance that general devotion to hazard which, in public and private, characterizes so much of the city life of the day.

MEDICAL NOTES.

— A correspondent of the *Medical and Surgical Reporter* (March 1st) narrates a case where it seems tolerably certain that scarlet fever was transmitted by means of a letter. At least there is much less room for doubt than in many cases where such a cause is popularly assigned. The outbreak was in a country house half a mile distant from the nearest neighbor, and the family had occupied the house for three years; the children had not been away from the farm for two months, and no one had been in the house who had had the fever or been where it was. In fact, no case of the disease had been known of or heard of by the physician for some months anywhere in the county. It appeared, however, that the mother had received a letter from her brother only a short time before, stating that her brother's family had just lost a child with scarlet fever. This letter contained a photograph. The letter was received only seven days before the first child was taken sick, and the children all handled the letter and picture.

— The Faculty of the New York Polyclinic have been obliged by the increasing success of that institution to provide larger room, and have therefore purchased the extensive property heretofore occupied in part by them, which will be remodeled and fitted with amphitheatres for clinical work, well-furnished laboratories for chemical, histological, and pathological studies, and rooms for operative surgery and demonstrations in surgical anatomy. These increased facilities, taken in connection with the hospital appointments of the Faculty, enable the Polyclinic to offer great attractions to those members of the profession who wish to supplement their undergraduate studies while remaining in this country.

— The Swedish physician, Santesson, relates in *Hygiea* that he was called to a young man of twenty-five with an abscess in the left iliac region. Examining him M. Santesson found the right side of the scrotum empty, and in the left side a hard, round body, of the size of a musket ball, covered by the skin, but no trace of cord or testicle. A linear cicatrix on each side of the median line made him suspect castration. On interrogating his patient he learned that the young man, when seventeen or eighteen years old, had obeyed the Scriptural direction, If your right eye offends you, pluck it out, and had, with a planing iron, made an incision in the skin of the scrotum, extracted the testicle, and cut the cord on both sides. Local applications of cold water arrested the hæmorrhage, and he recovered in about three weeks. Certainly it seemed to him disagreeable to live with an empty scrotum, and fearing that he would gain heaven later than he thought he decided upon a new operation. With the chisel he made an incision in the scrotum on the left side, and introduced into the wound a glass ball, which served as a testicle, and relieved his disagreeable void. The wound healed slowly. M. Santesson extracted the ball, and presented it to the Society of Medicine of Stockholm.

— Lecturers on First Aid to the Injured and kindred subjects, which have become so popular of late, do well to translate all technical terms which they may have occasion to use completely into the vernacular, otherwise they may be confronted at their examinations by such startling statements as this, which we learn from an English contemporary to have been actually rendered on such an occasion: "Bleeding from the nose is neither *Artillery* nor *Venus*, it is *Caterpillary*."

— Whatever may be said (and there is much) in favor of the requirement of some compensation from the beneficiaries of a hospital, it is worthy of remark that at Guy's, which for various reasons is a most conspicuous example of the inauguration of the commercial system, the motto of the founder was *dare quam accipere*. In view of the change of policy it would seem appropriate to make a slight change in this doctrine of the founder so that it should read *accipere quam dare*.

— A female child, aged six, who was brought to one of the London hospitals for ringworm was noticed to have a patch just above the middle of the forehead, where the skin was white, and the lock of hair growing from it was almost, if not quite, white. The mother had a precisely similar condition, and said that the lock had, at one time, been as long as the rest of her hair, but she had now cut it short. She also said that it was hereditary in her family, having occurred in two of her sisters and one brother, in her father and her grandfather, and that one of her sisters had four children similarly affected, all girls.

— French Fun: Dr. B., after having bought a lot in the Montparnasse Cemetery, went to the marble worker to order the tomb. After the details were arranged the marble worker said: "Monsieur did well to select this cemetery, it is so quiet; and then Monsieur le Docteur must know a good many people here."

— A writer in the *Lancet* describes the use of a Hodge pessary in the treatment of a fracture of the lower jaw at the symphysis with external wound of two inches in length. The desideratum was an apparatus which should immobilize the jaw and yet allow of the dressing of the wound. The pessary was bent so as to allow the chin to protrude through its ellipse, one bar being moulded so as to support the fracture anteriorly, the other from below. Tapes were sewn to the rounded ends of the pessary for securing it.

— Rev. Daniel Waldo, a graduate of Yale in 1788, who died in 1864 at the age of one hundred and two, gave as one of the rules of life which he had acted upon, and which he believed had enabled him to live so long, "Never allow yourself to fall into a fit of anger. One storm of angry passion will cut short your life more than an ordinary run of fever."

— A very unusual thermometric record for the "temperate" zone is announced from New South Wales. The unfortunate locality is the town of Bourke, some 500 miles from Sidney. It is situated on an immense plain at about the sea-level, separated from the coast by a chain of low mountains. The temperature, as published by the government meteorologist at Sidney, showed an average at the hottest period of the day for the first fifteen days of 1884 of 110.6° F. The lowest figure for any of the days was 103.5° F., and the highest 122° F., which was reached two days in succession.

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MEDICO-LEGAL NOTE.

— The following is stated in the Maryland *Medical Journal* on the authority of Mr. Willoughby N. Smith of the Baltimore bar, and Lecturer on Medical Jurisprudence in the College of Physicians and Surgeons, as being the state of the law in the United States with respect to the sanctity of communications imparted in confidence to a physician by a patient: —

In the absence of any statutory provision to the contrary, it is well settled that a physician or surgeon may be *compelled* to disclose any communication made to him in professional confidence. — *Stephens' Digest of Evidence*, Art. 117.

The States which have enacted statutes changing this rule of the common law are the following: Wisconsin, New York, Michigan, Iowa, Minnesota, Missouri, Ohio, Indiana, and Nebraska.

The statute of Wisconsin provides that "no person duly authorized to practice physic or surgery shall be *compelled* to disclose any information which he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon." — *Wisconsin Revised Statutes*, Sect. 4075.

The statutes adopted in New York, Michigan, Minnesota, Missouri, Ohio, Indiana, and Nebraska, provide *either* that a "person duly authorized to practice physic or surgery" shall not be "competent" or that he shall not be "*allowed*" to make the disclosure. *But* by the statutes of Iowa, Indiana, and Minnesota such testimony "may be received with the consent of the patient" in all cases, and in Minnesota the prohibition, in the absence of such consent, is confined to civil cases: the "regular physician or surgeon" may be *compelled* in that State in criminal cases to disclose communications reposed in him in confidence by a patient while in actual attendance upon the patient in the capacity of medical adviser.

Correspondence.

SOME SUGGESTIONS UPON CEREBRO-SPINAL MENINGITIS.

MR. EDITOR, — The paper upon Cerebro-Spinal Meningitis by Dr. Mason, in the JOURNAL of February 7th, was of special interest to me from the fact that the *first* and many of the succeeding cases that occurred during the epidemic mentioned by Dr. Sargent came under my care.

I will go no further than to give the treatment that was found the most successful, namely, to purge drastically with salts. If the purge was omitted over twenty-four hours the patient became unconscious, with a tendency to convulsions. As soon as the bowels were moved freely these symptoms disappeared.

In a case that occurred some months after the epidemic had apparently subsided a different mode of treatment was adopted in consequence of the disease having advanced to the convulsive stage.

A little girl, aged six years, vomited in the morning. I was called soon after. She could hardly be said to be sick, yet something in her appearance reminded me of my former cases. I cannot describe it better than by saying she did not seem to comprehend any question that was asked her. Yet her mother would not admit that this was unnatural, attributing it to my being a stranger.

On my visit the next morning this peculiarity was, I thought, more marked; still the mother would not admit that there was anything unnatural. Soon after my visit she became convulsed, and as I was not sent for, found her so on my visit at night. At this time her pulse was a mere tremor. My first effort was to stop the convulsions, as she would soon die for lack of respiration. As this was before the use of anæsthetics, my reliance was upon opium.

My principal object in giving the treatment in this case is to show that if a medicine is given which is adapted to control the symptoms for which it is given it can be pushed until the object is attained, without its ultimate effects being manifest.

To control the convulsions I dealt out three grains of sulphate of morphine in six powders. I inquired of the mother if she had any laudanum; she brought out a two-ounce vial full. Dr. Jewett, the prominent temperance lecturer, lived opposite, and kindly offered to take charge of the patient during the night; therefore I am confident the medicine was given as directed. My directions were to give one of the powders of morphine every half hour until it controlled the convulsions; if the morphine did not do it then follow it with a teaspoonful of laudanum every half hour. It will be remembered that this was for a child six years old.

On my visit early in the morning I found the child had taken all the morphine and all of the laudanum, yet had a slight tremor of the facial muscles; not a symptom of the ultimate effects of the drug could be discovered, no change in the respiration, no contraction of the pupils. She had no further manifestation of the disease, except the effect of the deposit of pus upon the membrane of the brain. She was as a new-born infant, and the change in her was as from infancy to childhood, having to learn everything anew.

HENRY G. DAVIS, M. D.

NEWTON, MASS.

Miscellany.

LIQUOR LICENSES IN BOSTON.

THE recent action of the Police Commissioners of Boston in increasing the price of the liquor licenses is supposed to be due in part to the influence of the Law and Order League, and undoubtedly is in accord with general public sentiment as reflected in the daily press. The amount to be collected for the liquor licenses is left within certain limits to the local board, the statute providing, for instance, that the innholder's license (first class) shall be not less than $100 nor more than $1000 per year. Under the former rules the amount was fixed at $300, but is now increased to $600. This schedule (A) applies to about thirty hotels in the city proper. Another schedule (B) has been established for hotels outside the old city limits, also numbering thirty, and its fee is $350. These licenses all convey the right to sell all kinds of liquors at all hours. The other classes of licenses, more or less restricted as to the kinds and amounts of liquor to be sold, are held by common victualers, brewers, grocers, etc., and have all, without exception, been increased in price, the increase varying generally from twenty-five to fifty per cent. Only the druggists' licenses, which are fixed by statute at $1, remain unchanged.

The extent of the change may perhaps be best realized when it is said that it is estimated that the income from licenses in the city during next year at the new rates will amount to $550,000, as against about $310,000 for the current year. This is supposing that the number of licenses remains as at present at about 2800.

POISONOUS WALL-PAPERS.

As the result of government inquiry, concerning foreign legislation or municipal enactment having for its object limitations, restrictions, or safeguards in the manufacture, use, or sale of arsenical and other poisonous colors in the tinting of wall-papers, textile fabrics, and other industrial decorative purposes, the *British Medical Journal* reports that the German Imperial law, which supersedes all local legislation, is by far the most complete, and has served as a basis for those of Denmark and other countries; the Austrian laws are very satisfactory, and probably would be more applicable to the circumstances of Great Britain. In accordance with a suggestion of the Board of Trade, further special inquiries have been made by her Majesty's representatives abroad on the subject of the customs regulations affecting the importation of textile fabrics and wall-papers, and the result of such inquiries has been to show that no special customs regulations or restrictions exist having for their object the detection of poisonous substances employed in coloring these articles imported into the undermentioned countries: Baden, Bavaria, Belgium, Denmark, France, Germany, Greece, Netherlands, Portugal, Roumania, Saxony, Servia, Spain, Switzerland, United States, and Würtemberg. In Austria there are certain customs restrictions which will probably be made more stringent. In Italy the new customs tariff, approved by royal decree of August 9, 1883, enacts that goods which the competent authorities shall decide to be dangerous to the public health shall be destroyed or sent back at the cost of the importer. In Sweden and Russia elaborate instructions are in force.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 1, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	628	233	16.48	17.77	2.08	5.92	2.74
Philadelphia	927,995	360	125	14.56	16.52	1.12	7.00	2.52
Brooklyn	644,526	199	80	15 09	15.59	2.01	5.53	3.52
Chicago	632,100	186	87	20.52	10.26	1.62	6.58	4.32
Boston	423,800	171	48	15.66	14.50	2.90	6.38	1.74
Baltimore	408,520	139	61	15.12	16 56	1.44	4.94	.72
St. Louis	400,000	137	47	16.79	10.22	2.19	5.84	4.38
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	115	29	18.14	17.40	4.35	1.74	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	76	35	14.52	17.16	—	2.64	5.28
Pittsburg	180,000	75	30	10.64	9.31	—	6.65	2.66
Milwaukee	142,400	45	20	17.77	2.22	—	6.66	4.44
Providence	119,405	42	9	11.90	21.12	4.76	4.76	—
New Haven	62,882	20	5	5.00	10.00	—	—	—
Nashville	54,400	17	9	—	5.88	—	—	—
Charleston	52,286	26	8	—	15.40	—	—	—
Lowell	71,447	30	16	27.77	13.33	10.00	—	—
Worcester	69,442	26	11	19.20	11.55	3.85	11.55	—
Fall River	62,674	14	3	28.56	28.56	—	—	—
Cambridge	60,995	16	5	18.75	18.75	—	—	—
Lawrence	45,516	19	5	15.78	31.56	—	—	5.26
Lynn	44,895	11	3	18.18	18.18	—	—	—
Springfield	38,090	—	—	—	—	—	—	—
Somerville	31,350	7	1	—	28.56	—	—	—
Holyoke	30,515	12	4	8.33	8 33	—	8.33	—
New Bedford	30,144	2	0	50.00	50.00	—	—	—
Salem	29,503	8	0	—	50.00	—	—	—
Chelsea	24,347	8	3	37.50	—	—	12.50	—
Taunton	22,693	6	3	16.66	16.66	—	—	—
Gloucester	21,400	6	3	—	16.66	—	—	—
Haverhill	20,905	7	4	14.28	14.28	—	—	14.28
Newton	19,421	6	0	—	—	—	—	—
Brockton	18,323	5	1	—	20.00	—	—	—
Malden	15,273	3	1	33.33	—	—	33.33	—
Newburyport	13,947	9	1	—	11.11	—	—	—
Fitchburg	13,433	1	0	—	—	—	—	—
Seventy-one Massachusetts towns	233,167	77	14	2.60	15.60	—	2.60	—

Deaths reported 2509 (no reports from Cincinnati and Buffalo): under five years of age, 904: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 297, consumption 386, lung diseases 308, diphtheria and croup 57, diarrhœal diseases 43, scarlet fever 60, typhoid fever 32, measles 21, puerperal fever 19, malarial fevers 18, whooping-cough 14, erysipelas 14, small-pox four. From *typhoid fever*, New York eight, Chicago seven, Philadelphia six, Boston, New Orleans, and Lowell two each, Baltimore, St. Louis, District of Columbia, Pittsburg, and Providence one each. From *measles*, Baltimore seven, New Orleans five, New York and District of Columbia three each, Philadelphia, Lawrence, and Taunton one each. From *puerperal fever*, New York and Chicago three each, Brooklyn, Boston, St. Louis, and Milwaukee two each, District of Columbia, Lowell, Cambridge, New Bedford, and Chelsea one each. From *malarial fevers*, New York seven, New Orleans four, Brooklyn three, Chicago and St. Louis two each. From *whooping-cough*, New York four, Philadelphia, Boston, and Baltimore two each, Brooklyn, Chicago, St. Louis, and New Haven one each. From *erysipelas*, New York seven, Philadelphia and Brooklyn two each, Chicago, Boston, and Baltimore one each. From *small-pox*, New Orleans three, Philadelphia one.

In 71 cities and towns of Massachusetts, with an estimated population of 1,299,412 (estimated population of the State 1,955,104), the total death-rate for the week was 18.00 against 16.72 and 16.28 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending February 16th, the death-rate was 20.1. Deaths reported 3367: acute diseases of the respiratory organs (London) 334, whooping-cough 120, scarlet fever 79, measles 77, diarrhœal diseases 44, fever 40, diphtheria 39, small-pox (Sunderland 10, Birmingham three, London two, Liverpool one) 16. The death-rates ranged from 11.8 in Portsmouth to 25.8 in Sunderland; Leicester 16.5; Leeds 17.7; Birmingham 17.8; Blackburn 17.9; Bradford 19.4; London 19.8; Birkenhead 21.2; Sheffield 21.7; Manchester 22.8; Liverpool 24.9. In Edinburgh 18.2; Glasgow 25.4; Dublin 31.4.

For the week ending February 16th, in the Swiss towns, there were 40 deaths from consumption, lung diseases 35, diphtheria and croup 13, whooping-cough 10, diarrhœal diseases 10, scarlet fever four, typhoid fever two. The death-rates were, at Geneva 18.3; Zurich 23.6; Basle 20.2; Berne 23.3.

The meteorological record for the week ending March 1st, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Feb.–March. 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 24	30.192	18	24	11	70	73	68	70	NW	NW	NW	20	14	3	C	C	C	—	—
Mon., 25	30.228	27	31	18	84	77	100	87	NE	NE	E	5	14	10	O	F	S	—	—
Tues., 26	29.813	32	34	30	100	100	100	100	NE	NE	N	13	16	5	S	S	S	—	—
Wed., 27	29.788	33	41	26	94	73	78	82	W	W	SW	2	11	6	O	F	F	—	—
Thurs., 28	29.233	28	34	20	94	94	70	86	E	NE	W	10	14	26	S	S	O	—	—
Fri., 29	29.376	8	21	3	72	61	85	73	W	W	W	26	30	20	C	O	C	—	—
Sat., 1	29.744	12	20	4	76	70	72	73	W	W	W	18	14	10	C	C	C	—	—
Mean, the Week.	29.767	23	34	3				70										48.25	1.49

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OBITUARY.

Dr. C. M. Lord, of Washington, one of the most respected and skillful physicians of the national capital, is dead. He resided for many years on Capitol Hill, and was well acquainted with most of the distinguished men of his time. His personal and social qualities gave him wide popularity. He was born in Troy in 1840, and graduated at the University of Pennsylvania. He was a surgeon in the Union Army and Navy during the war, and was for a time in charge at the Old Capitol Prison. For fourteen years he was surgeon at Providence Hospital.

CORRECTION FROM BALTIMORE.

Mr. Editor, — Allow me to make a correction in my letter of the 28th ult., published in the Journal for March 6th. Page 237, line 17 from bottom, should read "His opinion *is the more important*," instead of "*has the more weight*," as it was not the intention of your correspondent to attach the greater weight to Dr. Billings's opinion *because* it was *opposed* to that of Dr. Chancellor. I hope this may be corrected at once, lest it may give offense where none was intended. B.

Baltimore, *March* 8, 1884.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MARCH 1, 1884, TO MARCH 7, 1884.

Perin, Glover, lieutenant colonel and surgeon, medical director, Department of Dakota. Leave of absence extended twenty days. S. O 23, headquarters Division of the Missouri, March 5, 1884.

Bill, J. H., major and surgeon. Granted leave of absence for one month. Paragraph 1, S. O. 20, headquarters Department of the Platte, March 3, 1884.

Baily, J. C., major and surgeon. Granted leave of absence for one month, to take effect on or about March 1, 1884, with permission to apply to the Adjutant General of the Army, through division headquarters, for an extension of three months. S. O. 24, headquarters Department of Texas, February 26, 1884.

Bache, Dallas, major and surgeon. Leave of absence extended seven days. Paragraph 1, S. O. 43, headquarters Department of the East, March 5, 1884.

Stephenson, William, first lieutenant and assistant surgeon. Ordered to Fort Niobrara, Neb., for temporary duty, on completion of which to return to his station, Fort Omaha, Neb. Paragraph 4, S. O. 20, headquarters Department of the Platte, March 3, 1884.

Fisher, Walter W. R., first lieutenant and assistant surgeon. Assigned to duty at the Presidio of San Francisco, Cal., from 18th inst.

Polhemus, A. S., first lieutenant and assistant surgeon. Assigned to duty at Fort Winfield Scott, Cal., from 18th inst. S. O. 23, paragraphs 1 and 2, headquarters Department of California, February 21, 1884.

Phillips, John L., first lieutenant and assistant surgeon. Assigned to temporary duty at Fort Warren, Mass. Paragraph 2, S. O. 39, headquarters Department of the East, February 28, 1884.

Benham, R. B., first lieutenant and assistant surgeon. Relieved from duty at Fort A. Lincoln, D. T., and ordered to Fort Sisseton, D. T., for duty. Paragraph 1, S. O. 22, headquarters Department of Dakota, February 26, 1884.

Rhode Island Medical Society. — A quarterly meeting of the Society will be held in Lyceum Hall, 62 Westminster Street, Providence, on Thursday, March 20, 1884, at ten A. M. Papers will be read by Dr. N. O'D. Parks on Topical Cardiac Blistering in the Treatment of Acute Rheumatism, and Dr. Herbert Terry on The Treatment of Puerperal Fever.

George D. Hersey, *Secretary.*

Annual Meeting of the Sanitary Council of the Mississippi Valley. — The sixth annual meeting of the Sanitary Council of the Mississippi Valley will be held in the city of Memphis, Tenn., on Friday, March 21, 1884, instead of Wednesday, the 19th, as previously announced.

Death. — Died, at Groveland, Mass., March 7, 1884, Morris Spofford, M. D., M. M. S. S., aged fifty five years.

Books and Pamphlets Received. — House Drainage as Constructed by the Durham House Drainage Company of New York. By William Paul Gerhard, Chief Engineer Durham House Drainage Company. New York. 1884.

Proceedings of the Naval Medical Society. Vol. I. No. 6. Washington. 1884.

Practical Pathology. A Manual for Students and Practitioners. By G. Sims Woodhead, M. D., F. R. C. P. E., Demonstrator of Pathology in the University of Edinburgh, etc. With One Hundred and Thirty-Six Colored Plates. Philadelphia: Henry C. Lea's Son & Co. 1884.

Fifth Biennial Report of the State Board of Health of Maryland. January, 1884.

Fifty-Eighth Annual Report of the Massachusetts Charitable Eye and Ear Infirmary. For the Year 1883. Boston.

Rhode Island. Thirtieth Registration Report, 1882. Thirtieth Report upon the Births, Marriages, and Deaths in the State of Rhode Island for the Year ending December 31, 1882. Prepared by Charles H. Fisher, M. D., State Registrar of Vital Statistics, etc. Providence. 1883.

Circulars of Information of the Bureau of Education. No. 4. 1883. Recent School-Law Decisions. Compiled by Lyndon A. Smith, A. B., LL.D. Washington: Government Printing Office. 1883.

Study of a Case of Multiple Sarcomata of the Skin (Myeloma, Mycosis Fungoides, Mycosis Fungoide, Inflammatory Fungoid Neoplasm). By James Nevins Hyde, A. M., M. D., Professor of Skin and Venereal Diseases, Rush Medical College, Chicago. Read at the Fourth Annual Meeting of the American Dermatological Association, Newport, R. I., August 30, 1883. Printed by Oliver & Boyd, Edinburgh.

Original Articles.

ON THE USE OF FORCE IN THE TREATMENT OF RESISTANT CLUB-FOOT.

BY E. H. BRADFORD, M. D.

It is certainly desirable to place in the hands of the general surgeon a method by which obstinate, relapsed, or half treated cases of congenital talipes equino-varus may be cured without the expenditure of a great amount of time or the trouble of a great amount of special detail. This is particularly needed in the service of a large general hospital, and in the work of a country practitioner. The operation of excision of the tarsus has probably come into vogue on account of this need; but although this mode of procedure is apparently attended by slight risk and followed by excellent results, if equally good results can be obtained by less severe surgical interference the method is certainly to be discarded. Personal experience [1] in tarsotomy has led me to this conclusion, for although excellent results were obtained it appeared that the resistance to correction was not due so much to the deformity of the tarsal bones as to the tissues (presumably ligamentous) binding the displaced bones together, and that theoretically it was better surgery to attack the latter than the former structures. Simple tenotomy is not sufficient to divide the ligaments which lie close to the tarsal bones. A direct incision, proposed and successfully carried out by Dr. Phelps, of Chateaugay, is objectionable on the ground that correction would leave a gaping wound, and also because on general principles a deep incision is to be avoided if equally good results can be obtained without. Gradual stretching, the method most in vogue, demands in the most obstinate cases a great deal of time and a daily attention not always at command.

The method of forcibly rectifying a club-foot is not a new one, but it has not found favor because of the mechanical difficulties encountered, and also because a practicable means of fixation after such correction had not been in use, consequently not enough has been gained to sanction the procedure. Furthermore, tradition has deterred many surgeons from immediate correction in the fear of subsequent non-union of tendons.

The first mechanical means of value for the purpose of immediately correcting obstinate club-foot was reported by Dr. Morton, of Philadelphia. In two cases in which I had the opportunity of testing this method its efficiency was proved, and fair results obtained; perfect success was not gained from the fact that perfect fixation through lack of experience in the method and in the mode of after-treatment was not effected. The appliance seemed to be defective in that it lacked precision, relying as it did for the correcting force upon straps, which are liable to stretch and slip. The accompanying drawing (Fig. 1) illustrates an appliance which appeared to remedy this difficulty.

The object of the appliance is to exert pressure under control of the operator in three directions, and also to enable him to twist and raise the front of the foot.

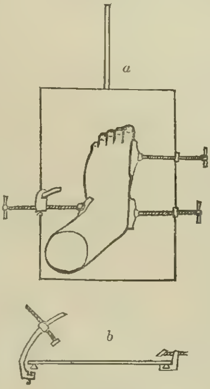
The apparatus consists: —

(1.) Of a plate large enough for any foot.

(2.) Of three steel buffers or padded plates which are attached at the ends to steel screw rods, playing through sockets with a female screw thread at the sides of the large plate. By turning the screws, which is done by the handles, the plates or buffers are pushed forward. They should be placed so as to press (1) upon the side of the first metatarsal; (2) on the side of the os calcis just beneath the inner malleolus; (3) on the outer side of the foot over the projecting head of the astragalus. The female screw through which the male screw plays is adjustable upon an arm curved so that pressure can be applied when it may be found necessary.

The sockets and arms are arranged so that they can be shifted and placed at any point along the side of the large plate, or can be shifted from side to side, so that the appliance can be used for either foot.

Fig. 1.



Cross-section.

(3.) A straight rod, extended in the plane of the plate, gives increased power in raising the front of the foot. This is not always needed, and can be removed.

In operating upon obstinate cases of club-foot (the only cases for which this method is designed) the method of procedure is as follows: Tenotomy is performed in the usual way, the plantar fascia divided first, the tibiales tendons (if contraction is present) and the tendo Achillis last (after the deformity at the arch of the foot has been in a degree corrected); the foot is then forcibly manipulated with the hands, pressure being exercised upon the projecting head of the astragalus by the thumbs, and force applied in a counter direction by the hands grasping the ankle and fore part of the foot. It will be found in certain cases that complete correction of the deformity cannot be accomplished by the hands alone, and the hindrance will be seen to be not a shortened tendon or any tissue accessible to the tenotome.

The instrument just described is then to be applied, and the screws turned and adjusted so that the plates will press upon the os calcis, the head of the astragalus, and the side of the first metatarsal as far as its articulation with the tarsus. The foot will now be firmly held, and by additional turns of the screw force can be applied in the desired directions. Rotation upwards and outwards can be effected by twisting the plate and the equinus deformity of the foot can be corrected by pressing the end of the plate upward. In case it is desired to increase the power in this direction this can be done by increasing the length of the handle. If the screw plates are properly adjusted it will be found that there is no danger of a fracture, as the pressure can be so directed that the ligaments will yield before any of the bones of the tarsus can be broken. An anæsthetic is of course required, and correction will be done gradually rather than by any sudden tear. The extent to which force can with safety be applied is with difficulty defined; it may be said, however, that experience shows that a much greater pressure can be used than would at first be thought feasible, — in a majority of cases enough force can be used to convert the foot from the position of varus to that of valgus, and to correct the equinus position. In the simpler cases this is always possible; in the severer cases some minutes should be given to gradually stretch the foot. Sometimes complete correction is not possible at one sitting, and something will have to be left for after treatment or for a second sitting.

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[1] Boston Medical and Surgical Journal, 1881, p. 241.

After the foot has been brought into a position which is nearly normal, and the contracted tissues so stretched that the foot can be held without a great amount of force, the foot should be fixed in the corrected position. For this purpose nothing has been found so useful or comfortable as a plaster-of-Paris bandage properly applied. The foot should be held in as nearly a normal position as is possible, grasped by one hand at the toes while counter-pressure is exerted on the leg. Roller plaster bandages prepared in the way that is customary for plaster jackets are wound around the foot and leg which are first to be covered with one layer of sheet wadding. The bandages are to be applied without loosening the hold upon the foot, which is to be kept in the corrected position until the bandages have become sufficiently hard, not to yield when the hold on the foot is loosened, and additional turns are then applied around the toes. The bandage should be carried above the knee and half way up the thigh, and the leg should be flexed at the knee thus preventing any subsequent rolling of the limb within the plaster bandage. After the dressing has become stiff, and before it is absolutely hard, it can be cut through by two cuts along the dorsum of the leg and foot and cross cuts over the foot and thigh so that the lid of the plaster box may be lifted and the parts inspected subsequently when necessary without destroying the bandage.

There should be no wrinkles in the bandage, and no pressure should be made upon the dorsum of the foot while the gypsum dressing is hardening. After ten days or three weeks the stiff bandage may be removed, and if the foot is sufficiently corrected a walking shoe applied.[1]

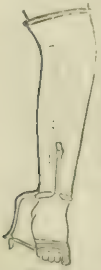

FIG. 2.

The chief objection which will be urged against this method will be the supposed risk incurred. It would seem, however, that the danger is not so great as would be thought. Experience with osteoclasis has proved conclusively that the temporary pressure upon the skin necessary to break bone does not cause sloughing or even an abrasion; the same is true of the pressure required to rectify a club-foot. Experience has also proved that it is safe to fix a limb immediately after osteoclasis with plaster-of-Paris bandage. The same appears to be the case in club-foot, if ordinary care is used in applying the bandages. Sloughs may occur on the inside of the ball of the toe, on the outer and under side of the sole, and on the dorsum of the foot; but these sloughs are not more troublesome than those sometimes occurring in the use of Scarpa's shoe or appliances, held by straps, and they are not so liable to occur from the fact that in a foot held in a well-applied plaster-of-Paris bandage the pressure is not confined to a few points, but is nearly uniform over the whole foot. In case a slough appears (a fact to be determined by lifting the lid of the plaster-of-Paris box which holds the foot), the following appliance (Fig. 2) can be used until the skin has recovered so that a plaster bandage can again be reapplied if a second one is necessary.

A plaster bandage is applied in the ordinary way from the lower part of the leg above the malleoli to above the knee, which should be bent; a strip of strong iron rod is placed on the first layer of the bandage, bent at the top so as to half encircle the thigh, to pass along the outer side of the leg, and to project slightly above and to the outer side of the outer edge of the foot. At the lower end of this rod a buckle is attached, and the portion lying upon the plaster bandage is thoroughly incorporated by the successive turns of the bandage. A strip of rubber adhesive plaster is wound around the foot (which can be protected in the sole by card-board if necessary), and to the free end of the plaster at the level of the terminal end of the fifth metacarpal a piece of webbing is sewn. This is to be buckled to the buckle attached to the iron rod. Other strips of webbing and other buckles can, if needed be put at any desired point, and by a wrench the iron can be bent in any direction, so that the point from which the pull is to proceed can be placed at any desired direction; additional strips of iron rod can also, when necessary, be applied. It is of course desirable to prevent the whole appliance from slipping down, and this can be done by placing a long strip of adhesive plaster on the skin of the leg before the gypsum bandage is applied, and a buckle on the outside of the bandage; if the free end of the plaster is secured in the buckle, slipping of the appliance down is prevented. A stocking and slipper can be worn on the foot if a hole is cut in the side for the strip of webbing to pass through, and the patient can bear weight upon the foot.

As an objection to the method of applying a fixed dressing, it has been said that the plaster dressing being a fixed one and not allowing motion, gradual gain cannot be made beyond the position in which the foot has been placed. This is of course true, but almost complete correction can be gained in a majority of cases immediately, and the further gradual gain is only such as can be secured by a walking shoe. A fixed dressing secures the indicated rest after the force required to gain the correction, and enables the stretched tissues to adapt themselves to the new position. The foot is forcibly put in a new position, and may be said to have suffered a "sprain," the indications for the treatment of which are fixation, which is most readily secured by a plaster bandage.

The danger of non-union of tendons after correction immediately following tenotomy in resistant cases can practically be disregarded, although it is mentioned by many authorities. In this, as in many other particulars, experience appears to disprove tradition.

After complete correction, — and by that term is meant that the plane of the sole of the foot can be brought to a right angle with the axis of the leg, and that the line of the inner edge of the foot turns to the outside of the plane of the inner edge of the leg, — and after all pain and swelling have subsided, a "walking" shoe is applied. This is to be worn until the muscles have recovered the usual balance of power, the object being to prevent the possibility of incorrect walking.

The requisites of a "walking shoe" are that it should be easily applied, without the supervision of the surgeon or a skilled nurse, that it should allow motion in all directions except those toward the position of former distortion, and that it should not be cumbersome, heavy, or unsightly, and that it can be readily worn for some time. Various appliances have been in use for this purpose; but the one which has seemed to me the most efficient is the varus shoe, which Dr. C. F. Taylor, of New York, has devised and used, and for an explanation of which I am indebted to him. A published description of this useful appliance had best be left to the originator.

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[1] Hahn: Berl. klin. Woch., March 19, 1883, describes a new method of holding the foot while a plaster bandage is applied.

TABLE OF CASES OF CONGENITAL CLUB-FOOT TREATED BY THE USE OF FORCIBLE STRAIGHTENING.

No.	Name.	Address.	Age.	Deformity.	No. of Operations.	Hospital.	Result
1	John Horihan.	3 Fifth Street, East Cambridge.	5 years.	Double.	1	Samaritan Hospital.	Perfect.
2	Stafford Woodworth.	G. W. Woodworth, Kentville, N. S.	5 “	Single.	1	Samaritan Hospital.	Perfect.
3	Jessie Bishop.	J. Edwin Bishop, Highbury, Kings Co., N. S.	4 “	Single.	1	Samaritan Hospital.	Perfect.
4	Sadie McKay.	James McKay, Lanesville, Mass.	3 “	Single.	1	Samaritan Hospital.	Perfect.
5	Albert Burns.	23 Atlantic Corporation, Lawrence, Mass.	4 “	Single.	1	Samaritan Hospital.	Perfect.
6	Edward Sweeny.	97 Conant Street, Boston.	15 “	Single.	1	City Hospital.	Perfect.
7	Morris McDonald.	16 Bolton Street, North Cambridge.	8 “	Single.	1	Children's Hospital.	Nearly perfect
8	Frederic Daniels.	61 Central Avenue, Chelsea.	5 “	Double.	3	Children's Hospital.	Nearly perfect.
9	Mary Feely.	96 Chaffee Street, Providence.	2 “	Double.	1	Children's Hospital.	Perfect.
10	Bessie Kinney.	Sherborn State Prison.	2 “	Single.	1	Children's Hospital.	Perfect.
11	Jessie Kelly.	Merriam Street, Somerville.	18 months.	Double.	1	Samaritan Hospital.	Nearly perfect.
12	Bessie Minard.	Nova Scotia.	4 years.	Double.	1	Samaritan Hospital.	Perfect.
13	Leland Nelson.	S. E. Nelson, Ashburnham, Mass.	6 “	Double.	1	Children's Hospital.	Perfect.
14	Joseph Flynn.	South Boston.	5 “	Single.	1	Children's Hospital.	Imperfect.
16	Joseph Mahoney.	Longwood.	4 “	Double.	2	Children's Hospital.	Imperfect.
15	X Y	Dorchester.	7 “	Double.	3	Children's Hospital.	Imperfect.

All of the foregoing cases were of the congenital deformity of an aggravated type; those of acquired variety were not included in the list.

By a *perfect* result is meant that the patient stands and walks on the whole of the sole of the foot; can when standing on the heel flex the front of the foot above the floor, and that the patient's foot presents no projection of the head of the astragalus or any of the tarsal bones on the outer and upper surface of the foot.

By an imperfect result is meant a condition of the foot falling short of this standard. By nearly perfect, is meant that the heel can be brought to the floor without twisting the foot, but that the front of the foot cannot be raised without lifting the heel. This is true of the left foot in Cases VIII.–XI. The patients are still under treatment.

Nos. 9, 10, 11 were treated by forcible manual straightening without mechanical assistance. Nos. 14, 15, 16 were experimental cases in a measure; they were the first ones treated in this way, and were but partly successful for the reason that the method was not perfected, and chiefly because the feet were not fixed after operation from fear of injury following the use of plaster-of-Paris bandages, and because the bandages were not applied above the knee with the limb bent, and twisting in of the foot inside of the bandages occurred. The deformities were not more resistant and were less severe than in the other children who were successfully treated. They were all benefited, and walk with slight noticeable deformity except when the feet are bared. Case XVI. is instructive from the fact that an aneurism of the posterior tibial followed a month after tenotomy. The tenotomy was freer than was needed, but at the time it was thought advisable to cut very freely as the appliance for stretching was not perfected. The aneurism was, a month later, cut down on, and found to proceed from a pin-hole opening in the artery. This was tied as any bleeding point would be, and the patient recovered promptly, and at present, three years later, walks without appliances. An equinus deformity remains, the patient being unable to bring the heel to within one inch of the ground with twisting the front of the foot, and walks on three fourths of the sole.

Case I. has been the longest under observation, and would indicate that there is little danger of recurrence of the deformity. At the present time he walks perfectly well, without appliance, and with perfect feet. For a year and a half after his discharge from the hospital he has been seen professionally but five times. He wore for a year light walking supports, which his mother has been able to adjust herself without medical supervision.

Case II. has not been seen since his discharge from the hospital. Letters from the parents report that at the present time, eighteen months after discharge, the child is walking perfectly.

August 10, 1882. October 4, 1882.

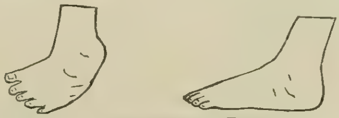

FIG. 3. From casts. FIG. 4.

The same is true of Case III.

Case IV. was one of equally severe deformity. The patient is now, eight months after discharge, able to walk perfectly. The amount of flexibility at the ankle-joint is indicated by the accompanying tracing (Fig. 5), taken by placing a piece of paper at the side of the leg, the sole of the foot being flat on the floor.

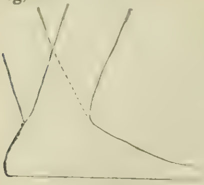

FIG. 5.

In Case VI. the patient suffered a good deal of pain for a week, and on the removal of the plaster a slough was found on the side of the ball of the toe and also on the dorsum of the foot. The appliance as indicated in Figure 2 was used, and the patient went about with crutches. He began to use a walking shoe in six weeks, and was discharged from the hospital, and three months later was in the position indicated in the photograph, and able to walk about freely without appliance, crutch, or cane, having taken care of his foot himself during that time, he being seen medically but six times, chiefly for observation. The treatment was perhaps hurried unnecessarily, and an earlier removal of the plaster would have prevented the sloughs appearing. These, however, did not in any way prevent the continuance of treatment.

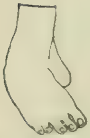

FIG. 6.
Drawn from cast.
August, 1883.

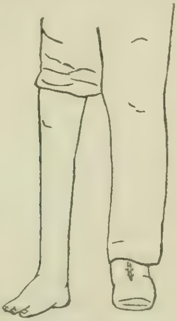

FIG. 7.
From photograph.
January 1, 1884.

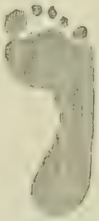

FIG 8.
From imprint of sole of foot.—January 1, 1884.

The patient's foot was very resistant, and at the time of operation all possible force was required after tenotomy to press it into a normal position. The patient was fifteen years old, and had been walking on a deformed foot all his life.

Case VIII. was the most resistant of the series, partly because the foot was small and force was therefore with difficulty applied. Three sittings were necessary to straighten the left foot; a small slough appeared, and the spur appliance was used. The right foot was straightened in one sitting.

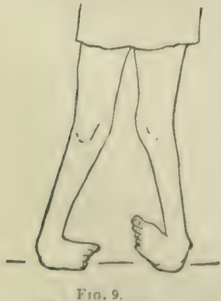

FIG. 9.
From photograph
September, 1883.

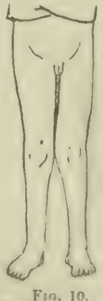

FIG. 10.
From photograph
January 1, 1884.

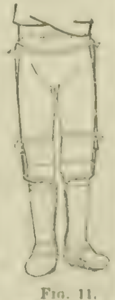

FIG. 11.
From photograph
January 1, 1884
Wearing appliance.

The length of time required in the treatment of the above cases varied. In the cases where the feet were the least resistant the plaster bandage was removed in from three to four weeks, and walking shoes applied immediately. In Cases II., V., and XIII., the whole active treatment occupied but a month, after which time the patients were left to the parents' care and not seen by the physician, although directed to wear the walking shoes for a year. Case XIII. was seen a year afterwards, and the feet found to be in a perfectly satisfactory condition. The same may be said of Case V., seen three months after discharge from the hospital. Where greater resistance was encountered, longer time was needed; Case VI. was seven weeks under active treatment. Case VIII., the most resistant of the cases collected, was four months under constant observation. In both the plaster bandages were removed on account of sloughs, and the spur appliance used until the feet were in a condition for a walking shoe.

It should be born in mind that the method of treatment by extreme mechanical force is not to be used except in extreme cases, and in cases where a speedy result is desirable. It is not claimed that equally good results cannot be obtained by other more gradual methods. The writer, however, believes the method to be safe, to save time and trouble, to give perfect results.

A CASE OF "WASTING PALSY" (PARTIAL).[1]

BY GEORGE M. READ, M. D., DORCHESTER.

MR. A., American, married, merchant, aged fifty-two years, five feet ten inches high, ordinary weight 160 pounds, gave a good family history, and said of himself that, aside from occasional slight attacks of "indigestion," he had always been well till within a year. For thirty years business had confined him closely, and he had been on his feet almost constantly during the day, standing much of the time at his desk. Less than a year previous to first consulting me (February 5, 1883) Mr. A. thought his left lower limb showed fatigue more readily than usual, and found it necessary to *sit* at his desk. Later an ordinary walk became fatiguing, and he was aware of sensations of "coolness," and "prickling" in the weak member, with occasional muscular "twitchings" as the limb became tired. Within a month the patient had thought the left extremity smaller than its fellow, and in consequence sought medical advice. There has been slight œdema of left foot. Mr. A. has never had a chancre nor suffered a blow or fall at any time. Special senses and sexual function unimpaired; appetite poor; bowels constipated; micturition natural.

Weight at time of first interview 145 pounds. Inspection showed a man of tolerable muscular development, but with a small amount of subcutaneous fat. The left lower extremity was noticeably smaller than the right. No external signs of syphilis. Physical examination revealed nothing abnormal about heart or lungs. Pulse 76; temperature normal; tongue furred; breath offensive; stomach and intestines slightly distended by gas. No tenderness on pressure over any portion of the spinal tract. Left upper extremity somewhat better developed than right, but patient is left handed. By measurement the left lower extremity was found smaller in circumference by five centimetres than the right, the comparison being between several points both above and below the knee. Muscles of nates apparently unaffected. Left foot slightly œdematous. Patient stepped from chair, stood, and walked well with his eyes shut. The cutaneous sensibility on the affected side seemed a bit increased. Use of the induced current proved the muscular contractility unimpaired.

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[1] Essay by William Roberts, M. D., London, 1858.

Urine normal in amount for twenty-four hours; light colored; specific gravity 1025; neither sugar, albumen, nor casts.

Here is a case in which the only prominent symptoms are diminution in size and loss of power in one lower extremity, the functions of which, aside from this loss of power, are unaffected. In forming a diagnosis the history allows one to eliminate palsy from lead and atrophy resulting from continued rest or following injury to a nerve. One at first thought might confound this with a case of tabes dorsalis, but here the power of muscular coördination is unimpaired; the trouble is confined to *one* lower extremity, the cutaneous and muscular sensibility is undiminished, no history of pain or bladder affection, and the diminution in size of limb has followed closely the loss of power, the only other prominent symptom in this case.

It is seldom that "wasting palsy" attacks primarily and exclusively the muscles of the lower extremities. In a tabulated report of fifty cases of (partial) progressive muscular atrophy in but six did the disease make its appearance in the muscles of the lower extremities. Granting the diagnosis correct, we have here an unusual form of a comparatively rare disease.

The subsequent history of this case, covering eight months of treatment, is as follows:—

Mr. A. underwent, at the hands of a competent attendant, a thorough course of massage and galvanism, enjoyed daily surf bathing during the three summer months, lived as entirely in the open air as weather permitted, and confined his exercise within the point of fatigue. His diet consisted of easily-digested meat, strong beef soups, fruit, and plenty of milk and cream, a glass of sherry daily. Internal medication, small and increasing doses of sol. potass. arsenitis.

At our last interview (September 20th) Mr. A. showed a marked improvement in his general condition; tongue clean, appetite good with fair power of digestion. Has gained seven pounds in weight. Uses cane less, and is able to walk one or two miles without fatigue. The sensations of coolness and twitching of muscles is less. The puffiness of left foot is gone, and actual measurement shows a present difference in the circumference of the two limbs of but three centimetres +.

After eight months' observation, with the assurance that the disease has not progressed, but, on the other hand, shows a tendency toward amendment, a prognosis of permanent arrest with possible recovery seems not out of place.

The patient is advised to continue the treatment by massage and galvanism, live in the open air, and exercise with discretion.

Of eighty reported cases where the result is mentioned fifty per cent. have terminated in arrest, amendment, or recovery. Other general conclusions drawn from these cases are that the disease has its primary seat in the muscles, nerve changes following later when the muscular fibres have to a large extent disappeared.

Under the microscope "the striped elementary primitive fibres were found to be completely destroyed, the sarcous element being diffused and, in many places, converted into oil globules and granular matter, whilst the sarcolemma or tissue of the elementary fibre was broken down and destroyed."[1]

"Inherited proclivity," syphilis, exposure to cold, and muscular exertion are supposed to play a part in the ætiology of wasting palsy, though many cases occur in which none of these conditions have been present. A disease of adult life, more prone to attack males than females, showing a marked preference for the muscles of the upper extremities. The never-absent phenomena are "destruction of the muscular substance with consequent loss of power."

The treatment giving the best results is that generally recommended in the case reported.

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PLASTER SUPPORTS.

BY W. T. BROWNE, M. D. (HARV.), JEWETT CITY, CONN.

THE object is to produce fixation with a material which shall be easy of application and easy of removal, being cleanly, light, durable, cheap, and ready for use as soon as one is done applying it. This may be attained by the use of plaster of Paris in the following way, for a support of the spine for instance:—

Take three, four, or five pieces of plaster gauze as wide as the support is to be, and long enough to go around the body and lap ten or fifteen centimetres each way. Lay these on another piece of the same length and eight or ten centimetres wider, and stitch them all together in the middle of their length, so that the seam shall extend up and down the front of the completed support; rub cosmoline into this seam in as narrow a line as possible. Hold the layers of gauze up to the body, so that the seam shall come over the sternum and the widest layer next the body, and cut out where they come under the arms and in the groins. It is not necessary to be very particular about the cutting, as the edge can be easily turned over the required amount after the plaster has been applied and before it has set.

The patient, having on the usual thin undershirt that fits well, and without any pads, is suspended in the usual way.

Eight hundred or one thousand grammes of plaster are now mixed with water to the consistency of cream, and while an assistant holds the gauze up to the body, the first layer is brought down smoothly and rubbed with plaster, then the next, and so on till all have been laid and filled with plaster; then turn the edges of the widest layer over the others, thus forming a binding and a smooth edge.

The plaster may be put on with a brush or with the hand; I prefer the hand. It requires about fifteen minutes to apply the plaster, so it should not set quicker than that.

Such a support is cleanly, for the edges being bound are not liable to crumble.

It is much lighter than when put on with rollers, as it does not need to be as thick owing to plaster all being mixed at once and setting in a uniform mass.

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[1] Meryon, Med.-Chir. Trans., vol. xxxv., p. 76.

A bandage made in this way is two or three millimetres thick in front, and four or five behind, and will last three or four weeks. If it is wanted to last longer, it may have more gauze and more plaster.

The cost of material is only a few cents, and the plaster will be found to be very thoroughly set by the time the binding has been turned and the surface rubbed smooth.

The plaster should be tested before using to ascertain how long it requires to set, and if it requires a few minutes more than by experience it is found to take to apply, it may be mixed a few minutes before required for use.

When it is necessary to remove the support it may be ripped open along the seam as readily as any seam in cloth.

It requires less experience to apply a bandage in this way, as it is impossible to draw it tighter in one place than another and produce ridges on the inside.

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REPORT ON THEORY AND PRACTICE OF MEDICINE.[1]

BY GEORGE B. SHATTUCK, M. D.,
Visiting Physician Boston City Hospital.

I. ARTIFICIAL INFLATION OF THE COLON WITH GAS FOR DIAGNOSTIC AND THERAPEUTIC PURPOSES.

Professor v. Ziemssen[2] has extended to the large intestine a procedure which he, and others, had previously advocated and practiced upon the stomach, namely, its artificial inflation with gas. Others, as well as himself, have undoubtedly advanced the suggestion of this wider application, but he seems to be the first to publish the results of its practical use.

The procedure is simple. A rectal tube six inches long is inserted and attached to rubber tubing terminating in a funnel, by which solutions of bicarbonate of soda and tartaric acid are successively introduced into the colon, for the extreme expansion of which about five drachms of bicarbonate of soda and four and a half drachms of the acid, giving off about five quarts in volume of gas, are required. To avoid the pain attendant upon a too sudden expansion of the wall of the intestine a divided introduction, with a few minutes' pause between each portion, of such an amount of alkali and acid is advised, each divided portion of solution being followed by a small quantity of water to prevent the evolution of gas in the tube. The escape of gas by the rectum is easily prevented by pressing the buttocks together. A lesser volume of gas is required when the object is merely to excite peristaltic action than for diagnostic purposes. In determining the diagnosis of transposed viscera, however, a smaller volume of gas is exceptionally recommended.

As an aid to diagnosis the procedure may be expected to throw light upon the position, the form, and elasticity of the colon; upon the resistance of the cæcal valves to the passage of gas; upon the communication of the colon or rectum with neighboring organs (the stomach, the small intestine, or the bladder); upon the position of contractions or closure of the intestinal calibre; and, under some circumstances, upon the nature of an impediment to the movement of fæces. From the therapeutic stand-point this method of gas-inflation is of value, and much superior to inflation by water, when one desires to excite strong peristaltic action; to tear through or dilate strictures; to reduce dislocations or intussusceptions; to separate adhesions.

Among other displacements of the colon V. Ziemssen has found the method useful in determining downward displacements, the relation of the intestine to ovarian and other abdominal tumors, and its interposition between the upper surface of the liver and the abdominal wall.

Typhoid fever and tuberculosis of the intestine are the only conditions mentioned as contra-indicating the use of the method. Neither in the presence of cancerous growths or fæcal accumulations, or of peritonitis with or without adhesions, have any untoward results occurred. The normal intestine will resist an enormous degree of inflation, as was proved by experiments upon bodies immediately after death, it having been found impossible to rupture the colon by such experiments.

II. THE RENAL CIRCULATION DURING FEVER.

A series of experiments upon dogs, in whom fever had been artificially induced, was undertaken by Dr. Walter Mendelson at the Pathological Institute of the Leipzig University, to ascertain the actual condition of the circulation in the kidney during fever. To his report[3] of this research the Cartwright Prize Essay for 1883 was awarded.

An instrument invented by Ray and named the oncometer, or bulk-measurer, was used to determine the condition of the circulation in the kidney, to which it can be readily applied without interfering with the functions of the organ. The dogs used were previously rendered immobile and insensitive for the application of the oncometer by brain puncture, and the pyrexia was produced by subcutaneous injections of pepsin, which was found to be the most satisfactory pyrogenous agent.

By these experiments it was determined that attendant upon the febrile process there is a diminution in the volume of the kidney; it was further ascertained by other experiments that this diminution, as was to be anticipated, was dependent upon contraction of the blood-vessels of the kidney; and again, by causing a local fever in the brain, whilst the kidney and the rest of the body remained of normal temperature, the conclusion was drawn that this contraction of the vessels was in all probability the result of a stimulus conveyed to them from the central nervous system, the stimulus being the consequence of irritation of the central vasomotor centres by the abnormally hot blood circulating through them during fever.

It is suggested that these conclusions, if correct, — and the experiments and their interpretation seem to have been quite carefully guarded — offer, in addition to the increased loss of water by the lungs and skin, another available explanation for the decrease in the amount of urine secreted by fever patients; and that the occurrence of albuminuria, a very constant symptom in nearly all high fevers, becomes readily understood in view of the extreme anæmia thus shown to affect the kidney during a hyperpyrexia, the glomerulal epithelium being insufficiently nourished with arterial blood and thus losing its function of retaining within the vessels the albuminous portion of the blood plasma.

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[1] Concluded from page 253.

[2] Deutsches Archiv f. Klin. Medicin, vol. xxxiii, p. 235, 1883.

[3] Am. Journ. Med. Sci., October, 1883, page 380.

III. ABSCESSES OF THE LIVER.

The largest field for experience in the diagnosis and treatment of hepatic abscesses is found in tropical or subtropical countries, and we are glad to record the observations and conclusions of observers in such climates.

Quejia[1] confirms the common experience that abscesses of the liver are situated most often in the right lobe, and in the posterior border of this lobe especially. Abscesses of the superior surfaces of the liver are marked by severe pain of the right shoulder, while those on the concave or inferior surface give rise to disturbances of the digestive functions. Those large abscesses which occupy a considerable part of the thickness of the organ are accompanied by both symptoms, pain in the shoulder and digestive disturbances. Bearing in mind the frequency of abscess on the posterior border, and the tendency to open spontaneously into the bronchi, careful percussion, marking the limit of dullness, may afford a guide as to where incision should be made. The coexistence of pain in the shoulder and digestive perturbation, without dullness of astained form, but with the presence of the well-known symptoms of abscess, authorizes us in making an incision, directing it towards the centre of the organ. As to whether hepatic abscess is susceptible of spontaneous cure he quotes a case in which he found on post mortem an osteo-calcareous mass, due apparently to a hepatic abscess cured by cretification of its walls. In true hepatic abscess jaundice is always wanting. Incision should be practiced when the line of dullness reaches or passes the nipple, and in many cases is best made behind the nipple line.

IV. CAPILLARY PULSE.

As is well known, under normal conditions the flow of blood, which is intermittent in the arteries, becomes apparently continuous in the capillaries, but a physiological capillary pulse can be felt and seen under favorable circumstances in certain positions, as the end of the fingers when pressure is applied, the skin of the forehead, the inside of the lip, the fundus of the eye. Under some abnormal circumstances the capillary pulse becomes very apparent and nearly constant, especially in compensated aortic regurgitation attended by hypertrophy and dilatation of the heart, and diminution of elasticity of the arteries. Under such circumstances the aortic lesion is said to have been diagnosticated from observation merely of the capillary pulsations in the red mark on the forehead after removal of the hat.

Such a diagnosis should rather be designated a clever guess, for the capillary pulse is not confined to aortic regurgitation, but has been observed in cases of interstitial nephritis with arterio-sclerosis, of arterial atheroma, of chlorosis, of extreme anæmia, typhoid fever with hyperpyrexia, general paralysis, etc., etc.; many cases of aortic regurgitation, moreover, do not exhibit the phenomenon at all.

Ruault[2] advances the opinion that the capillary pulse can only occur when the elasticity of the capillaries is diminished, which is probably a sufficiently good explanation for its presence in aortic regurgitation, but not in typhoid fever and anæmias.

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[1] Revista Medico-Chirurgica de Mejico, October 10, 1883. London Medical Record, February 15, 1884.

[2] Gaz. Hebdomadaire, December 14, 1883. British Medical Journal, February 9, 1884, page 277.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

MARCH 10, 1884. The President, DR. CHARLES D. HOMANS, in the chair.

SUPPRESSION OF URINE TREATED WITH CANTHARIDES.

DR. W. C. B. FIFIELD reported the case, which he had seen in consultation with Dr. Rogers, of Dorchester. The patient was a hard drinker, whose symptoms were at first obscure, but who had later had albuminuria with casts. Complete suppression had lasted some days. Active treatment had been of no avail, and the patient was comatose and failing. Tincture of cantharides was then given hourly in drop doses, and after some hours the secretion was reëstablished, and the patient recovered so far as to be out.

TREATMENT OF BLOOD-POISONING FOLLOWING SURGICAL OPERATIONS.

DR. W. G. WHEELER reported three cases, the publication of which is reserved. He asked the opinion of the Society as to the effect of large doses of quinine. It appeared to him that an irritable stomach is one of the early symptoms of septicæmia. He had not obtained the benefit from fifteen-grain doses that we read of, and it disagrees with the patient.

DR. C. B. PORTER agreed cordially with the writer in the importance which he placed upon drainage. He thought that the first cardinal principle in the treatment of wounds was that they should be properly drained, and second to that that they should be antiseptic. He had never seen any benefit from quinine given to reduce temperature in septicæmia, but relied entirely upon alcohol. So long as the patient is not intoxicated he is not getting too much. A rapid pulse is only an indication for more alcohol, and it is his rule to give it as soon as the temperature goes up. He has given as much as forty-eight ounces of brandy in twenty-four hours, with the results of lessening the fever. If it cannot be retained by the mouth it may be by the rectum, and if it cannot be held there alone it may be by the addition of morphia or chloral, which are in these cases of comfort to the patient. The essentials of treatment were drainage, disinfectants, and alcohol. He did not apply his remarks on quinine to the high temperature of typhoid. With reference to one of Dr. Wheeler's cases of slight abrasion, he said that he had seen blood-poisoning which had its point of departure in the granulations about a urethral calculus, which was got away at the second attempt to grasp it with the forceps, they being introduced into the urethra but once.

DR. WHEELER spoke of the value of giving stimulant subcutaneously when it can be retained in no other way.

DR. GEORGE W. GAY said that it would be an interesting point to determine the relative frequency of traumatic fever, septicæmia, and erysipelas in cases of wounds both in hospital and in private practice. He thought a much larger proportion of patients having open wounds were thus affected than was commonly supposed. He had seen as much erysipelas outside the hospital as in it in proportion to the number of his cases. When it is prevalent in the hospitals it also prevails outside, and in the practice of men who have no hospital appointment. He is inclined to refer it oftentimes to some influence in the air rather than to any local cause. The speaker called attention to the fact that with patients who, after an operation or an injury, have a sharp attack of traumatic fever, and after seven to ten days recover from it, then for a certain time one may do almost any operation without much danger from septicæmia or traumatic fever. He was not prepared to say that a tentative operation was almost justifiable, but it does protect for a time. If, when the temperature begins to go up after operation, the surgeon looks for a blush and for pent-up pus he will find one or the other in a majority of cases. He had seen little or no good result from the use of quinine in cases of blood-poisoning. He also thought that another once much-praised drug, tincture of chloride of iron, is of no value in septic inflammation. He relied on drainage and antiseptics externally, and on opium, food, and stimulants internally.

Dr. Fifield said that when the first report of the Boston City Hospital was issued it caused much comment on the mischief rising from placing a hospital on made land, but with every improvement in drainage and in cleanliness, as well as with Listerism, results have improved till they are now something to be proud of. Messrs. Callender, Keith, and Tate have shown conclusively that cleanliness is necessary to their success. The speaker could not reconcile these facts with a belief in atmospheric influences as a cause of the disease. Dr. Fifield could not too strongly express his belief in the value of stimulants in septic fever, or in any other, if the temperature became high. He had not seen any good produced by large doses of quinine, and he had a poor opinion of morphia, which he thought depressed patients who might bear the tincture of opium well. He thought that calomel was not sufficiently appreciated. With rising pulse and temperature, which are not controlled by opium, stimulants, and quinine, the use of ten to fifteen grains of calomel may empty the bowel, and relieve the fever. In proof of this he related two obstetric cases.

Dr. Porter said that it was particularly pleasing to find such unanimity of opinion as to the value of alcohol.

In surgical cases constipation sends up the temperature, and a purge brings it down. Menstruation also sends it up, so that he has the presence of the catamenia expressed on his hospital temperature charts. During its presence a rise of two or three degrees does not disturb him. We know very little as yet of the normal changes of temperature in health.

Dr. Fifield had observed the same thing. He also referred to a recent article on the possibility of cutting short typhoid with calomel, and to the former belief that it could be cured with large doses of calomel and ipecac.

Dr. Gay also agreed with Dr. Porter on the effect of the catamenia on temperature. He remarked that he had seen perhaps a half dozen cases of operations, involving large blood-vessels, which have done badly for ten or twelve days, when there has been a large secondary hæmorrhage, after which they have begun to recover. If this meant anything it meant that the old plan of bleeding was sometimes a good one. Our ancestors, with their emetics, cathartics, and bleedings, may not have been so far wrong as has since been supposed.

Dr. Fifield reported a case of purpura in which there were unsuccessful attempts to check hæmorrhage. Contrary to expectation the bleeding seemed to benefit the patient. Bleeding was the treatment of the ancients.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.[1]

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

Mr. S. M. Colcord, a former president of the American Pharmaceutical Association, was called upon by the chairman, and responded as follows: —

I was not expecting to be called upon to speak. I am not now in the drug business, consequently not an adulterator, not personally interested in the law, but am in the milk business, supplying pure milk. I am interested in this question as a matter of public welfare and consider it a question of vital importance. More than thirty years ago I served on committees to detect, expose, and prevent adulteration. The American Pharmaceutical Association had its birth in a convention of the best apothecaries in the United States, called for the purpose of exposing and preventing the importation of inferior, adulterated, or spurious drugs. A law was already upon the Statute Book, and this convention was called to state the facts to the government, and pray for the enforcement of the act for the public welfare. The convention found it to be a work of time, and that home adulterations were equally important, and that patent medicines seemed to be exerting a controlling influence. After two annual conventions a constitution and code of ethics were formed, and the convention adjourned to meet in the city of Boston as the American Pharmaceutical Association, with a Boston man for president, and here in this city of Boston was fought the great battle of adulteration. On the question of "admitting all drugs good of their kind" it was decided, mainly by Boston votes, that the large class of spurious, adulterated, and sophisticated goods was to be admitted no longer through our custom houses. The consequence was that all the distributing ports of the world soon found out that the United States was no longer to be the market for their worthless trash. Orders went out for goods of such a quality as would pass the custom houses, and it soon came about that foreign consignors sent no more poor goods to this country, and our dispensers became acquainted with a class of drugs heretofore unknown in our country, and now every one is satisfied with the law; no one is oppressed; dispensers, *well informed*, have no trouble in finding pure articles of fine quality, and everything is lovely in that direction. But how about patent medicines and home adulterations? Well, the new Association found itself born of "poor but honest parents," and not having arrived at a fighting age, voted that patent medicines or secret remedies were not a legitimate part of the dispenser's business, and as this was too big for them to handle, and as they had so much other useful work to perform, that they would have nothing to do with this question. Home adulterations continued to be reported upon year after year, the Association growing more critical and severe (without accomplishing anything) until the committees making the reports were threatened with private prosecution. It was then voted to change the committee so as to serve the drug market, and the Association has since done what it could by fostering investigation, science, and education as a preventive and controlling influence upon home adulteration.

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[1] Concluded from page 256.

As I am now out of the business I do not feel like talking upon this subject. The fact is, these people are all my friends, — the wholesale druggists, the retailers and dispensers, the prescribers, and the patients who have patience to take these adulterations, and my experience has been that I cannot shoot an unknown enemy at long range, without finding it a fratricidal onslaught with poniard and pop-gun.

This matter of home adulteration is not a thing that has grown up in the drug business. You might as well say the drug business grew out of adulteration. I presume in the beginning they started in the race together, but I think now that adulteration may be a little ahead. It has always seemed to me that many honest and honorable men in the drug business have come to think that what many people call adulteration, sophistication, and substitution, is an unavoidable and legitimate part of the business, and that having adopted the business they adopt these side issues as annexes to the law and the *profits*.

Now this law was not put upon the Statute Book by any action of the drug trade, neither was any remonstrance made to it that I am aware of, and the drug trade has had very little interference from the law, and it only desires to be let alone, and to do as it pleases, and feels abundantly able to settle points of quality with its customers without the interference of law. But still the fact remains that the United States Pharmacopœia is nearly a perfect standard of quality, fully recognized as a legal standard, with nothing ambiguous or undefined, and very easily conformed to by all persons qualified (even very poorly) to do an ordinary drug business; that by enforcing this law all are freed from disloyal and dishonorable competition in quality, and can have no reasonable objections to the law.

If we try this law fully enforced for awhile we shall find relief from all conflictions between honesty, conscience, and profit; we should have the confidence of our customers, and all parties would be benefited commercially, and the mercenary taint that clings so tenaciously to the drug business will be so far removed that few, if any, would be willing to have the law repealed or become a dead letter.

MR. HENRY CANNING, President of the Massachusetts College of Pharmacy, spoke as follows: —

Experience has shown that the President of the College of Pharmacy cannot be too careful in acting as its mouth-piece, for the reason that the institution is apt to be held responsible for all sorts of legislation touching the pharmacist.

As an individual, however, I trust that if any modification of this law must be made it may be only in the direction of making it stronger. It is eminently a law for the better protection of suffering humanity.

I was somewhat chagrined on hearing the report of the various adulterations in the line of food and drugs to find that so large a percentage of the pharmaceutical products examined had been found wanting, but the feeling was a little softened when I learned that the same report showed a much larger percentage of adulteration in important articles of food.

Again, I trust that if any change in this law be made it be only in the upward scale.

PROF. G. F. H. MARKOE spoke in favor of the present law as follows: —

MR. PRESIDENT, — I am heartily in favor of the law for the prevention of adulteration of food and drugs, and would be sorry to see it changed except in the direction of greater efficiency.

The remarks by the gentlemen who have spoken before me place the subject of the adulteration of drugs in its worst aspect. More than twenty years of practical familiarity with the drug market enables me to affirm that during all that time there never has been, and there is not now, any serious difficulty in getting good drugs, pure chemicals, and well-made, full strength pharmaceutical preparations from all reputable wholesale druggists or manufacturing chemists, provided the pharmacist or the physician is willing to pay a fair price for choice drugs and standard preparations. The sharp competition in the prices of goods, mainly introduced by unscrupulous dealers, who care nothing for quality, has a great deal to do with the adulterations and substitutions that are found in the drug trade, especially in the line of powdered drugs, which may be quite worthless, and yet appear equally as good as the powder made from a pure drug. A skillful drug miller can transform worm-eaten or rotten rhubarb into a nice-looking powder quite as handsome as that furnished by a prime article of Chinese rhubarb. Citrate of iron and quinine may contain two per cent. or twelve per cent. of quinine, and yet the two samples may appear to be alike; a careful assay alone will show the true character of the article. But although citrate of iron and quinine with less than the standard quantity of quinine is quite common in the market, and is bought by those who will not pay the price for the officinal article, yet I feel sure that a very large portion of all that is sold is of good quality, because the chemists who produce the largest part of all that is used in the country make an honest preparation, and also because the great bulk of all the dispensing business is in the hands of honest and capable pharmacists, who demand a guarantee of quality from those of whom they buy, and who know enough to reject that which is not fit for use.

The wholesale drug trade of the country, with but few exceptions, is in the hands of honest and honorable men, who would much rather deal only in the best grades of drugs and only in the products of the most reputable and skillful manufacturing pharmacists and chemists. The efficient enforcement of the drug law will compel the few firms who willfully force poor goods upon the market to mend their ways; and since there is little chance for underselling on goods of equal quality the ruinous competition which compels an honest man dealing only in honest merchandise to meet the prices quoted by dishonest dealers for articles bearing the same name and label, but far below the standard of purity and quality, this sort of unfair and unjust competition will be kept well in check by the law in question, and I feel sure it will receive the hearty support of all well-meaning dealers.

A few words with regard to the pharmacist as distinguished from the druggist or wholesale dealer in drugs. I hold it to be his duty to closely watch all his supplies and to assure himself of their proper quality. The United States Pharmacopœia of 1880 contains concise and accurate descriptions of all officinal drugs and chemicals, together with statements of the adulterations and impurities to which they are liable, also giving good tests for purity and practical methods for the recognition of sophistications. This part of the work is so well done that no intelligent pharmacist has any excuse on the score of the lack of a sufficient guide and standard. Those who do not know enough to use this excellent standard must either employ some one competent to interpret and apply it for them or run the risk, under the law, of being ranked with those men who willfully transgress for the hope of greater gain.

W. W. BARTLETT, Ph. G., Vice-President of the College of Pharmacy, spoke as follows: —

MR. CHAIRMAN, — I am very much interested in this adulteration law, and have attended many of the trials and hearings that have grown out of it.

I am first vice-president of the Massachusetts College of Pharmacy, but come here in my individual capacity only. It is contrary to the policy of the college to take part in anything of a political nature, it being strictly an educational institution. I believe that the law should remain on the statute books just as it is. The changes now sought to be made in it are in the interests of those who have been detected in adulterating their goods and aim to make the law totally inactive. The best druggists in Boston favor the law as it is, and many have been present at the public hearings and have so expressed themselves openly.

The action of the Boston Druggists' Association in the matter of adulterations has not been clearly understood by all. By your leave I will read the following resolution, offered by myself, and unanimously adopted by that body, November 27, 1883: "Resolved, That the Boston Druggists' Association heartily condemns the practice of adulterating drugs and medicines, and will give its earnest support to any fair and legitimate means for suppressing the obnoxious business."

Physicians will have no difficulty in obtaining drugs and pharmaceutical preparations that are fully up to the standard of the United States Pharmacopœia of 1880 if they demand them. I make a practice of assaying my opium before making tincture of opium, and have found in every case the opium fully up to the requirements of the United States Pharmacopœia, 1880, when procured from a reliable source. I have also examined a sample of citrate of iron and quinine for a wholesale druggist in this city, which was the product of the laboratory of a reliable manufacturing chemist, and found it fully up to the standard of the United States Pharmacopœia, 1880.

These facts show that it is quite an easy matter to get reliable drugs and pharmaceutical preparations. The greatest difficulty that the retail druggist has to contend with is unfair and dishonest competition. The dealers in fancy goods having taken from us a part of our business, and established ruinous prices for the articles so taken the public immediately based the prices of prescriptions and drugs on these prices regardless of purity and quality, and many unscrupulous druggists have met these prices and furnished correspondingly bad goods.

I think that physicians should discriminate in favor of those stores where only strictly pure and standard goods are dispensed.

I believe that much trouble comes from the millers. I had occasion not long since to have a white preparation ground and I found a cubeb and some gum arabic in the tailings. On requesting the miller to allow me to visit his mill he objected, and I found that he did his grinding under lock and key.

In conclusion I would state that I think that the law as it is can be safely left in the hands of the Board of Health without working hardship or oppression to the honest pharmacist or wholesale druggist.

DR. DAVENPORT, in reply to a suggestion that drugs from some reputable manufacturer should be specified by the physician in prescribing medicines, stated that he considered it better to demand a good article and leave it to the discretion of the pharmacist to supply the drug from any manufacturer he might think proper, or from medicines manufactured by himself if he should choose to do so. In this way the responsibility for the quality of the goods is taken from the prescriber and is placed upon the dispenser, who is also stimulated to the selection or preparation of articles of standard quality and reliability.

WM. C. DURKEE, Ph. G., spoke as follows: —

I am especially glad to hear the last remarks of Dr. Davenport. The practice of specifying a particular manufacture of pharmacopœial preparations does not seem to me a good one, but one, should the custom largely increase, which will produce injury to both apothecary and doctor.

The apothecary having little occasion to practice by manufacturing, the knowledge which he may once have acquired, will become less inclined or able to apply the pharmacopœial tests for purity and quality to those few drugs or preparations which are not ordered by the name of some manufacturer or dealer. The responsibility of the apothecary ceases when he complies with the order of a physician who indicates the maker of the preparation he wishes dispensed, and the physician assumes all the responsibility for quality, as the manufacturer may reside in another State or country and not be amenable to Massachusetts law. Whereas if medicines are ordered by the officinal name only, the pharmacist is wholly responsible for quality, and if able to properly assay the officinal preparations, he is competent to manufacture them, and is entitled to a portion of the profit which would otherwise often go to any irresponsible foreign manufacturer who creates a demand for his preparations by advertising or otherwise.

I am heartily in favor of the law as it now stands, and believe it will do much to elevate the practice of pharmacy. It will help to do away with the competition of those who buy poor drugs and sell preparations from them cheaper than good preparations cost to manufacture. It will help us to furnish physicians with reliable remedies, thereby adding to the faith in and knowledge of medicine and increasing its usefulness.

The pharmacist should be held responsible for quality, but should be allowed to make, or choose the maker of the medicines he dispenses.

DR. GEORGE B. SHATTUCK called the attention of the Society to the bill lately introduced in Congress by a Pennsylvania representative to provide for the preparation and publication of a new pharmacopœia. The subject was an important one and had a direct bearing upon the question then under discussion. The present Pharmacopœia had been prepared by the best experts in the country after careful consideration and consultation. As was shown by preceding remarks of some of the well-known pharmacists, who had added the weight of their presence to the meeting, the better the changes made in the work were understood the more they were approved of. The book had already been adopted as a legal standard in four large States, and was also the standard adopted by the United States Treasury Department. As many other excellent reasons readily suggested themselves why a new pharmacopœia was unnecessary and objectionable, and not one that he could think of in its favor, the speaker begged to be allowed to offer and move the adoption of the following resolutions: —

Resolved, That this Society is strongly opposed to a bill introduced into the National House of Representatives January 8th last, by Mr. Randall, entitled A Bill to Prepare and Publish a National Pharmacopœia for the United States. The Society believes that the present Revised Pharmacopœia is at the very least as good a work as is likely to be secured by the passage of this bill.

That all necessary legal authority which the present Pharmacopœia does not now possess can be easily given it.

That the complication which would necessarily arise from two pharmacopœias is undesirable.

Dr. F. H. Williams seconding the motion, the resolutions were unanimously adopted.

Mr. G. F. H. Markoe, of the Massachusetts College of Pharmacy, spoke against the bill and in favor of the present Pharmacopœia upon much the same grounds as those already given.

Adjourned at 10.30 o'clock.

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PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

May 12, 1883. A Clinical Chart was exhibited by **Dr. Green.**

CASE RESEMBLING INFANTILE PARALYSIS, CAUSED BY IMPROPER DIET.

Dr. Minot reported a case of interest in relation to the diagnosis of infantile paralysis. A little girl, thirteen months old, who had been brought up on Mellin's food and Swiss condensed milk, had an attack of dysentery, followed by tenderness in every part of the body, especially the legs, and soon lost the power of moving the legs. When seen by Dr. Minot, three months afterwards, she was pale, delicate, very thin, the gums were spongy and black, the teeth (incisors) loose. She was intelligent, and could say a few words. The lower extremities appeared almost completely paralyzed, the only movement being a slight lateral one of the feet, and some flexion and extension of the toes. Irritation of the soles of the feet failed to produce reflex movement; irritation of the inside of the thighs, just above the knees, caused slight movement of the legs. The case strongly resembled one of infantile paralysis, but in view of the condition of the gums, and the general atrophy of the child, a change in diet was advised, together with iodide of iron and cod-liver oil. The medicine was not given, but the patient was fed with fresh cow's milk, bread, and broths. An immediate improvement took place, and the motion of the legs was soon restored. The child has since continued perfectly well, now for about three years.

Dr. Buzzard, who mentions a similar case in his Clinical Lectures on Diseases of the Nervous System, attributes the paralytic symptoms to a large quantity of uric acid in the blood, caused by the enormous amount of sugar contained in the diet. He thinks that minute crystals of uric acid are deposited in the connective tissue between the muscles, and cause so much pain as to render the muscles powerless.

Dr. Abbot remarked that when first introduced it was said of dialyzed iron that more than ten or fifteen drops was useless, but he had prescribed much larger doses with apparent advantage.

Dr. Ingalls said that he had always considered the tincture of the chloride by far the best preparation of iron, but within the past few years he had tried the dialyzed preparation, he thought with less good results. As to the excess of dose of the latter, was it not as with many other articles, the tincture of the chloride, for example; for after a few days the deep discoloration of the fæces had led him to think the doses larger than necessary.

HIGH TEMPERATURES AFTER LABOR WITHOUT OBVIOUS CAUSE.

Dr. Fifield spoke of the occasional occurrence of high temperature and pulse after labor, whether instrumental or unaided, where no definite cause could be traced and where no serious results had ensued, the patient meanwhile calling herself well and feeling no particular discomfort. Some of these cases seemed to be remittent with one or two days' interval. The last seen was given into his hands by Dr. Cutler. The patient, a primipara, thirty years old, had had a very hard instrumental labor. For several days the temperature continued at 104.5° F., and the pulse at 130–140, yet the patient perceived nothing amiss with herself. The lochia were not particularly offensive, and carbolized vaginal injections were frequently and regularly used. The lady was of a very nervous temperament. After these high figures had continued, with occasional remissions, for about twelve days, the pulse and temperature subsided and a good recovery followed.

Dr. Fifield said that he was at great loss to explain these symptoms. There was no septicæmia. Careful examination and inquiries revealed nothing otherwise abnormal. Dr. Fifield remarked that Dr. McClintock speaks of the great rapidity of pulse in some women after labor, the symptom having no particular significance.

Dr. Minot said that he had reported to the Society cases somewhat similar to those of Dr. Fifield. In each case the patient was of very nervous temperament.

Dr. Draper referred to cases reported by Teale, of Manchester, England, several years ago, of hysterical women in whom the temperature reached 122° F., in one instance verified very carefully.

Dr. Richardson stated that at the lying-in hospital there had been a number of cases where the temperature had run high for several days, with nothing to account for it except perhaps laceration of the cervix after severe labor. When the "surface" became normal and the laceration had healed the temperature fell; so distinctly, that it might be supposed that these cases of high temperature had been due to some laceration.

Dr. Doe said that in the *London Medical Times and Gazette* a case was recently reported in which the temperature after labor ran up to 106° F. The cervix was lacerated on one side. The uterus was washed out and the temperature fell immediately to 101° F., but rose again. The washing out was kept up for eight or nine days, the temperature rising to 104° F. in the intervals between the washings. Four days later, the washing having been discontinued, the temperature fell. The symptom was supposed to be due to the laceration alone.

THE INDUCTION OF LABOR.

Dr. Richardson gave the details of two cases of the induction of labor. One in a case of eclampsia where manual dilatation and version had been performed, the patient being delivered in a little over one and a quarter hours. The other in a patient in the last stages of phthisis where the labor had been induced by rupture of the membranes high up. Labor started up within five minutes after the escape of the liquor amnii.

Dr. Sinclair remarked that the ease of dilatation was accounted for by the fact that the patient was a multipara.

In answer to Dr. Reynolds, Dr. Sinclair stated that he had performed manual dilatation with delay varying from five minutes to four hours, and declared that there was no bag in existence equal to his own finger. Manual dilatation was perfectly safe if the operator's head was steady and his hand proceeded accordingly. Nothing would take the place of the finger. If the operator jumped about and withdrew his finger and generally lacked steadiness of purpose, he would fail, and he would regret his failure.

Dr. Richardson stated his belief that Barnes' dilators simply start up labor. He had never seen any further effect from their use. In any case where the patient could take ether he would never use any means but manual dilatation. Dr. Richardson asked if it were not a fact that the cervix dilates by uterine pains when Barnes' dilators are used, and not by any dilating force exerted by the dilators.

Dr. Sinclair observed that manual dilatation was being gradually and quietly adopted in England, and was resorted to a good deal everywhere. He said there were sometimes troublesome cases, and referred to that of a primipara at the eighth month, where dilatation occupied four hours and the woman died of secondary hæmorrhage at the end of twelve days. This was somewhat discouraging, but this was the longest time required he had ever met with. Tearing the cervix ought not to occur; one must use patience and wait till the parts are thoroughly soft and dilated.

HÆMOPTYSIS IN THE COURSE OF PUERPERAL SEPTICÆMIA.

Dr. Hosmer reported the following case: —

A patient, something more than thirty years old, dated the commencement of her fourth pregnancy from October 25, 1882. Early in the following February she had a severe fall upon the ice, and on the 22d of the same month she noticed flowing.

She was first visited March 15th, and the usual precautionary measures were advised, but without avail, for ten days later, March 25th, the fœtus was expelled. A puerperal septicæmia was soon developed, and in connection with it there came a rather long succession of chills which were connected with thoracic trouble. There was severe pleuritic pain on the right side, condensation of the lung tissue over a small area in the middle of the right back, and hæmoptysis, which in varying degree continued for many days. The expectoration, effected without much cough, did not conform to the ordinary pneumonic standard, but contained a large proportion of fresh, bright blood. The question was as to the precise condition of the lung which occasioned the hæmorrhage. Reference was made to the *Boston Medical and Surgical Journal*, in which, in the issue of November 20, 1879, under the head of Phlebitis of the Lung, was reported a case that presented the same symptom which was thought to be an unusual one by reason of the conditions with which it was associated.

Dr. Fitz said that he was under the impression that Dr. Wyman used the term as synonymous with thrombosis. Hæmorrhage is a frequent symptom of pulmonary embolism; persistent hæmorrhage would suggest abscess or gangrene during the progress of which the hæmorrhage continued. Hæmoptysis, however, is a result of embolism only in the case of the passage of relatively small particles into branches of the pulmonary artery — an obstruction of the primary branches of which results in sudden death — before the phenomena of hæmorrhagic infarction can occur. In the woman there was probably uterine thrombosis followed by pulmonary embolism.

June 9, 1883.

METHOD OF MANAGEMENT OF FACE PRESENTATION.

Dr. Richardson reported two cases of face presentation in which delay had been occasioned by the head not being fully extended. The lack of extension being remedied, rotation had taken place and the children had been born.

ACUTE ECZEMA IN PREGNANCY.

Dr. Abbot reported the case of a primipara who during the first month of her pregnancy had become covered with an eczematous eruption, in size from a small point to a surface an inch in diameter, accompanied by considerable itching, here and there slight vesication, followed by furfuraceous desquamation of the cuticle, which was finally well in three or four weeks. Such a case is described by Dühring as a form of acute eczema. The patient received no treatment except a borax wash to relieve the itching. The whole body and extremities were covered by the eruption, which was supposed to be due to the suspension of the catamenia by pregnancy. The patient had never shown any sign of eczema before, except a slight irritation at times close to the alæ nasi.

PROLAPSE OF THE ANTERIOR WALL OF THE VAGINA DURING LABOR.

Dr. Lyman reported a case of delayed labor with this complication. As the head descended there lay in front of it what appeared to be the thickened anterior lip of the uterus, and which became thicker and thicker, resisted efforts to restore it, and was found to be the anterior wall of the vagina. This delayed the labor about an hour. For several days after the labor there were pretty decided symptoms of cystitis, but these passed off, and the patient made a satisfactory recovery.

Dr. Richardson said that he had seen the condition several times at the hospital or with the students, always in multiparæ and in women in a markedly debilitated condition, and preceded by trouble with the bladder which was in the fold.

Dr. Lyman said that the patient had had no trouble with her bladder previously. She had consulted him a year before for a very badly lacerated cervix and perinæum, and almost universal eczema, owing to which she was advised not to undergo operation. Under general treatment she improved, went home to Minnesota, got well of the eczema, conceived, and came on again to be confined. Dr. Lyman remarked that the case illustrated how well women get along sometimes with badly lacerated perinæum, cervix, etc., the cervix showing complete eversion. All the uncomfortable symptoms disappeared, and since her confinement the patient has been as well, almost, as any woman.

Dr. C. Ellery Stedman remarked that he had seen the same appearance, the vaginal fold being as thick as his thumb.

Dr. Green thought it strange that with prolapse of the anterior vaginal wall and a torn perinæum there was not more trouble. As to treatment, if the fold could be pushed up, that would be sufficient; otherwise, in his opinion, the forceps should be used at once.

Dr. Richardson remarked that version would be better, as avoiding a dragging down, with forceps included, of the very thing it is desirable to avoid.

Dr. Lyman said that if he had put in forceps he would have risked vesico-vaginal fistula; but he would not interfere unnecessarily.

Dr. Green observed that the head might be too low for easy version, and it was a fair question whether forceps or the continued pressure of the head were the worse. It seemed to him that the forceps might have been used, the perinæum being torn, if the head were depressed somewhat so as to avoid pressure against the anterior wall. Either one or the other process should be adopted rather than let the case go on a long time without aid.

Dr. Richardson observed that it should be recollected that in version a different diameter of the head is coming through the pelvis, and the rotation need take place only at the last minute.

Dr. J. L. Sullivan, of Malden, said he would like to call attention to the different experience of different physicians. He had had twenty-five hundred cases of labor and never a face presentation.

Dr. Richardson said that in the lying-in hospital three of the six cases of face presentation were in women with deformed pelves. In answer to a question by Dr. Lyman, he should think it was very seldom that a woman would suffer from hæmorrhage in case of low attachment of the placenta before the sixth or seventh month. He never would allow a case to go on without delivery if the child were viable.

Dr. Lyman gave an account of a case of immense suppurating unilocular ovarian cyst. The woman died twenty-four hours after ovariotomy.

Dr. Sullivan reported a case to which he had been called in consultation, and asked what ought to have been done. The woman was six and a half months pregnant, not for the first time. She had a convulsion, being in the advanced stages of Bright's disease. It was impossible to dilate the cervix in consequence of a whipcord like contraction during the hour or hour and a half of effort, but she was not under ether. Suddenly she became comatose, and died in ten minutes. The urine was scanty, moderately albuminous, and perfectly loaded with casts of all descriptions. There had been no uterine action. In another case, not long ago, Dr. Sullivan succeeded in dilating and inducing labor, and everything went on well.

Dr. Richardson suggested that the uterus might have acted differently under complete anæsthesia.

Dr. Sullivan questioned further what course should have been pursued had ether been administered without result. The question propounded was this: What ought to be done in such a case provided a whipcord constriction persisted after bleeding and etherization, or any other suitable means, had proved useless in causing relaxation and dilatation. In the case related the patient suddenly died just as ether was brought into the room. The remarkably feeble pulse and feeble condition of the circulation led him, right or wrong, to postpone venesection until the effects of ether had first been ascertained. Before ether could be procured death occurred, probably from cerebral hæmorrhage.

The question actually propounded, or intended to be propounded, by him was this: Would it be proper to deeply incise the os uteri in such a case should the whipcord constriction of the internal os persist after bleeding and ether had been pushed to the full extent of safety. In other words, the inquiry relates to a *hypothetical* case, the possibility of such having been suggested by an actual one.

Dr. Abbot observed that it was well known that apoplexy was a not uncommon result in such cases, and if it was the cause of the symptoms in the one reported nothing could probably have been done to relieve it. He had had a patient, however, a boy, who was comatose, completely, for a week, in the course of Bright's disease, and recovered entirely so far as the coma was concerned.

Dr. Sullivan remarked in regard to venesection that it was contra-indicated, yet if the patient had lived and the ether had failed he would have bled. As to the condition of the cervix he could dilate so far, but no more, with repeated efforts.

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NEW YORK STATE MEDICAL ASSOCIATION.

The New York State Medical Association has just issued in pamphlet form a report of the proceedings of the convention held in the city of Albany February 4 and 6, 1884, at which the Association was organized on a permanent basis, together with a list of founders, representing the various counties of the State, to the number of 168.

THE CANVASS OF THE STATE. THE "CODE" QUESTION.

At the first meeting, February 4th, **Dr. Gouley** made a report of the canvass of the State which had lately been completed. In regard to the circular which had been sent to every member of the regular profession in the State, so far as known, the following figures were given: —

The proof is found to contain the names of	5219
Since the appearance of the proof new names have come in to the number of	67
Total, carried to next page	5286

Which number, added to the original, gives a total of	5286
Since the beginning of the canvass there have died	83
	5286
Number of names stricken off from other causes	201
Leaving a total (given in the corrected catalogue) of	5002
Number of those who have not expressed their preference	1142
Total number of votes recorded	3860
For the National Code (corrected number)	2547
For the "New Code" (corrected number)	1040
For no Code (corrected number)	239
Unclassified (corrected number)	34
Total	3860

The canvass of the State Medical Society showed the following figures: —

For the National Code	193
For the "New Code"	134
For no Code	19
Uncommitted	36
	382

In some remarks on the report of the canvass Dr. Gouley urged speedy action in the formation of a separate association on the ground that there was not the least chance that the National Code of Ethics would be reënacted by the Medical Society of the State of New York as long as a two-thirds majority was required. There was not a two-thirds majority, and he did not believe such a majority could be obtained in five years or more.

DR. FLINT'S ADDRESS.

Dr. Austin Flint, Sr., made an eloquent address, in which he gave the recent history of the conspiracy which culminated in the adoption of the New Code by the State, and which first publicly made its appearance in the medical law of 1880, and also some account of the measures taken to counteract its baneful influence. It opened as follows: "It is more than a year since I have publicly spoken to an audience of friends on the questions which have at last divided the medical profession of the State of New York. As you all well know, thus far the battle-field in the warfare against the honor and dignity of the profession has been mainly in the city of New York. In the city of New York the conspiracy which brought about this deplorable conflict that has been forced upon us, had its inception. The attack upon the most sacred traditions of our profession was there made with a malignant rancor that can only be fully appreciated by those who have been personally involved in this unhappy contest. I say it in all modesty, but we of the city of New York come before you as veterans from the front, bearing scars. If we venture to offer suggestions with regard to future action, if we beg you to learn a lesson from our experience, it is because we are unhappily too familiar with the arrogance and the unscrupulous methods of our enemies within the profession. Our experience teaches us that but one course is now open to those who are unwilling to remain in the false and humiliating position in which we are placed. The proper course is for us to organize a new State Association, to be composed exclusively of those who refuse to countenance professional relations with irregular practitioners."

The address was concluded in the following words: "The issue has been forced upon us. We stand in the actual fact of a divided profession. The State Society and Society of the County of New York have seceded from the regular profession of the United States. We made no movement looking to the formation of a loyal State Association until the most vigorous efforts to redeem the existing societies had signally and hopelessly failed. We are now cast out of fellowship with the regular profession of this great country, as represented in the American Medical Association and in the medical societies of other States. We must redeem the State of New York. There remains but one course to pursue, and that is to form an association of our own. The bitter fight, the disgraceful spectacle of a contest between members of a devoted and honorable profession, are things of the past. The war is ended. Let us organize and live together in peace, working hand in hand for the advancement of the science of medicine. Let the men who are so blind or so misguided as to think their course is right, or who cannot resist the temptation to take tribute from those who persist in supporting the enemies of truth and of our universal science of medicine, go their own way and consult on terms of equality with any and all 'legally qualified practitioners of medicine,' whatever form of charlatanism they may assume! I hope, Mr. Chairman, that a New York State Medical Association will be organized to-night in affiliation with the regular profession of the United States; that the existing county societies whose membership is loyal will put themselves at once in affiliation with the new State Association; and that in counties in which the existing societies cannot be brought in bodily new associations will be promptly organized, to be composed exclusively of members of the profession who uphold the National Code of Ethics."

PLAN OF ORGANIZATION.

The plan of organization adopted provided: (1.) That the State should be divided into five geographical districts. (2.) That a nominating committee of eleven members should be created. (3.) That the nominating committee should name the various officers, subject to the approval of the Association, and also two members from each district, who, together with the titular officers and one member appointed at large by the President-elect should constitute the Council for the management of the affairs of the Association. (4.) That the Council should complete the organization, prepare a constitution and by-laws, in accord with this plan, to be presented at the next meeting of the Association, and file articles incorporating the New York State Medical Association and also county associations as branches of the latter. . . . (8.) That the initiation fee should be five dollars, and the annual dues three dollars. (9.) That the Code of Ethics, which should form an integral part of the By-laws of the Association, should be the same as that adopted by the American Medical Association. (10.) That the Association should hold annually one session, which should last three days or more.

A resolution was also adopted to the effect that all physicians in the State of New York who were in good standing in the present county societies, and who subscribed to the Code of Ethics of the Association, could become members thereof upon paying the initiation fee and signing the Constitution and By-laws.

MEETING OF THE COUNCIL.

At a meeting of the Council held after the adjournment of the Association, Drs. A. Flint, Jr., J. W. S. Gouley, and N. C. Husted were appointed as a special committee on the preparation of a constitution and by-laws for the Association. Dr. A. Flint, Jr., Dr. Van de Warker, and Dr. Gouley were appointed a committee to secure the coöperation of a medical journal in sympathy with the wishes and interests of the Association.

On motion of Dr. Van de Warker it was resolved that the members of the Association should be designated Fellows, and Drs. E. M. Moore, A. Flint, Jr., and the Treasurer, Dr. J. H. Hinton, were appointed a committee to prepare a seal for the use of the Association and a form of certificate of fellowship.

Recent Literature.

Opera Minora, A Collection of Essays, Articles, Lectures and Addresses, from 1866 to 1882, inclusive. By Edward C. Seguin. New York: G. P. Putnam's Sons. 1884. x., 687 pages.

Dr. Seguin has been a voluminous writer, has done much to bring to the notice of the profession the latest results of research in nervous pathology and therapeutics, and has himself aided in the extension of our knowledge. His papers and reported cases are to be found in many medical periodicals, scattered widely and not always easily accessible. It is, therefore, a satisfaction to have them collected in one volume.

About eighty essays, etc., are reprinted, beginning with three published while Dr. Seguin was house physician of the New York Hospital. The majority of the subjects either relate to or are closely allied to the nervous system; one of the earliest of these is a paper in regard to aphasia published in 1868, which is one of the longer articles. Among the more important subjects may be mentioned Description of a Peculiar Paraplegiform Affection (tetanoid paraplegia), the first cases of spastic spinal paralysis reported as a distinct affection. Contribution to the Study of Localized Cerebral Lesions and a second article on the same subject. Lecture upon the General Therapeutics of the Nervous System. A paragraph at the close of this lecture is well worth quoting, "Let me close this rather fragmentary lecture, by calling your attention to something which is not wholly extra-medical. I allude to the care of your patients' spirits, their emotions and fancies if you will. Never let *alarm* be one of your medicaments. If necessary, in order to bring about a reform of bad habits, lay the picture of consequences before your patient truthfully, but not in the language of exaggeration. Even in hysterical cases you need not be so frank as to hurt your patient's feelings; it will often do if her relatives know precisely what you think of the value of the symptoms. In cases of mental disorder, pray do not forget that even very maniacal or melancholic patients attend to and remember all your words and actions, and will treasure any kind and careful behavior of yours as well as bitterly recall any unkind or hasty phrases and acts. As a general therapeutic rule, I would have you be as anxious to avoid wounding the sensibilities of your poor or wealthy patients as of injuring their tissues."

There are eight lectures on the Localization of Spinal and Cerebral Disease, several articles on the diagnosis of different diseases, and the importance of an early diagnosis. The papers relating to the value of certain drugs and the dosage in treatment of nervous diseases are well worth reading.

Many interesting cases will be found reported in more or less detail.

Of course the different papers vary in importance and in value, there may be some statements which the author would now modify if he were writing on the subject again; but there is much of permanent value in the book, apart from the interest to be found in it as the record of the mental and professional growth of one of our foremost neurologists.

Transactions of the American Gynæcological Society, Vol. 8, for the year 1883. New York: D. Appleton & Co.

This volume appeared with commendable promptness less than four months after the meeting of which it is the report. We regret to see that in the change of publishers, whether inadvertently or intentionally, the color of the paper has been changed from that of the preceding volumes to one several shades nearer to a pure white: the typography of the title page is also changed, not to our taste for the better.

The President, Dr. Gilman Kimball, gave as his annual address A Biographical Sketch of Dr. Nathan Smith, Founder of the Dartmouth Medical College, who was the second in this country to perform ovariotomy successfully. As Dr. Smith was at the time unaware that McDowell had operated at all, his operation was "as truly original as the first" although performed nine years later. Ephraim McDowell is certainly to be regarded as the "father of ovariotomy" in point of time; but Dr. Kimball pleads with much justice that "in point of absolute merit Nathan Smith is entitled to the same honor as that accorded to McDowell."

Dr. R. S. Sutton's paper on Cleanliness in Surgery shows how generally the principles of Listerism have been adopted, although all surgeons do not accept them in their entirety. To the greater attention to cleanliness and the avoidance of contamination of wounds, brought about by Lister's teachings, are to be ascribed the greater measure of success in the surgery of the present day.

Dr. A. H. Smith calls renewed attention to the great value of hot water in secondary hæmorrhage after pelvic operations, especially in plastic operations, even when the bleeding occurs from moderately large vessels. The water should be at a temperature of 115° to 120° F., and to be most efficient should be carried directly to the bleeding surface. As operations are sometimes lost by the supposed necessity of cutting stitches in order to reach and tie bleeding vessels for secondary hæmorrhage, the efficiency and easy application of this hæmostatic should not be forgotten.

Dr. C. D. Palmer contributes an excellent paper on the ætiology and treatment of dysmenorrhœa, in which he expresses the belief, now held by many gynæcologists, that, although undoubted cases of so-called obstructive dysmenorrhœa do sometimes occur, painful menstruation is essentially a neurosis. Organic disease may or may not be associated with dysmenorrhœa; but the neurotic condition is the only feature in most cases. This condition is generally an expression of a disordered or highly developed nervous system: treatment should therefore be directed to the constitutional disorder, and local treatment be resorted to only when general treatment has failed.

Dr. E. W. Jenks suggests a New Method of Operating for Fistula in Ano which he has twice employed with complete success. The method is briefly as follows: The fistulous tract is incised in the usual way, care being taken to incise the muscular fibres of the sphincters at right angles. The pyogenic membrane is then carefully dissected out, bleeding vessels secured by torsion or ligature, and the parts thus laid open are then closed with deep sutures much in the same way as in the operation to close a ruptured perineum. Dr. Jenks does not claim that this method is applicable to every form of anal fistula; but he believes it to be the best method in a majority of cases. The advantages of the method are that a long convalescence is avoided, union is secured by first intention, and subsequent incontinence prevented.

Dr. C. C. Lee contributes a paper of great interest on the Management of Accidental Puncture and Other Injuries of the Gravid Uterus as Complications of Laparotomy. Nothing can be more appalling to the operator than to plunge a trocar into the gravid uterus, thinking it to be an ovarian cyst; yet this accident has happened to careful surgeons. Dr. Lee shows, however, that this accident is not necessarily followed by abortion, especially if the ovisac is not opened: he also formulates the treatment that should be pursued according to the nature of the injury.

Dr. R. B. Maury's paper on Rectal Disease Considered in its Relations to Disorders of the Uterus is an inquiry as to what extent certain morbid affections of the rectum are due to uterine disease. Since "the rectal, uterine, and vesical circulations are parts of one and the same vascular system," it is easy to see that any important disturbance in the nutrition of one of these organs must have a marked effect on the others; and Dr. Maury illustrates this effect by cases under his observation.

The remaining papers are by Dr. Johnson on Superinvolution of the Uterus; Dr. Reamy on a Rare Form of Abdominal Tumor; Dr. Campbell on Congenital Fissure of the Urethra, with Exstrophy of the Bladder; Dr. Jackson, Is the Extirpation of the Cancerous Uterus a Justifiable Operation?; Dr. Emmet, A Study of the Ætiology of Perineal Laceration, with a New Method for its Proper Repair; Dr. Byford, Remarks on Chronic Abscess of the Pelvis; and Dr. Engelmann, Ergot: the Use and Abuse of the Dangerous Drug. Dr. Barker's memoir of the late Dr. James Dowling Trask concludes the volume.

We are sorry that it has seemed good to the Society to omit the valuable index of gynæcological and obstetric literature which has previously found a place in these Transactions, and hope that the omission is only temporary. C. M. G.

Practical Pathology: A Manual for Students and Practitioners. By J. Sims Woodhead, M. D., F. R. C. P. E. Edinburgh: Young J. Pentland. 1883.

This work is intended rather as a guide in the preparation of specimens for microscopic examination than as a systematic treatise on pathology, and as far as it goes is admirably adapted for its purpose.

The first part of the book is devoted to a description of the modern methods of preparing and coloring tissue. The value of the aniline colors for differential staining is prominently brought forward, and numerous formulas for their use are given.

The principal organs of the body are considered in the second part, commencing with the liver. A description of the normal histology is first given, and then follows a consideration of the most ordinary changes, which are met with. Then the methods best adapted for the preservation of each particular specimen for microscopic examination are dwelt upon; and lastly the appearances as seen under the microscope. These last are illustrated by beautifully colored plates, which add greatly to the attractiveness of the book, as well as giving an admirable idea of how really good sections should look when properly treated and colored.

The importance of always associating the gross appearances with the histological changes is a practical point strongly insisted upon by the author, and one often overlooked. For it is hard to realize that the aggregate of such slight changes as can be detected in the ultimate constituents of an organ can give rise to such marked differences in its color, size, or shape when regarded as a whole.

The book will be of value to those who wish a ready reference for practical work, and who have only occasional opportunity for it. It is to be feared, however, that the style in which the work is issued will enhance its cost so much that it will place it beyond the reach of many to whose library it would be a welcome addition.

An American edition of this work has just been issued by Henry C. Lea's Son & Co., which shows a little the wear of its English predecessor, but which from its lower price will probably be more popular.

Bacteria. By Dr. Antoine Magnin and George M. Sternberg, M. D., F. R. M. S. New York: Wm. Wood & Co. 1884.

The first part of this book is a translation of Dr. Magnin's work, and gives the classification of bacteria, from a botanical point of view, as presented by Cohn. This part of the book has value as affording a means of identification of the different forms that come under observation. The morphological characteristics of these parasites are now recognized to be of very uncertain value since the great variation in form under different conditions of growth has been discovered. This is fully recognized by the author, who devotes considerable space to a consideration of their physiological action and its value in determining species.

The latter part of the book is devoted to a résumé of the work done upon each of the diseases with which the micro-organisms have been found to be associated. With this is joined some original investigations undertaken by Dr. Sternberg, which, however, are so incomplete as to fail to carry conviction that all sources of error were excluded. There is also a marked tendency on his part to see in any rather indefinite form described by others a close resemblance to a micrococcus discovered by himself in a form of septicæmia produced by inoculating rabbits with human saliva. This has not been accepted as yet by the most competent observers as differing essentially from other forms of septicæmia following the introduction of putrefying substances.

At the end of the book is a very valuable and complete bibliography of the works on these minute parasites.

Medical and Surgical Journal.

THURSDAY, MARCH 20, 1884.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE DRUNKARD AND THE DOCTOR.

"FOR the gentlemen of the faculty of physic, I must frankly own that I see no special reason, why they in particular should apply themselves to the study of the law; unless in common with other gentlemen, and to complete the character of general and extensive knowledge; a character which their profession beyond others has remarkably deserved. They will give me leave however to suggest, and that not ludicrously, that it might frequently be of use to families upon sudden emergencies, if the physician were acquainted with the doctrine of last wills and testaments, at least so far as relates to the formal part of their execution."

Such was the opinion of the learned Blackstone as expressed in his lectures at Oxford one hundred and thirty years ago, and we have no desire to express a contrary opinion. We doubt if a little knowledge of the law is any less dangerous than a little knowledge of medicine. But certainly we believe, and no one will deny, that it is desirable for a physician to consider how his actions would appear in the eyes of twelve individuals selected at random from his peers. Every surgeon, certainly, though gifted with but a sluggish imagination, must sometimes picture himself as a defendant before an intelligent jury and his now grateful patient transformed into an indignant plaintiff. It is not wholly superfluous to consider some of the possible conditions in which the vagaries of a jury may be perilous to the doctor's pocket and peace of mind. He who has considered beforehand will act most intelligently when action becomes necessary.

In what follows there is no desire to interpret law, but simply to suggest some unusual questions that may be presented to the surgeon at any moment and the possible position that may be taken by a jury in reference to them.

Not long ago a drunken man was the victim of a severe accident to his arm which necessitated amputation. He had suffered a compound fracture with severance of arteries and nerves. The arm hung only by ribbons of the soft parts, and the venous hæmorrhage was restrained with difficulty. The accident had not entirely sobered the unfortunate. He had no friends with him at the time of the accident, and it could not be found that he had any relatives in the city. The necessity for amputation seemed evident to any man in his senses, but the operation was persistently refused by this inebriated individual.

The man had the appearance of one able to comprehend the true state of affairs could he only be allowed time to return to himself, but the venous hæmorrhage was so great and so difficult of control that delay was impossible; it was immediate amputation or death. In this instance the surgeon proceeded with his preparations, and received at last a somewhat reluctant consent to be sure, but one that justified him in the necessary action. But the refusal was sufficiently delayed to raise the question how far the surgeon may proceed in opposition to the will of a patient whose reasoning powers are temporarily destroyed by the effects of alcohol.

It is an axiom in surgical practice that no operation, not even the slightest, can be performed against the will of the patient or his or her guardian. It is the surgeon's duty to advise whatever procedure may be necessary, but before doing any operation it is imperative that he shall receive consent. If he does otherwise he invades the right of the individual and lays himself open to a criminal charge for assault or to a civil suit for damages. If a man deprived of his senses by a fracture of his skull were taken to a hospital, the surgeon would be justified in doing what seemed necessary; if he retained his senses sufficiently to remonstrate nothing could be done without the consent of friends.

Were the patient entirely deprived of his senses by alcohol, in other words dead drunk, possibly the surgeon might be justified in removing an arm so evidently destroyed as the one described above, especially where his inactivity would be so manifestly the cause of death. In such a case the law would demand of him only the exercise of ordinary judgment and skill if he chose to act, though we doubt if it would hold him responsible if he refused. Certainly he would run some risk in either case of being called before a jury to answer for his judgment. If the case will admit of delay there is no doubt the individual should be allowed to regain consciousness. Only in the plainest case and after all possible precautions in the way of consultation and explanation to by-standers should the surgeon snip the few shreds of skin that connect the crushed member with the body.

Were the patient only deprived of his reasoning powers, and did he protest against what seemed to him mutilation, however evident his drunkenness no surgeon would be justified in touching him. He might advise and entreat, and perhaps threaten, but further than that he could go only at his peril. A merely drunken person does not lose his responsibility for his own acts. Responsibility presupposes the ability to choose one of two lines of conduct, and inferentially the right to accept or refuse medical aid for himself. He may be held responsible for the failure to provide such aid for those under his care but not for himself, and any one who dared put in force the most evident principles of surgery should expect to find himself face to face with a jury worked up to frenzy at so evident an outrage on the independence of an individual.

Any person must interfere to prevent an active attempt at suicide, but to prevent the passive suicide above mentioned is an entirely different matter.

Would the case be different were it known that the drunkenness was the result of alcohol administered feloniously, and not absorbed by the free will of the sufferer? No matter how benevolent the surgeon nor at what sacrifice of personal comfort he may act in regard to the matter, we doubt if he would be upheld by a jury in supposing that his unfortunate patient had lost any portion of his right to decide on the acceptance or rejection of surgical advice. That he had been the victim of rascality to such an extent as to deprive him of his senses would not justify any one in infringing on the right to resist mutilation.

Does the medical aspect of the case differ from the surgical? Would a physician be justified in administering by force an emetic to a drunken man who has been accidentally poisoned, in the absence of his friends, in spite of the man's remonstrances? Certainly the act is quite as much an infringement of his personal liberty as the surgical procedure, and we feel sure a jury might so regard it. Were the emetic administered by a subcutaneous syringe the case would approach nearer the surgical basis, and might well be regarded as an aggravated assault, though perhaps the absence of mutilation would make the offense less rank in the jurors' nostrils.

A drunken woman, dangerously flowing, might well regard the physician's attempts to determine the cause of the hæmorrhage as an assault; and it is already an established principle that the consent of a woman must always be obtained before an examination. Were a woman who had been examined when insensible from drink to learn of it and resent it afterwards might not a jury be brought to regard the procedure as an aggravated assault, that the physician had taken advantage of the woman's condition to do something he would not have dared to do had she retained her senses?

The conclusion of the matter is simply to emphasize the necessity on the part of medical men of respecting to the uttermost the rights of individuals. Such a combination of circumstances as we have mentioned will rarely happen; ordinarily the presence of friends will take the burden of responsibility from the surgeon's shoulders. Should such a case as has been mentioned present itself the surgeon will do well to follow the principles we have laid down. Possibly it may seem inhuman to allow a man to die simply because he is drunk. It seems inhuman to allow people to die simply because they are too ignorant to accept wise counsel, but it is sometimes inevitable. Every individual has the right to bear his congenital deformity unrelieved, his unsightly growth unremoved, to bear his pain without an opiate, to leave his fractured bones to unite as they will or not at all, to die with his crushed limb unamputated if he chooses; his diseases and his life are his and not the doctor's. One can as little force a man to follow a certain line of conduct in regard to his own health, if he does not injure others, as in regard to religion.

Were doctors infallible, were the practice of medicine restricted to those fitted to undertake it, the case might be different; but in a community where so little distinction is made between doctors who have fitted themselves for the practice of the profession and those who arrogate to themselves the title it is proper that their powers should be carefully circumscribed.

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SHALL THE UNITED STATES PHARMACOPŒIA BE THE LEGAL STANDARD FOR DRUGS IN MASSACHUSETTS, OR SHALL IT BE SOME ONE OF SEVERAL COMMENTARIES OR DISPENSATORIES?

It is reported in the daily journals that a majority of the present Legislative Committee on Public Health, apparently influenced by certain wholesale druggists of this city who have been prosecuted by the State Board of Health, Lunacy, and Charity for selling adulterated drugs, intend to report a bill amending the present Adulteration Act. They would make that one of the several excellent commentaries, which have been published as private enterprises, which its authors have seen fit to entitle the United States Dispensatory, the legal standard in Massachusetts for all the medicines mentioned therein instead of the United States Pharmacopœia itself upon which it is based. Any such change in the law would be very disastrous, and we shall presently give a few of the many reasons why it should not be done, but in this connection it will be proper here first to consider by what authority the United States Pharmacopœia and the particular commentary thereon, entitled the United States Dispensatory, have severally been prepared.

The United States Pharmacopœia is the official code for the preparation of medicines issued by the authority of a national convention for its revision composed of not more than three delegates sent by the several incorporated medical societies, medical colleges, colleges of pharmacy, and pharmaceutical societies throughout the United States, the American Medical Association, the American Pharmaceutical Association, the Surgeon-General of the Army, of the Navy, and of the Marine Hospital Service, which has met at Washington, D. C., every ten years since 1820. It has thus a national origin as far as possible, not being the direct act of the national government itself. It has, however, received the authoritative sanction of the national government, at least ever since the act of Congress entitled An Act to Prevent the Importation of Adulterated and Spurious Drugs and Medicines, approved 26th June, 1848, when it was made the United States Treasury Department standard by which all imported drugs and medicines were to be tested in reference to strength and purity. Moreover, an act is even now pending before Congress to make it the standard in a national adulteration law almost identical with the present law in this State. In 1881 it was made the standard under very similar laws in New York and New Jersey, and subsequently in Louisiana.

In January, 1833, Drs. George B. Wood and Franklin Bache, both of Philadelphia, and members of the Convention for the Revision of the Pharmacopœia in 1830, issued their private copyrighted work, which they were pleased to entitle the United States Dispensatory. In its preface they said, "We have, moreover, a national pharmacopœia which requires an explanatory commentary." "On these accounts it is desirable that there should be a Dispensatory of the United States." "But though precedence has been thus given to the Pharmacopœia of the United States those of Great Britain have not been neglected. Therefore, as it itself says, "the United States Dispensatory may very properly be considered as a commentary upon the United States *and the British Pharmacopœias*," and making the United States Dispensatory the legal standard would make the British Pharmacopœia equally with the United States Pharmacopœia the legal standard in this State.

As, however, it is only one of three very excellent commentaries upon the United States Pharmacopœia which have thus far been published as private undertakings it seems, indeed, a very strange idea to place this one in authority over and above the very work upon which it is itself based. Why should this particular commentary by Wood and Bache be thus honored rather than either one of the other two, the so-called National Dispensatory by Drs. Stillé and Maisch, likewise of Philadelphia, or the still later work, The Companion to the United States Pharmacopœia, by Drs. Oldberg and Wall, which has been just issued by the publishers of the United States Pharmacopœia itself? In short, the motive for this attempt to replace the present legal standard, which is the work of a representative national convention, on the sales of which, moreover, the compilers do not receive one cent of personal gain, — for the royalty of forty cents upon each copy sold, which is paid their committee of publication by the publishing house, is devoted entirely to the *repayment of only the actual expenses incurred* by the members of that committee in their work upon the Pharmacopœia itself, — is not *at first* apparent.

As merely a commentary upon the Pharmacopœia all the authority the Dispensatory has is naturally based upon that work, and it must therefore be subject to a revision at the least as often as is that work itself. Unlike the Pharmacopœia, however, which can have its standards changed only once in ten years, and that by the act of the majority of the national convention of delegates representing the wishes of the medical and pharmaceutical interests of the entire country, all the various dispensatories, as the private property of their authors, are subject to change any time at the will of one or two men. As also all three of the commentaries or dispensatories are more costly works than the Pharmacopœia, any one of them being made the legal standard would be a source of increased expense to the public and to druggists, as well as put us out of accord with the laws in other States.

A much more vital objection (and here probably is to be found the motive for changing the legal standard) as regards the efficient execution of the law is this, that with the Pharmacopœia as the standard the all-important question of exactly what is the legal standard is capable of much more easy solution than it would be were any one of the several dispensatories the standard. This is plainly seen by taking for example the much discussed subject of the legal strength of tincture of opium or laudanum. According to the United States Pharmacopœia, 1880, one hundred parts by weight of the tincture of opium is made up by exhausting ten parts of powdered opium with diluted alcohol. The powder itself to yield not less than twelve or more than sixteen per cent. of morphine when assayed by the prescribed method of assay. Consequently the tincture must contain at the least one tenth of twelve per cent., that, is one per cent. and two tenths of morphine by weight. This is a standard requirement about as definite as language can well express. How different, however, would it be with the latest edition of the United States Dispensatory as the standard. There "one ounce av.," is to be made up into "ten fluid ounces of the tincture." What is here the minimum standard percentage weight of morphine in a tincture which by experience has been found to range in specific gravity all the way from 0.920 + to 0.990 +? No one can assert positively what it is. Even this Dispensatory itself does not attempt to express any definite results, but says that it would be "*about*" or "*nearly*" thus and so. No convictions, as those who are trying to bring about this change well know, could ever be gained upon the charge of having violated any such indefinite standards. But the trouble that would result from the change does not even end here, for the United States Dispensatory as a commentary treats not only upon the last revision of the United States Pharmacopœia, and the one before it, and in like manner upon the British Pharmacopœias, but also in many cases upon the French and German pharmacopœias. Out of such a large selection of standards, more or less indefinite, according to the various pharmacopœias, — for these several foreign pharmacopœias would then become law in Massachusetts, besides many an unofficial formula, — it would become well nigh useless to attempt any enforcement of the law.

This is just the end which is sought for by those who have felt the disadvantage of the present more definite standard. Having rid themselves of this trouble they are very willing that the rest of the act should remain unaffected, as it would have been rendered perfectly harmless against adulterations. No valid reason can be given for the desire to make the commentary the legal superior of that upon which it comments. Surely any private commentary upon a statute is not superior to the statute itself.

— The eighth annual meeting of the New York State Veterinary Society was held at the Ashland House March 11th, with Dr. A. F. Liautard in the chair, when the draft of a bill regulating the practice of veterinary medicine and surgery was discussed and finally referred to the executive committee. Dr. Liautard was reëlected President of the Society.

MEDICAL NOTES.

— Dr. Alfred Hosmer, of Watertown, has resigned his position as one of the medical examiners for Middlesex County. Dr. Julian Mead has been nominated as his successor.

— Dr. Francis M. Gunnell has been appointed Surgeon-General of the Navy. He is a native of Washington and has had thirty-five years of service in the medical corps, nearly half of that time having been spent at sea. The new incumbent is highly spoken of, though it is to be regretted that Surgeon-General Wales, under whom the medical service of the navy had taken such a high position for efficiency, should have failed of reappointment.

— The formula of Tamar Indien, the agreeable and convenient laxative, is announced (Report de Phar., July, 1883) as follows: —

℞ Tamarind pulp	450 parts.
Powdered sugar	40 parts.
Powdered sugar of milk	60 parts.
Pure glycerine	50 parts.

M. Evaporate to consistence of soft extract.

Add

Powdered senna leaves	50 parts.
Powdered anise	10 parts.
Essence of lemon	3 parts.
Tartaric acid	3 parts.

M. Divide into 100 boluses. Steam them, and roll in the following mixture: —

Cream of tartar	5 parts.
White sugar Sugar of milk	āā 35 parts.
Tragacanth	2 parts.
Tartaric acid	2 parts.
Powdered red sandal	25 parts.

Dry and put up in tin foil.

— During the past twelve months Dr. John Homans has performed ovariotomy twenty-seven times without a single death.

— An interesting testimony to long-continued, faithful medical service transmitted from sire to son is afforded in this picture drawn by the *Canadian Medical Journal* of a doctor's door: —

"Grandfather, father, and son have been in the old stand so long that to the inhabitants of the locality the doctor's house is amongst the things which have always been. The patients' entrance is on a side street, and a small porch protects the visitor. The steps are well worn, and the native grain is everywhere visible in the wooden surroundings. There is neither bell nor knocker, and the door presents interesting, and, so far as we know, unique evidence that votaries to this Æsculapian shrine have not been lacking. On the panels, at different heights, are three well-worn places where the knuckles of successive generations of callers have rapped and rapped. The lowest of the three, about three feet from the floor, represents the work of 'tiny Tim' and 'little Nell,' so often the messengers in the poorer families. Higher up and of less extent is a second depression where 'Bub' and 'Sis' have pounded, and highest of all, in upper panel, a wider area where the firmer fists of the fathers and brothers have, as the years rolled on, worn away the wood to nearly half its thickness."

In unpleasant contrast with the simple dignity of such a symbol as this of the good physician's home are those doctors' signs which the same journal describes as so common in Canada, the representations of the commercial spirit in medicine. For instance, the writer speaks of metallic door-plates two feet square, with letters five inches high, bearing an inscription like the following: "Dr. ——, M. D., Edinburgh. (Honors) M. R. C. S., Eng., L. A. H., Dublin."

NEW YORK.

— The ninth annual commencement of the American Veterinary College was held at Chickering Hall on the evening of the 4th of March. The graduating class, of which Hamilton Vruland was the valedictorian, numbered twenty-two members, and the address to the class was delivered by the Rev. Dr. John P. Newman.

— The commencement exercises of the New York College of Dentistry were held at the same place on Thursday evening, March 6th, when the valedictory address was delivered by George J. Neish, of the Island of Jamaica, and the address to the graduates by the Rev. Dr. Howard Crosby. The class numbered forty-one.

— A project has been set on foot for the founding of a hospital and clinic for the treatment of cancer cases exclusively. A board of managers, composed of five ladies, five physicians, and five laymen, has been organized, with Mr. John E. Parsons as president, and Mr. Joseph W. Drexel treasurer, and it is said that the sum of $250,000 is already promised for building purposes provided that $100,000 more can be raised for the purchase of suitable land. The five medical members of the board are Drs. Hunter, Cleveland, Kinnicutt, Peabody, and W. T. Bull.

— Dr. Joseph E. Janvrin has been appointed gynæcologist to the New York Skin and Cancer Hospital *vice* Dr. James B. Hunter, resigned.

— The annual commencement exercises of the Medical Department of the University of the City of New York were held at the Academy of Music, Tuesday evening, March 11th, the Rev. Dr. John Hall, Chancellor of the University, presiding. The degree of M. D. was conferred on 164 graduates, and the usual prizes and honors were awarded. The valedictory address was given by F. K. Perkins, and the address to the graduating class by the Hon. Chauncey M. Depew.

— The Bellevue commencement was held at Steinway Hall on the evening of March 13th. The graduating class, of which there was no valedictorian, numbered 149. It was announced that positions upon the house-staff of Bellevue Hospital would be given at once to the four students standing highest in scholarship, and that the next four in order of merit would be appointed on the staff as soon as vacancies should occur. Among the first four was Reginald H. Sayre, younger son of Prof. Lewis A. Sayre. The address to the class was delivered by the Hon. Algernon S. Sullivan.

— The State Board of Health met in New York, instead of Albany, on the 12th of March. The report of a sub-committee appointed to inquire as to the poisonous nature of water gas was received and adopted, but it was announced that its contents would not be made public until after it had been submitted to the Legislature. By request, Professor Chandler made some remarks on the subject, in the course of which he said that while water gas contained three times as much poisonous carbonic oxide as coal gas, it was practically no more dangerous than the latter. Those asphyxiated by coal gas would die just as surely as the victims of water gas poisoning, although a little longer time would elapse before the fatal result was reached. He believed that the reason why there were more cases of suffocation from water gas than coal gas was simply because in the places where these accidents usually occurred, such as hotels and apartment houses, more water gas was used. Water gas, he said, was now used by half the people in New York, and it furnished fifty per cent. more light than coal gas for the same price. The administration of the food and drug laws was considered and referred to the public analysts, who will agree on a definite plan of action to be submitted to the board for approval. A bill appropriating $20,000 to the board to assist in preventing adulterations is now before the State Senate. Dr. Alfred L. Carroll, of West New Brighton, Staten Island, was elected secretary of the board, in the place of Dr. Elisha Harris, deceased.

— The report of the State Board of Health to the Legislature, in regard to water gas, was made on the 14th of March, and was to the effect that, judging from such investigation as they had been able to make, of the subject, this was not more dangerous or detrimental to health than any other illuminating gas.

— Dr. Whitman V. White has been elected corresponding secretary of the New York County Medical Association. The recording secretary is Dr. E. A. Judson, who was the Old Code candidate for that position at the last election in the County Medical Society.

— Another fat girl, Jessie Reed, died at Buffalo, where she had been on exhibition at Bunnell's Museum, on the 12th of March. She was twenty years old, six feet and four inches in height, and weighed four hundred pounds. She had been married for two years, and leaves one child, six months old. Her remains were brought to Greenpoint, Long Island, where her parents live, and the coffin is said to have measured six feet seven inches in length, thirty inches in width, and eighteen inches in depth.

— Dr. Cyrus Edson, chief of the second sanitary division, having in charge the prevention of adulterations of food, has had a number of samples of mustard, obtained from various dealers, analyzed by Dr. Elwyn Waller, and the result shows that flour is not infrequently used to adulterate pure mustard, while in order to maintain the color of the article a sufficient quantity of what is known as naphtholine yellow is added. This substance is a highly irritant poison, which, when ignited, explodes with almost as much force as gunpowder, and cases against vendors of the adulterated mustard will be prepared by the counsel to the Board of Health.

—The Aqueduct Commissioners, including the Mayor, Controller, and Commissioner of Public Works, accompanied by the chief and consulting engineers, left the city on March 11th to visit Baltimore and Washington, and inspect the water systems of those cities. The last of February Commissioner Thompson, of the Department of Public Works, made his report of the work of the department up to December 31, 1883. In regard to the supplementary Bronx River system, upon which work had been commenced three years ago, he said that rapid progress had been made in carrying out the project, and that by the 1st of September it was expected that 5,000,000 gallons of water per day would be furnished through the conduit and distributed to the Twenty-third and Twenty-fourth Wards; while as the Kensico reservoir and the Rye Ponds became filled by the autumn rains, the supply would gradually be increased to about 10,000,000 gallons per day. In the report it was stated that until a new aqueduct was built, the efficiency of the water service depended entirely on further means and measures to prevent waste. From fifteen to twenty miles of pipes were added each year to the distributing system, and the consumption of water in the built-up portion of the city increased rapidly, in consequence of the erection of large business buildings and apartment-houses. During the last quarter the waste inspectors had made 15,308 house inspections and 9893 night inspections of house-drains, and reported 1770 cases of leaks from defective plumbing and 1614 places were water was wasted between midnight and 6 A. M. at the rate of from one to five gallons per minute.

Miscellany.

THE DISCOVERY OF THE GERM OF SWINE PLAGUE.

Dr. D. E. Salmon, of the Agricultural Department, Washington, published a communication in *Science* [February 8, 1884] upon the discovery of the germ of swine plague, criticising a statement made by Pasteur before the Paris Academy of Sciences last November. In this statement Pasteur, whilst claiming for Thuillier the credit of the discovery of this microbion of *rouget*, recognizes its simultaneous and independent discovery at Chicago by Dr. Detmers. Dr. Salmon claims to have anticipated both these observers by more than a year, and his comments are summed up in the following sentence: —

" It is a matter of record, therefore, that the organism which constitutes the cause of swine plague was first discovered by Klein in 1876, but that he failed to connect it in any way with the virus of the disease, and afterwards concluded that it depended upon a very different schizophyte. It is also a matter of record that I was the first to demonstrate by satisfactory methods that this micrococcus exists in the blood during the life of the animal, that it can be cultivated in flasks, and that the sixth successive cultivation, made in considerable quantities of liquid, and which contained no other form than micrococcus, still produced the disease. Neither Pasteur and Thuillier, nor any other investigators that I am aware of, have added one particle of evidence, except by way of confirmation, to that previously advanced by me. M. Pasteur is usually very particular in giving credit, but he does not seem to be keeping up with the progress of American science."

PETTIFOGGING BY THE DRUG ADULTERATORS.

THE *Daily Evening Traveller*, of this city, under date of March 17th, comments with well-merited severity upon an indecent circular which has been widely circulated in this vicinity of late in the interest of the manufacturers of adulterated drugs. The circular referred to is a collection of false statements and misrepresentations intended to influence legislative action in the direction of repealing the present statutory restrictions against adulterated drugs. The circular is signed with the name, says the *Traveller*, of "a well-known and influential gentleman who is acting as counsel of certain druggists who are urging some minor amendments of the law, but not its repeal. The name is printed in capital letters, and so placed as to appear to be his signature to the circular, which in point of fact was prepared and printed without his knowledge. This trick, intended to give to the statements of an anonymous circular the apparent authority of a respected and responsible ex-senator, is in complete keeping with the falsehoods and adroit misrepresentations which appear in every line. For example, the Dispensatory is a mere commentary upon the Pharmacopœia, and not the latter upon the former, as stated; and the drug referred to in that connection bore the label U. S. P., to indicate to the purchaser that it was prepared in accordance with the Pharmacopœia. The obnoxious bill and order referred to were not offered with the knowledge or wish of the Board, but are evidently a part of the previous scheme of the authors of the circular, who wish to rally to their aid the owners and venders of proprietary medicines and the opponents of the legal regulation of the practice of pharmacy. It is the opinion of the opponents of adulteration that the cunning attempt to work upon the fears of country druggists and grocers will undoubtedly cause considerable pressure to be brought to bear upon individual members of the Legislature, but that this effect is likely to be more than offset by the insight which the circular will give into the character and motives of the scoundrels who are trying to protect their dishonest gains by crippling the State Board in its vigorous and impartial enforcement of the laws."

HIGH AND LOW CEILINGS.

WE find in the February number of the *Practitioner* an article presenting the opposite views as to the most desirable height for rooms in the average grade of dwelling. On the one hand in a recent report to the Court of Common Council Dr. Sedgwick Saunders raised a protest against the erection, in Petticoat Square, of certain artisans' buildings for the reason that all the rooms above the ground floor are only eight feet in height. He shows by reference to a number of similar buildings that the general average height of rooms in modern blocks for working men is nine feet; that they vary from about ten feet on the ground floor to eight feet seven inches on the fifth and sixth stories; and he urges, on the ground of health, that every room occupied by the working classes should be at least nine feet, and preferably ten feet, in height On the other hand, Mr. John Honeyman recently read a paper before the Congress of the Sanitary Institute at Glasgow, in which he stated that there were distinct advantages in having low ceilings. Mr. Honeyman asserts that where land is dear and the demand for dwelling accommodation great, the builder will naturally be tempted to make stories low, and thus to increase their number, instead of constructing buildings of a few high stories; and that in this way an increased number of tenements can be provided at a reasonable cost, a method of procedure which of all others tends to the prevention of over-crowding. He further asserts that with the appliances which alone are available in the tenement of the working man it is far easier to ventilate a low room than a lofty one; that if a room be low in proportion to its area it will be better ventilated by the fire-place and doorway than if a space of stagnant air be provided at an elevation above the reach of such means of ventilation; and that high rooms mean a wasteful expenditure of money, with consequent increase of rent, which encourages in the most direct manner over-crowding with all its attendant evils. He also states that there is no necessary connection between density of population and a high death-rate, as the statistics compiled concerning the inmates of various improved dwellings show.

Provided a certain cubic capacity per occupant could always be insisted on, it would be better that it should include the comparatively large amount of floor area which would be necessary in the case of a room eight feet in height than that it should be partly contained in the higher strata of a room ten feet in height with a corresponding diminution of floor space. It will probably be found impossible, in the present state of public opinion, to require much more than 400 cubic feet for each adult, and half that amount for children under ten years of age, even in the case of a sleeping apartment which is not exclusively used for that purpose, and this minimum capacity must be regarded as utterly insufficient unless we have along with it a constant and rapid change of air. "But," to quote Mr. Honeyman, "to effect this change so that the whole volume shall be kept up to a safe standard of purity it is necessary that the fresh air should be properly distributed, and permeate the whole apartment. This point, we fear, is sometimes lost sight of. For example, if we take a room of 2000 cubic feet with five inmates, to keep the air, not as pure as we could wish, but in a tolerably healthy condition, at least 5000 cubic feet of fresh air would require to be passed through the room per hour, and as an ordinary open fire will easily attract that quantity there seems to be no great difficulty about it. But observe it is quite possible to pass all that quantity through the room without purifying the atmosphere in any appreciable degree; we may let it all in at one side of the room, and up the chimney at the other, leaving the air breathed by the inmates impure and poisonous, perhaps fatally, so that the more complete the distribution of fresh air the more beneficial will the ventilation be. Now the facility of distribution will depend to a large extent on the form of the room. If the room (always bearing in mind that we are speaking of rooms of the same cubic capacity) be high in proportion to its area, and the fresh air be admitted in the usual way referred to, the lower part only will be ventilated, and a large proportion of its atmosphere will remain impure;

whereas if it be low in proportion to its area it will all be well ventilated, and the inmates will get the full benefit of the room's capacity. In the other case they would not, as a considerable proportion of the high room would remain stagnant and foul, a condition objectionable on other grounds."

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 8, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Scarlet Fever.
New York	1,340,114	624	225	15.36	18.56	4.96	1.76	2.08
Philadelphia	927,995	389	122	15.08	5.72	4.68	1.30	4.16
Brooklyn	644,526	220	84	18.90	15.30	7.65	1.35	5.40
Chicago	632,100	186	85	18.90	12.96	4.86	.54	4.86
Boston	423,800	197	57	11.22	19.38	3.06	2.51	1.02
Baltimore	408,520	175	68	19.38	11.40	3.42	.57	2.85
St. Louis	400,000	150	59	22.56	13.33	10.56	4.66	2.77
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	151	42	23.22	7.22	1.98	3.96	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	99	34	11.11	14.14	—	2.02	7.07
Pittsburg	180,000	82	42	19.52	30.59	7.32	7.32	1.22
Milwaukee	142,400	40	19	12.50	17.50	5.00	2.50	—
Providence	119,405	37	14	10.80	2.70	5.40	2.70	—
New Haven	62,882	30	—	3.33	26.66	—	—	—
Nashville	54,400	21	11	23.80	23.80	—	4.76	4.76
Charleston	52,286	37	12	2.70	10.80	—	2.70	—
Lowell	71,447	36	12	2.78	16.68	2.78	—	—
Worcester	69,442	27	9	14.80	25.90	11.10	—	—
Fall River	62,674	21	9	9.52	19.04	9.52	—	—
Cambridge	60,995	23	8	8.70	4.35	8.70	—	—
Lawrence	45,516	16	—	6.25	12.50	—	—	—
Lynn	44,895	12	4	8.33	16.66	—	—	—
Springfield	38,090	19	10	36.82	26.30	21.04	15.78	—
Somerville	31,350	11	4	27.27	9.09	18.18	9.09	—
Holyoke	30,515	10	3	20.00	40.00	—	10.00	—
New Bedford	30,144	14	2	7.14	21.42	—	—	—
Salem	29,503	13	—	7.69	—	—	7.69	—
Chelsea	24,347	5	0	20.00	40.00	—	—	—
Taunton	22,693	10	0	30.00	10.00	30.00	—	—
Gloucester	21,400	6	3	—	—	—	—	—
Haverhill	20,905	8	1	—	—	—	—	—
Newton	19,421	9	0	11.11	22.22	—	—	11.11
Brockton	18,323	4	0	75.00	—	—	—	50.00
Malden	15,273	3	0	—	—	—	—	—
Newburyport	13,947	5	0	—	20.00	—	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Sixty-seven Massachusetts towns	245,285	69	12	14.49	14.49	5.60	—	—

Deaths reported 2750 (no reports from Cincinnati and Buffalo): under five years of age, 951: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 425, consumption 419, lung diseases 397, diphtheria and croup 127, scarlet fever 72, diarrhœal diseases 57, malarial fevers 33, typhoid fever 27, measles 21, puerperal fever 21, erysipelas 19, cerebro-spinal meningitis 19, whooping-cough 17, small-pox 12. From *malarial fevers*, New Orleans 14, New York eight, Brooklyn three, Chicago, Baltimore, and St. Louis two each, Philadelphia and Nashville one each. From *typhoid fever*, Philadelphia nine, New York five, Baltimore four, Pittsburg two, Brooklyn, Chicago, St. Louis, District of Columbia, Milwaukee, Lynn, and Somerville one each. From *measles*, Baltimore 11, New York four, Brooklyn, Chicago, St. Louis, District of Columbia, Providence, and Nashville one each. From *puerperal fever*, Chicago and Boston five each, Brooklyn four, New York three, Philadelphia, Baltimore, St. Louis, and Nashville one each. From *erysipelas* New York six, Philadelphia five, Chicago three, St. Louis two, Milwaukee, Lawrence, and New Bedford one each. From *cerebro-spinal meningitis*, New York six, Chicago and Boston three each, Philadelphia two, Baltimore, New Orleans, Worcester, Chelsea, and Brockton one each From *whooping-cough*, New York nine, Baltimore three, Brooklyn, Chicago, Boston, New Orleans, and Pittsburg one each. From *small-pox*, New Orleans ten, Philadelphia and Nashville one each.

Five cases of small-pox were reported in St. Louis; scarlet fever 48, diphtheria 22, and typhoid fever nine in Boston; scarlet fever six and diphtheria three in Milwaukee.

In 87 cities and towns of Massachusetts, with an estimated population of 1,321,530 (estimated population of the State 1,955,104), the total death-rate for the week was 20.30 against 18.00 and 16.72 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending February 23d, the death-rate was 21.1. Deaths reported 3538: acute diseases of the respiratory organs (London) 345, whooping-cough 127, scarlet fever 99, measles 95, diarrhœal diseases 38, fever 34, diphtheria 29, small-pox (London four, Birmingham three, Sunderland two, Liverpool and Newcastle one each) 11. The death-rates ranged from 14.1 in Portsmouth to 28.1 in Manchester; Leicester 16.9; Bristol 17.2; Bradford 18.2; Birmingham 18.6; Sheffield 19.8; London 20.2; Birkenhead 20.7; Liverpool 23.9: Newcastle-on-Tyne 25.9; Leeds 26.8; Nottingham 26.9. In Edinburgh 23.1; Glasgow 25; Dublin 30.

For the week ending February 23d, in the Swiss towns, there were 29 deaths from lung diseases, consumption 23, diarrhœal diseases 19, diphtheria and croup 10, whooping-cough six, typhoid fever five, measles, scarlet fever, erysipelas, and puerperal fever each one. The death-rates were, at Geneva 23.4; Zurich 11.8; Basle 20.1; Berne 25.6.

The meteorological record for the week ending March 8th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 2	29.712	15	22	6	64	68	96	76	W	W	NE	4	7	4	F	C	C	—	—
Mon., 3	29.627	17	27	10	61	73	72	69	N	W	W	5	6	12	O	O	C	—	—
Tues., 4	30.113	13	22	8	66	56	75	66	W	NW	W	12	20	8	C	F	C	—	—
Wed., 5	30.240	21	30	6	76	77	96	83	SW	S	SE	6	10	12	F	O	S	—	—
Thurs., 6	30.096	31	41	22	90	65	76	77	NW	W	NW	12	8	6	S	O	C	—	—
Fri., 7	30.289	28	33	25	82	98	100	93	NE	N	N	9	10	12	O	S	R	—	—
Sat., 8	30.108	28	34	23	95	100	94	96	NE	NE	N	20	20	13	R	H	O	—	—
Mean, the Week.	30.026	22	30	14				80										59.50	.81

[1] O., cloudy; C., clear; F., fair; G., fog; H., sleet; S., snow; R., rain; T., threatening.

RESOLUTIONS OF THE BERKSHIRE DISTRICT MEDICAL SOCIETY ON THE DEATH OF DR. ALMON N. ALLEN AND DR. H. L. SABIN.

At the regular monthly meeting of the Berkshire District Medical Society the following resolutions were adopted: —

Whereas, Our brother, Almon N. Allen, of Pittsfield, has been removed from the scene of his long and useful labors on earth, and, as we trust, to a happy and everlasting home in the life which succeeds this; therefore —

Resolved, That while we bear our willing testimony to his character as a man and a physician, and deplore his absence from this our monthly meeting of the Society, we tender to his wife, son, and other relatives the sincere expression of our condolence and sympathy in their affliction, and commend them to the love of that Being "who doeth all things well."

Resolved, That a copy of these resolutions be forwarded to the family of our deceased brother, *The Boston Medical and Surgical Journal*, and the same be sent to the Berkshire County *Eagle*, and Pittsfield *Sun* for publication.

Resolved, That a copy be placed on the records of this Society.

A. M. Smith,
F. K. Paddock, } Committee.
O. S. Roberts,

Whereas, Our beloved brother, Dr. H. L. Sabin, of blessed memory, has been removed from our association,

Resolved, That we cherish with lively gratitude his long and happy union with us; we shall ever remember and be stimulated by his devotion to and love for his profession; his uniform kindness and courtesy; his eminent ability; his scrupulous adherence to high professional integrity; his hatred of shams; his just appreciation of noble purpose and endeavor; his manly eloquence in the cause he considered pure and just, and his Christian firmness and gentleness.

Resolved, That while we cannot mourn for the happy termination of such a long, useful, and noble life, yet we tender to his family our sincere sympathy in this bereavement.

Resolved, That these resolutions be sent to the family by the Secretary, spread upon the records of this Society, and published in *The Boston Medical and Surgical Journal*.

T. K. DeWolf,
C. L. Hubbell, } Committee on the above Resolutions.
N. S. Babbitt,
A. M. Smith,

H. Colt, Jr., *Secretary Berkshire District Medical Society.*

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MARCH 8, 1884, TO MARCH 14, 1884.

Billings, John S., major and surgeon. Granted leave of absence for one month, with permission to go beyond sea, to take effect April 1, 1884. Paragraph 6, S. O. 61, A. G. O., March 13, 1884.

Heizmann, Charles L., captain and assistant surgeon. Leave of absence extended three months. Paragraph 9, S. O. 57, A. G. O., March 8, 1884.

Wales, Philip G. Appointed to be assistant surgeon, with the rank of first lieutenant, to date from February 7, 1884, vice Brewster, resigned. Mem. A. G. O., March 10, 1884.

Fisher, Walter W. R., and **Polheimer, Adrian S.**, first lieutenants and assistant surgeons, assigned to duty in Department of California.

Stephenson, William, Borden, William C., and **Chapin, Alonzo R.**, first lieutenants and assistant surgeons. Assigned to duty in Department of the Platte.

Robertson, Reuben L., and **Edie, Guy L.**, first lieutenants and assistant surgeons Assigned to duty in Department of Texas.

Crosby, William D., first lieutenant and assistant surgeon. Assigned to duty in Department of Arizona.

Gandy, Charles M., first lieutenant and assistant surgeon. Assigned to duty in Department of East.

Pitcher, James E., first lieutenant and assistant surgeon. Assigned to duty in Department of Dakota. Paragraph 4, S. O. 55, A. G. O., March 6, 1884.

Kneedler, William L, first lieutenant and assistant surgeon. Assigned to temporary duty at Fort A. Lincoln, D. T. Paragraph 3, S. O. 26, headquarters Department of Dakota, March 8, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE TWO WEEKS ENDING MARCH 15, 1884.

Ames, H. E., passed assistant surgeon, from the Colorado and ordered to the Greely relief steamer Bear.

Terrill, F. H., passed assistant surgeon, to coast survey steamer Hassler.

McCarthy, R. H., passed assistant surgeon, from the coast survey steamer Hassler and wait orders.

Death. — Died, at Longmeadow, Mass., March 14, 1884, George Hooker, M. D., M. M. S. S.

Appointment. — Everett Torrey, Esq., has been appointed a member of the Massachusetts Board of Health, Lunacy, and Charity, in place of Hon. Thomas Talbot, retired.

Books and Pamphlets Received. — The Veins of the Brain and its Envelopes. Their Anatomy and Bearing on the Intra Cranial Circulation. By William Browning, M. D., Brooklyn, N. Y. Brooklyn, N. Y.: F. B. O'Connor, Jr., 68 and 70 Court Street. 1884.

Minutes of a Convention held in the City of Albany, February 4 and 6, 1884, at which the New York State Medical Association was Organized on a Permanent Basis.

Report of the Secretary of the State Board of Health of West Virginia for the Years ending December 31, 1881, 1882, and 1883. Wheeling. 1884.

Fifteenth Annual Report of the Trustees of the Willard Asylum for the Insane to the Legislature. For the Year 1883. Albany. 1884.

Original Articles.

PREVESICAL CELLULITIS FOLLOWING HERNIOTOMY. PHLEGMONOUS ABSCESS, "SOUS-OMBILICALE," IN HEURTAUX SPACE.[1] PERINEPHRITIC ABSCESS.[2]

THREE CASES REPORTED BY WILLIAM INGALLS, M. D. (HARV.)

CASE I. PREVESICAL CELLULITIS, FOLLOWING AN OPERATION FOR STRANGULATED HERNIA.

P. H., Irish laborer, age twenty-two years, single, was admitted to the Boston City Hospital on the 28th of April, 1883, having right inguinal hernia which occurred five years previously, after a fall from a height, and which has troubled him ever since, but which he has always been able to "put up" on its coming down until the 24th, when it came down, and his usual efforts to reduce it were ineffectual. During these last four days the patient has suffered great pain in the abdomen and some nausea, but no vomiting until yesterday when he took some medicine. After reduction by incision, sutures, drainage tube, Lister dressing. There was restlessness in the night, but neither vomiting nor chill; some pain and tympanites also, which were modified by morphia; on the 30th there was increased tympanites.

May 1st. Abdominal tenderness less.

May 7th. The wound is granulating; there is complaint of pain in hypogastrium and difficult micturition; and up to the 15th there continued to be abdominal pains and tenderness; diarrhœa; also a development of induration, pre- and supra-pubic, the area of which was a little more extensive on the right side than on the left; it was circumscribed. These symptoms led to an examination by the rectum, and there was found to be considerable tumefaction and induration in the prostatic region, recognition of the prostate gland being obscure. Analysis of the urine: specific gravity 1027; color normal; reaction acid; albumen one per cent. The wound is doing well.

May 15th. At this date the diagnosis was "a forming prevesical abscess."

From this date the tumefaction by degrees subsided, the wound healed rapidly, all the symptoms disappeared, and the patient was discharged, well, on the 11th of June, forty-eight days after the strangulation. There was at no time fluctuation of the prevesical tumor, nor was there any discharge therefrom.

CASE II. PHLEGMONOUS ABSCESS OF ABDOMINAL WALL.

D. L., 'longshoreman, age thirty-nine, Englishman, on the 11th May last was presented on the operating table for examination, not having previously been seen by myself. The history of the case is that up to about two weeks ago he had been generally in good health; that about that time he noticed a small bunch a little below the umbilicus which began to grow, with increasing pain on pressure and also upon coughing. Micturition became difficult and painful, and "there was a sensation as of a weight pressing upon the bladder."

Inspection discovered a tumor of the form of a demi-ellipse, the base of which was a horizontal line drawn across the umbilicus, the apex below, the diameters fully four inches, and the prominence, perhaps, an inch higher than the normal surface, red and fluctuating. Without ether the abscess was incised, and a large amount of pus poured forth, a number of clots of broken-down tissue being mingled therewith. The man was discharged in good condition with the wound closed on the 3d July, fifty-four days from operation, sixty-eight days from first notice of pain.

CASE III. PERINEPHRITIC ABSCESS.

A. C. S., age twenty-seven, Bostonian, workman in a shoe factory, entered hospital May 10, 1883, and reports that ten days ago he had pain in left abdomen, and he indicated a spot an inch below the point of the lowest rib at which a swelling or fullness was simultaneously felt, and which increased, as also did the pain.

Examination proved the existence of a circumscribed swelling at the region indicated, fluctuating and painful on pressure. This was incised and a large amount of pus escaped. Drainage tube and usual dressing.

June 5th. Twenty-six days from the above-mentioned opening, which has healed. The case has been going on well for the most part, but there has been some complaint of pain in left lumbar region, and there is now some pain shooting down the side and lower limb; the complexion is pale, and there is an anxious expression of face.

June 8th. A fullness over left kidney in process of formation during these past three days induced a suspicion of a forming abscess, and was to-day found to have ripened into one, and from this, upon its being opened, there flowed a large quantity of pus.

On the 11th of July, health and strength being much improved by suitable tonics and moderate exercise out of doors, he was discharged, well.

The position of the first abscess was front of, and precisely opposite to, the junction of the lower and middle third of the kidney, perhaps a little lower, and it is an afterthought that it was a perinephritic abscess, for it seems to be an unusual site for the pointing of one.

In a majority of cases pain in the side and pain shooting down the lower limb are complained of during the formation of the abscess; these symptoms were not alluded to by the patient until the forming of the second abscess. Although the kidney is not diseased in all cases of perinephritic abscess, yet the urine in all cases should be examined; it was not examined in this case, and the omission is inexcusable.

In the *Annals of Anatomy and Surgery* for December, 1882, there is an article by Dr. Pilcher entitled Prevesical Phlegmons.

He says: "The slight attention which has been paid to the study of phlegmons and abscesses, especially when considered from a topographical point of view, is very notable; . . . among the 182 monographs enumerated by title upon the subject of abscesses, including phlegmons and cellulitis, 102 are French, fifty Latin, nine English, two American, and nineteen from other nationalities."

Dr. Pilcher's paper is full, and, as the reader thinks, admirable as to the regional anatomy and the position and the causes of the subject in hand; as all may read, it is not expedient to be too free with extracts; but his "Conclusion" may be permissible, as follows: —

"Submuscular phlegmons are the result of bloody effusions upon the posterior face of the recti muscles, and the prevesical phlegmons are the consequence of an affection of some of the organs contained in the true pelvis. Submuscular phlegmons develop from the pubes towards the umbilicus . . . and have no prolongation into the true pelvis.

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[1] Bulletins et Memoires de la Société de Chirurgie de Paris, tome iii., page 611. Phlegmon sous-ombilical, par le Dr. A. Heurtaux.

[2] Read before the Surgical Section of the Suffolk District Medical Society, January 2, 1884.

"The prevesical phlegmons form tumors which, situated in the true pelvis, and consequently accessible to rectal touch, rise more or less above the pubes, between it and the bladder, and may extend towards the rectum and the iliac fossa. . . . Resolution is rare."

It seems to the writer that he is justified in believing that the first case was a cellulitis beginning in the cavity — properly, *space* — of Retzius, for, first, there was "an affection of some of the organs contained in the true pelvis," namely, the yet unhealed herniotomy; second, the swelled and hard prostatic region; third, the formation of a hard plate which formed in front of and above the pubes; suppurative action did not take place, else there would have been a typical prevesical abscess instead of, or a result of, the cellulitis.

The second case is a submuscular phlegmon such as is described and delineated by Castaneda y Campos,[1] as "Le phlegmon sous-ombilicale," and these do not invade the precincts of the true pelvis.

It may be said at this point that there is, apparently, good reason why results of study of this subject *as regional disease* have not been published in this country; for having searched the records of the Boston City Hospital from 1870 to the present time no record of anything of the kind was found; moreover, the records of the Massachusetts General Hospital for the years 1877, 1878, 1879 were thoroughly searched, and but one case bearing upon the subject was found. Therefore, it may be presumed, justly, that cases of the kind under consideration are rare, at all events, in this part of the country.

When the case of sub-umbilical abscess was uncovered for examination, Dr. Fifield being present immediately recognized it as a disease described by several French authors, and in connection with it called attention to the fact that this and prevesical abscesses were in near relationship for purposes of anatomical consideration.

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A CASE OF CYSTO-PYELITIS OR PYELO-CYSTITIS OR CYSTITIS COINCIDENT WITH PYELITIS.[2]

BY EDWARD O. OTIS, M. D.

I FIND myself in the rather anomalous position of presenting a case of which I seem to have about as many suppositions as to its exact diagnosis as existed with regard to the mental condition of Hamlet. Still the case has seemed to me one so suggestive in so many of its aspects and so shrouded in doubt as to its exact nature and origin that I have ventured to report it. It extended from May, 1881, to June, 1883.

H. R., a midshipman, twenty two years of age, of phthisical parents, enjoyed robust health while at the naval academy, and for two years after while on a cruise to the West Indies and northward. He sustained successfully all the physical examinations required from time to time while at the naval academy and in the service. In the latter part of May, 1881, some months after the expiration of his cruise, he went to Annapolis to pass his examinations for promotion. He studied hard and late, and while there played a game of base ball in which, after being heated, he sat down on the ground, but with no apparent evil result. I believe he was also hit by a ball in the bladder or genital region somewhere, but of this I cannot be sure; if he was it was not severe enough to make any lasting impression upon him, so that I do not think he mentioned the fact to me. The medical officers under whose care he subsequently came also had the impression that he received such a blow, but I find no mention of it in their records. A short time after this game he began to feel a slight trouble in the bladder region while walking and while urinating. This continued five weeks before any physician was consulted, and all this time he was about, the last act before taking to his bed being to walk six or seven miles. The pain increasing he consulted an eminent surgeon, who said he had all the symptoms of stone, and sounded for it at two different times with negative results. He was given a prescription for cystitis composed of pareira brava, liq. potass., etc. The pain referred to the perinæum and head of the penis increased so that he took to his bed. He was visited once at his house by the same surgeon, who washed out the bladder, and also made an examination of the urine, the result of which I obtained through his kindness, and which was as follows: Reaction acid; specific gravity 1020; albumen, one eighth of one per cent.; large amount of pus and mucus; bladder epithelium; a few blood corpuscles.

I saw him for the first time September 14, 1881. He was passing his water about every two hours, and complained of pain, which he located two or three inches from the head of the penis. There was no tenderness over the region of the bladder or in the lumbar region. No tenderness or enlargement of the prostate. He was obliged to keep the dorsal decubitus now, as all through his illness, on account of the pain when he attempted to lie on his side. The other organs were healthy with the exception of a mitral systolic souffle. My examination of the urine was practically the same as the one previously made. I did not take the temperature at that time, but three or four days later it was 102.8° F., and continued to vacillate from this time on between normal and 104° F. My treatment was essentially that instituted by his previous physician; the prescription above referred to was continued, also decoction of triticum repens and a weak alkali, and the bladder was washed out gently sometimes with simple warm water, sometimes an astringent or antiseptic was added to the water. Other symptoms, digestive derangements, fever, pain, etc., were treated according to the indications. September 19th he complained of *pain in* the *right loin*, and the following day pain just below the cardiac region. September 21st the pain in the right loin had *disappeared*. November 8th the note is made that he complained of soreness and pain in the *right iliac* region. From the time I first saw the case until November 14th, when he entered the Naval Hospital at Chelsea, the course of the disease was one of great variations, — now a chill and high fever and profuse perspiration, with gastric disturbance, pain, and much depression; now absence of all fever and pain, fair appetite, and general well being. The urine also varied much as to its abnormal ingredients, and as to the intervals between passing it.

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[1] Du phlegmon, etc., page 88.

[2] Read before the Surgical Section of the Suffolk District Medical Society, January 2, 1884.

At one time he passed several clots, and there was much blood. The last examination which I made, November 7th, was as follows: specific gravity 1016; reaction neutral or slightly acid; albumen, from one half to one per cent.; abundance of pus; few blood corpuscles; amorphous matter.

From November 14, 1881, to June 19, 1883, when he died, he remained at the Chelsea Naval Hospital, and for the record of his case while there and an account of the autopsy I am indebted to the surgeons on duty there during this period, and especially to Dr. A. C. Gorgas, Medical Inspector United States Navy. During this time the disease progressed steadily, but with short intervals of remission, when all the general symptoms would be much improved, with diminution of pus in the urine. There was usually rise of temperature in the afternoon, and almost continual pain, so that finally he became an opium eater in consequence, with all the train of symptoms such as is consequent upon a chronic suppurating disease. The bowels were generally obstinately constipated, and evacuated with much pain and depression. The urine, I believe, was always acid, often so strongly that an alkali had to be exhibited. At no time could he lie on either side. There was pain at times in the right lumbar region, but not constant, neither was there any marked tumor there. A very noticeable and significant symptom was the extreme constipation and flatulence, caused, undoubtedly, by adhesions about the intestines, preventing peristalsis and permitting gaseous collections. The remedies tried were innumerable, none of which apparently exercised any influence over the course of the disease, copaiba, sandal-wood oil, iron, alkalies, diuretics and astringents of different kinds, sedatives and tonics. The bladder was also washed out with various medicated waters containing antiseptics and astringents. In order to represent the progress of the disease more vividly I will give extracts from the record of the case after he left my care: —

November 17, 1881. Patient cannot stand or walk without much pain, or lie on either side.

December 22d. Urine examined: acid; large amount of sediment, pus and mucus corpuscles, occasionally a blood globule. Pain and tenderness over membranous and prostatic portions of urethra. No particular sensitiveness over either kidney nor in hypogastrium. Temperature in morning normal, in evening 101° F. to 102° F.

December 30th. Movement of bowels always causes pain.

January 14, 1882. Retains urine from six to eight hours. Freedom from pain. Ability to move about. Much less amount of pus and mucus. [Taking opium daily.]

February 20th. Seat of pain at membranous and prostatic portion of urethra and neck of bladder. Urine much increased. Pus less than a month ago.

May 14th. Decided and well-marked tenderness over parts corresponding to *left kidney*, and pain starting from that point and following course of ureter to bladder and penis.

May 15th. Pain over left kidney relieved. Urine and pus tinged with blood. No casts or renal epithelium. Reaction acid. Occasional night sweats.

May 16th. More blood in the urine; color that of port wine. Crystals of oxalate of lime.

May 17th. Passage of bowels with much pain and vesical tenesmus. Much blood in the urine. No pain over kidney, as before.

May 18th. Violent paroxysm of tenesmus and pain starting from neck of bladder and running to end of penis.

June 12th. A sound was passed, but the range of motion found very limited.

June 25th. Condition essentially the same. Neuralgic pains about bladder, penis, and perinæum. Occasional small blood clots. Urine tinged with blood, which has a fresh appearance, as if from bladder wall. Appetite poor.

August 1st. In *right* lumbar region of abdomen a circumscribed hardness is perceptible on percussion and palpation; not very sensitive, but rather sharp pressure producing a painful sensation, referred to deeper parts not distinctly located by patient. The nature or origin of this tumor cannot distinctly be made out, but it lies nearly over the situation of the right kidney. Examination of side and back in same region discovers no marked tenderness nor any tumor.

September 20th. Decided decrease in amount of pus within the last month, and a nearly corresponding decrease of pain.

October 8th. It seems probable that there may be a filling up and temporary emptying of some cavity of pus, whether or not in the kidney. The temperature rises as pus diminishes and falls with its reappearance.

November 13th. Passed several small concretions with a large quantity of pus.

December 7th. Felt a tumor in the right side, which gave much the sense of the liver but that it seemed in a degree globular and gradually sank.

December 14th. Acute pain along the urethra. Urine very pale, but highly acid; deposited about one fifth volume of pus and very great percentage of mucus. Pain so severe took 0.50 gramme of opium and 0.032 grammes of morphine, besides nine grammes bromide potash.

December 17th. Every attempt at micturition accompanied by more or less acute pain and frequent stoppage.

December 22d. Appetite remarkably good.

December 29th. Urine very mildly acid from continued doses of bicarbonate of soda.

January 3, 1883. Inflation of the intestines by gas remains the most embarrassing condition.

January 8th. Right testicle and cord sensitive.

January 16th. Catheter introduced, but produced such pain it had to be withdrawn.

February 5th. Pus less; general condition improved; urinary fluid more natural in color.

February 9th. No nephritic symptoms observed for some time, all pain being confined to urethral, perineal, and supra-pubic parts. Frequently the urine is voided without the least discomfort.

February 16th. Acute cystitis reappeared, with considerable strangury and increase in purulent sediment. [Deprived for the most part of his opium.]

February 21st. Complains of want of relief produced by evacuation of the bowels, a condition due to pressure upon the rectal walls by the thickened and weighty bladder.

March 9th. Diarrhœa and profuse sweating.

March 19th. Attempt made to explore bladder; passage of instrument interrupted at prostatic portion. Upon introduction of finger in rectum the tissues between it and rectum were found to be reduced to such tenuity that neither the use of the least pressure or a smaller instrument than No. 6 was deemed advisable.

March 29th. About 900 cubic centimetres of urine passed daily.

April 14th. Urine contains increased amount of pus.

April 28th. Hacking cough.

May 15th. Dull pain in left chest.

May 22d. Abundant râles heard over left lung. Painful inspiration. Glands of left axilla are enlarged and tender. Pain about articulation of jaws. Increasing emaciation. Urine more abundant. Less pus.

May 27th. But little respiration heard over left lung.

June 16th. Acute pain in right lumbar region, which quickly spread over the abdomen, with marked tenderness. Great distress and prostration. Symptoms of peritonitis. Concentrated urine. Retraction of penis and testes.

June 18th. Frequent vomiting of dark watery fluid, which is apparently altered exudation into the stomach, and independent of ingesta. Respiration oppressed. Circulation more feeble.

June 19th. Dissolution.

Autopsy. Eleven hours after death. Body extremely emaciated. Rigor mortis developed and subsided rapidly; entirely disappeared at time of examination. Brain not examined.

Thorax. Costal pleuræ adherent to chest walls by numerous and strong bands; also to pericardium on left and diaphragm on right side. Inferior portion of upper left lobe of lung consolidated, section sinking in water. Apex congested, bound by adhesions, and the seat of several small vomicæ and cysts of cheesy matter. Upper lobe of right lung also congested, and contained several superficial hard masses, sacs filled with cheesy substance. General pulmonary tissue very pale, but crepitant. Thoracic cavity sensibly encroached upon by abdominal organs. Pericardium contained small quantity of fluid. Heart rather small. Right side filled with clotted blood; and after dividing the aorta a fibrinous clot was withdrawn about twelve inches long, bifurcated, and corresponding with arterial divisions. Similar clots were found in left side. Semilunar valves normal. Mitral found to be insufficient.

Abdomen. A large quantity of sero-purulent fluid in peritoneal cavity, the pus apparently yielded by an abscess resting on the right side of the vertebral column and under lower extremity of kidney, and which was cut into before its discovery. Extensive adhesions between lower abdominal wall and diaphragm. Intestines united with each other, with posterior abdominal wall and omentum by numerous adhesive bands. Omentum studded with adhesive deposit. Stomach contained dark fluid, similar to that vomited, and distended by gas. Intestines congested, and generally attenuated, cæcum containing hard fecal masses. Descending colon bound down to posterior wall of abdomen, and contracted to one fifth or one sixth its normal calibre throughout its extent; also the rectum. Left kidney normal. The right enormously distended by pus, after evacuation of which it measured six and one half inches in length and four and one half in width, and its medullary structure was found completely destroyed by suppuration, a distinct abscess occupying each pyramidal section. The intervening cellular tissue was thickened into dense septa, and the capsule was greatly hypertrophied. Right ureter occluded. Bladder empty, shrunken, walls thickened, but showing no evidence of recent inflammatory action.

The points of interest in the case seemed to me to be the following: —

I. The insufficient cause. There was no vesical or renal calculus or any injury or exposure which would seem sufficient to give rise to such severe trouble, especially in a young man perfectly strong and robust up to the time of his illness. (I could never find any evidence of venereal trouble.)

II. The origin of the disease. Was it in the bladder or in the pelvis of the right kidney? If a primary pyelitis, why then did we not have pain more constant and confined to the diseased kidney? The first notice of pain in either kidney region was two or three months after the beginning of the disease, and this disappeared in a day or two. The next record of any pain is some six months afterwards, and that in the left kidney. Then, again, a number of months later pain is noticed in the right kidney with some evidence of a tumor. It will be also noticed that the urine was always acid, and often strongly so. The grave constitutional disturbance from the beginning would favor a primary pyelitis, or a very rapid invasion of the kidney if cystitis was the primary affection. Moreover, if cystitis was the original disease why were not both kidneys invaded? I must confess my inability to locate the origin of the disease as well as to ascribe it to any sufficient cause. I would suggest tuberculosis as possible. That there was a pyelo-nephritis in the later part of the disease, with symptoms of pyæmia, there can be hardly any doubt.

We have three suppositions as to its origin: First, it was a case of cystitis from unknown cause, with subsequent extension of the disease to the right kidney. Second, we have a primary pyelitis, also of unknown cause, with later inflammation of the bladder. Or third, we have pyelitis with coincident inflammation of the bladder.

III. As to treatment. Would any surgical interference have been justifiable or advisable? Two operations it seems to me are to be thought of: —

First, one referred to the right kidney. An exploratory incision, or at least an exploratory puncture, with an aspirating needle. But were there indications enough to warrant this? It was not until more than a year after the beginning of the disease that the evidence was sufficient to make it pretty certain that there was suppuration going on in the right kidney, with the formation of an abscess. On August 1, 1882, a circumscribed hardness in the right lumbar region was detected, and later, in December 7th, the note was made that a tumor was felt in the right side, but apparently it could not be very definitely made out. With this evidence and at this advanced stage of the disease would an operation such as I have suggested have been justifiable?

Second. From the symptoms of stone which were present, and also from the doubt as to the origin of the disease, there being at least an equal chance that the bladder was primarily affected, should, in the early days of the disease, an exploratory perineal incision, as suggested by Sir Henry Thompson recently, have been advised? Sir Henry Thompson claims that the operation is simple and easy, and that it is the most valuable aid to diagnosis in cases of obscure bladder trouble; and moreover declares that digital exploration of the bladder can be performed without much risk to the patient. Further, if the case on perineal section had seemed to be one of pure cystitis, then the section could have been utilized as a remedial measure, as suggested by Dr. Weir, of New York, in the *Medical Record* for June 12, 1880, page 659, by giving free and easy drainage to the organ, and a better and more perfect channel for irrigation.

IV. The difficulty of determining from whence the purulent discharge proceeded. I believe that it is not certain that the epithelial cells of the pelvis of the kidney are characteristic, and if they are, they are not always present or detected. Moreover, the urine is not always alkaline in a chronic case of cystitis of a high grade.

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A CASE OF FACE PRESENTATION WITH SOME REMARKS ON THE TREATMENT OF THIS CLASS OF CASES.[1]

BY J. B. SWIFT, M. D.

AT a meeting of this Section last year Dr. Harlow reported a series of twelve cases of face presentation, and showed that the labor might be easier for the mother and safer for the child by an early rectification of the position.

I have recently had a case which I succeeded in converting from face into a vertex, and which I think may be of interest in exciting a discussion as to the proper treatment of these cases.

On the morning of September 9, 1883, about nine o'clock, I was called to attend Mrs. O'D., and on my arrival found her in labor with her fifth child.. She says her previous labors have always been tedious and slow, and from the last she was a long time in getting up. She has been married seven years, and is of a decidedly nervous temperament.

Her pains began about two A. M., and although not very severe nor frequent she has had no sleep since they began. Examination per vaginam showed the cervix entirely obliterated, the os open so as to admit the finger, the membranes intact, head presenting, and the anterior fontanelle directly over the os. The head was movable above the brim and could be easily turned over so as to make O. R. P., but it would not remain so. The patient was dressed and about the room, and had eaten her breakfast as usual.

At eleven A. M. there had been no change, and she had had no pains since the first examination. She was advised to lie down and try to get some sleep, taking, if necessary, one drachm of bromidia, which had been prescribed by her regular attendant, and found to act well at times when she suffered from insomnia.

At two P. M. I found that she had slept somewhat without the aid of the medicine, and that the pains had returned, the os being somewhat more dilated than at the previous examination. The head remained in the same position.

At three o'clock I found the os about three quarters dilated and the pains changing in character, becoming expulsive. The head had become more extended, the orbit now occupying a position in the centre of the superior strait. The head was still movable, but pressure on the forehead would now only turn the head so as to bring the anterior fontanelle into its original position. I intended to wait until the os was more fully dilated and then introducing the hand rupture the membranes and bring down the occiput, hoping that with the escape of the waters the head would remain flexed. Unfortunately with the next pain the membranes ruptured spontaneously, and I found the head fully extended, the nose being in the centre of the strait. Pressure on the chin would still convert it into a brow, but the head would turn no farther. I informed the husband of the condition of affairs, and explained to him that I intended to give the woman ether and try to rectify the position. He asked that Dr. F. Minot, who had seen her in one or two of her previous confinements be called in consultation. On his arrival I told him what I proposed doing, and he agreed to the proposition.

The patient was etherized, and introducing my left hand I grasped the occiput, drawing it down into the pelvic cavity and placing it in the right anterior position.

It was deemed advisable to finish the delivery then, rather than leave it to the natural efforts, so the forceps were applied and a female child was extracted. After the delivery of the placenta there was some hæmorrhage, which was controlled by a hot water douche. The woman made an easy and rapid convalescence, the temperature never going above 99° F.

We are told in our obstetric books that the older accoucheurs believed spontaneous delivery by the face to be impossible, and that they always terminated such cases by version. Playfair says: "Smellie first recognized the fact that spontaneous delivery is possible, and that the chin turns forward and under the pubes; but it was not until long after his time, and chiefly after the appearance of Mme. Lachapelle's essay on the subject, that the fact that most cases could be naturally delivered was fully admitted and acted upon."

Such being the case, version was given up and the cases were left to the natural efforts; but it was soon found that these cases were long and tedious, and the prognosis for both mother and child was more unfavorable than in cases where the vertex presented; thus Cazeaux says: "We must remark that, as a general rule, the labor is more tedious, more painful, and more dangerous, both to the mother and child, and that it much oftener demands the intervention of art." According to Winckel the mortality of the children amounted to thirteen per cent., while that of the mothers reached as high as six per cent. Playfair says: "As regards the mother, in the great majority of cases the prognosis is favorable, although the labor is apt to be prolonged, and she is therefore more exposed to the dangers attending tedious delivery. As regards the child, the prognosis is much more unfavorable than in vertex presentations. Even when the anterior rotation of the chin takes place in the natural way it is estimated that one out of ten children is still-born; while if not, the death of the child may almost certainly be expected."

Schroeder says: "The prognosis in face presentations, even with the usual mechanism, is far more unfavorable than in head presentation. While in the latter nearly five per cent. of the children are still-born, that proportion rises to thirteen per cent. in face presentations. For the mother, also, face presentations are more unfavorable than head presentations, because on an average the labor lasts much longer. Of course, the prognosis is still more unfavorable if the mechanism is abnormal, that is, when the chin does not take its forward turn. Then scarcely a child will be born alive." And finally Lusk: "Though spontaneous delivery is the rule in face presentations, the dangers to both mother and child are considerably greater than in vertex presentations."

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[1] Read before the Section for Obstetrics and Gynæcology of the Suffolk District Medical Society, November 21, 1883.

In spite of this unfavorable prognosis we are told to leave these cases to nature, only interfering when it becomes evident that the child cannot be born while in this position. Then, if the head is still movable at the brim, or can be pushed up, there are two methods to be applied: (1) pressure on the chin in such a direction as to cause the head to revolve on its transverse axis; or (2), drawing down the occiput by the hand or vectis introduced into the uterus. These measures failing, or if the head is so firmly fixed in the cavity that it cannot be pushed back, the forceps must be used.

Schatz has proposed a method, by external manipulation, which is to be employed early in the labor. I have not seen the original article, but Lusk speaks of it, though he does not say with what success its employment has been attended. The operation consists in restoring the child to the normal attitude by pressing on the chest in one direction, while with the other hand the breech is pressed in the contrary direction, this having the effect of raising the head and at the same time doubling the child up, when the head will resume its normal position, and the vertex will present. There can be no question that, if this can be done, it should be tried in all cases where the diagnosis is made early, and I regret that it was not attempted in the case which has been reported, but had it been attempted I think it somewhat doubtful whether it would have been successful, for, although when the extension of the head was first discovered it could be corrected by pressure on the forehead, it would not remain so when the pressure was removed. So in any case, although we might be able by this method to remedy the malposition, still the causes which acted originally in making the face present probably would remain, and there is no certainty that the head would stay in its proper position if put there.

The question then arises whether or not in such cases we are justified in going still farther. It seems to me that we are, especially when we take into consideration the unfavorable prognosis to both mother and child, and the fact that it is much easier to rectify all malpositions early than when labor has been going on for some time. Still I would not lay this down as an absolute rule to be followed in all cases, but my plan of treatment would be in all cases to attempt to rectify the position by Schatz's method. If successful, well and good; but if the malposition returns after being rectified, or not being successful in our attempts at rectification, watch the dilatation of the os closely, care being taken not to rupture the membranes; and when the os is sufficiently dilated correct the position by pressure on the forehead, rupture the membranes, and keep up the pressure until the pains have caused the vertex to engage in the brim, when the case, if otherwise all right, can be left to nature. Or if on our first examination we find the membranes ruptured and the head still above the brim, try to correct it by pressure in the manner already described, or, not being able to do this, introduce the hand, grasp the occiput, and bring it down. There are cases, no doubt, in which the pelvis is roomy or the head small, where the face will engage easily and come through the pelvis without much more effort than in a great many vertex cases, but I think it will be found in the large majority of face cases that this is not the rule. The dimensions of the presenting part cannot be reduced in the way they are when the vertex presents, for the bones of the face are united, and will not overlap as the parietals will, therefore a greater exertion is required to force the face through, thus causing a tedious and harder labor, with the risk of tiring out the patient. Another thing to be thought of is the appearance which the child presents after being born in this way. The swelling known as the caput succedaneum of course forms on the face, and Playfair says of this: "Even when the child is born alive the face is almost always greatly swollen and disfigured. In some cases the deformity produced in this way is excessive, and the features are often scarcely recognizable." In spite of our assurance that this disfiguration will all pass away in a few days it must produce rather an unpleasant sensation, to say the least, to present such a child to a woman who has just passed through such an amount of suffering. Probably no one would object to the employment of Schatz's method.

In speaking of the other methods Lusk says: "Though occasionally successful they have been discountenanced by most obstetric writers, because experience has shown the results to be by no means commensurate with the dangers incurred." But he does not tell us what these dangers are. Further along, however, in speaking of the treatment necessary for cases which have been left to nature, and where she has failed, he shows how much more the danger is increased to the woman, and the child is almost always dead.

Playfair argues against interference on the ground that most men are not skillful enough, and then goes on to say in the next sentence: "When once the face has descended into the pelvis difficulties may arise from two chief causes, — uterine inertia, or non-rotation forwards of the chin." After speaking of the treatment for inertia he continues: "The second class are much more important, and may try the resources of the accoucheur to the utmost." It seems to me that it requires much more skill to handle a case where rotation fails than to merely turn the head over while it is still movable above the brim.

Cazeaux, speaking of the treatment of face cases, says: "In the present state of our science the mento-anterior positions should be left to nature, yet does the same rule hold good with regard to posterior ones? In a word, if this last position be clearly recognized before or shortly after the membranes are ruptured, should we not, prior to the engagement of the face, and while the head is still movable, endeavor to convert it into a vertex position, and thus prevent the difficulties that might subsequently arise? If I had to decide under such circumstances I would certainly resolve the question in the affirmative." Has our science advanced sufficiently since his time to warrant us in our undertaking? It seems to me that it has. The great objection in my mind to interfering with cases where the chin is anterior would be that they would be converted into cases with the occiput posterior; but even here, with our present knowledge of the mechanism of these cases, it seems that I should prefer a case of occiput posterior rather than one with the face presenting.

RECENT PROGRESS IN THE CONSTRUCTION OF INSANE HOSPITALS AND MANAGEMENT OF THE INSANE.

BY WALTER CHANNING, M. D.

SPECIAL TRAINING FOR INSANE HOSPITAL ATTENDANTS.

This is a subject which has from time to time attracted considerable attention in this country. It has recently been considered in a more practical manner by A. Campbell Clark, M. B., medical superintendent of the Glasgow District Asylum.[1]

The writer refers to a paper read by Dr. Clouston seven years ago, entitled On the Question of Getting, Training, and Retaining the Services of Good Asylum Attendants, which attracted considerable attention to the subject at the time and has kept it alive since that time. Dr. Clouston has a system of training for new nurses at Morningside in his infirmary, if we are not mistaken.

Dr. Clark's system is rather elaborate, consisting not only of ward instruction, but lectures and examinations as well. The first winter a course of eighteen lectures was given. An abstract of each lecture was written out on the black-board, and the class of attendants was allowed half an hour to copy it. During the winter two written examinations were held. Such questions as How to treat an epileptic in a fit; What risks does an epileptic run; and the treatment of epilepsy, epileptic insanity, bed sores, etc., were among those given. The percentage of failures was smaller than anticipated, and was chiefly among the men, who often were sadly deficient in education, and in some cases lacked ambition. An analysis of the results of this first course of lectures forced Dr. Clark to the conclusion that the lectures were aimed rather too high, but were worth continuing in a more practical form. Ward teaching consisted in the pointing out of symptoms of various forms of disease; indications for vigilance and treatment; and the preparation of brief notes by the attendants on individual cases.

The second course of lectures was followed by the attendants with unabated interest. The subject of one lecture was chiefly a pointing out of the various requisites of a good attendant. Another dwelt on the bodily diseases common to asylums; another on delusions, hallucinations, suicides, homicides; another on asylum accidents, bathing and its dangers, etc. Prizes were offered for the three best essays on hallucinations, each essayist to select three patients as a basis. The examinations were well attended and the results gratifying, and several attendants of both sexes were given first and second class certificates.

Dr. Clark offers some suggestions at the end. One is that British superintendents who are willing to give the system a trial should enter into a combination for two years. The second is that this combination shall merely experiment to the extent of supplying a special training, not compulsory, and shall give class certificates according to efficiency and duration of service. The third is, that a register of attendants, who have received certificates, be printed and circulated at the end of two or three years.

The *American Journal of Insanity*[2] publishes the paper of Dr. Clark, and in addition a letter describing a visit to the Bothwell Asylum, of which Dr. Clark is superintendent.[3] The writer speaks of the smallness of Dr. Clark's asylum, with only 180 patients, but regards this smallness as conducive to a *domesticity* which makes an experiment in the direction of special training of attendants more easy than it would otherwise be.

The last lecture to the attendants had been on Reflex Action, a decapitated frog serving for purposes of illustration. The practical bearing of this principle on disease, epilepsy for example, was explained, and all seemed interested.

Several of the attendants' note-books were examined by the writer, and the extracts which he gives from these show close observation, and are characterized by a freshness not always found in the ordinary insane hospital record book. An attendant's opportunities for observing patients are certainly much better than those of an assistant physician, and it is not unreasonable to assume that data might be obtained in this way which would be of real value if accurately recorded. The intelligence and care requisite for making reliable observations are the qualities usually found in the educated physician, and an absence of them is to be expected in the attendant, but Dr. Clark's method will serve to develop these lacking qualities.

One striking fact brought out by the recorded observations of the attendants was the propensity of women with puerperal mania to burn. A corroboration of this fact the writer found in another asylum.

A novel feature of the Bothwell Asylum was the bringing together of men and women at meals at small tables. The effect was regarded as good. For instance, an old woman "coaxed" the appetite of a boy; a male attendant succeeded in giving food to an obstreperous woman, which the female attendants could not do, and similarly a female attendant gave food to a man, which the male attendants had failed in doing.

Worthy of note at this asylum is a swimming bath thirty-one feet long by eight feet wide, and sloping gradually down from a depth of two and a half feet till a maximum depth of water of four and a half feet is reached. It is lined and floored with glazed tiles. Such a bathing arrangement could be well copied here. If I am not mistaken there have been similar swimming tanks in at least one or two of our own hospitals for the insane, but never on so large a scale or so completely finished. In summer patients would derive both benefit and enjoyment from a plunge in a good swimming bath or tank.

In the conclusion of his letter, the writer states that the veteran psychologist, Dr. W. A. F. Browne, was the first physician, many years ago, to give a course of lectures to asylum attendants.

A SOUTH AMERICAN INSANE HOSPITAL.

Dr. Dreising, of the German navy, has recently[4] given an interesting account of a visit to a lunatic asylum in Uruguay. This institution was begun in 1879, and is as yet only partially completed. The buildings inclose a large garden, which is tastefully laid out. The administration buildings also front on a court-yard laid out as a garden. The buildings are approached by very effective marble steps. The chapel is elaborately finished and very effective.

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[1] The Special Training of Asylum Attendants, Journal of Mental Science, January, 1884.

[2] January, 1884.

[3] A Visit to Bothwell Asylum, by G. Alder Blumer, M. D.

[4] All. Zeitschrift f. Psychiatrie, xl., Heft 4, Der Lauder-Irrenhaus von Uruguay.

In the court behind the chapel is the bath-house, which is architecturally the most interesting portion of the buildings. It is built in the form of a half circle. From a corridor which runs the length of it a person looks down on a large cemented basin for *massen-bäder*, or baths all over, as we should say. There are various kinds of complicated douche apparatus in the corridor in separate rooms or *zellen*. Among these are the full douche, the rain douche, the circular douche, and other kinds. Over the whole there is a blue glass roof.

In the rear from this building is one of the buildings devoted to the patients, and in the lower story are the rooms or *zellen* for the excited patients. Each of these rooms has a window which looks directly out on the main recreation ground of the patients. In the upper stories are the patients' sleeping rooms, which have a floor of burnt clay. At night the light comes from gas lights, with blue glass lanterns. The patients take their meals together in a large hall with marble tables.

A small adjoining building is used for private patients, who are divided into three classes, and have rooms accordingly.

The general arrangement of the female wing is similar to that of the male. The Sisters of Charity, who preside over the institution as nurses, are able to make the female patients do considerable work. They make fine lace, and at a recent fair in Buenos Ayres took a prize for silk-spinning. The women are paid for this work, and often get together a little capital to begin life on after leaving the asylum.

The male patients also earn money as bakers, shoemakers, carpenters, cigar makers, and laborers. The cooking for the institution is all done in the institution under the supervision of a sister.

In July, 1882, there were altogether 442 patients in the asylum.

The hospital (medical) staff consisted of a doctor and two medical students in their last semester. Beside these there was one clergyman, one inspector, one secretary, one apothecary, thirteen attendants, ten Sisters of Charity, etc.

INCREASE OF INSANITY.

The recent report [1] of the English Commissioners in Lunacy is of interest in regard to this point. The increase in registered insane persons still continues, having advanced by 1923 since January 1, 1882. The total number of insane persons was 77,196, or one in every 346 of the population. This increase, which seems very large, is largely accounted for by the diminished death rate, which has been one per cent. less during the last three years than previously. This diminution would make a decrease in three years of 1260.

"Among the private patients the ratio to population has of late years been practically stationary, but the proportion of the pauper class deemed to require care and control continues steadily to rise."

"During the last seven years, however, the increase in the annual occurrence of fresh cases of insanity, pauper and private, as indicated by the yearly admissions of new cases, . . . has not been in excess of the annual increase in the general population."

"It would thus appear that, if we take the total population, the proportion of persons attacked with insanity is not at present on the increase, and that the addition made annually to the total number of certificated insane persons maintained under care and control is due almost entirely to the accumulation of chronic cases."

Such statements as these, coming as they do from such high authority, are of great importance. And, furthermore, they are very encouraging and even surprising to those persons who have thought that insanity was increasing with great rapidity.

The experience of Scotland is even more convincing of the fact that a time may arrive when there will be only a very moderate increase in the number of cases of insanity. The Scottish Commissioners in Lunacy, in their last report,[2] state that with 10,510 insane persons, or twice the number very nearly that we have in Massachusetts, there was an increase of only 149 over the previous year. Only ten of these insane persons were added to the asylum population during the year.

Scotland may certainly be congratulated on this showing, which is so unlike any that we are accustomed to seeing. In this connection it is not out of place to call attention to the high state of perfection to which the system of Scotch lunacy management has arrived. This system shows a diminished death-rate, an increased recovery-rate, and a smaller increase of incurable patients in asylums than other countries. The chief merits of this system seem to be thorough supervision, harmony between the commissioners and medical officers of asylums, absence of restraint, unlocked doors, plenty of occupation, and very frequent visits of patients at home "on probation." Furthermore, however, Scotland is very fortunate in having an unusual number of exceptionably able men engaged at the present time in the care of her insane. As the care of the insane in this country made remarkable progress in the days of Ray, Kirkbride, Brigham, Bell, Earle, Howe, and others, so to-day in Scotland we witness a greater advance than elsewhere in the world, perhaps, from a somewhat similar combination of fortunate circumstances.

The report states, in conclusion, that "after making allowance for the increased population of the country the number of private lunatics in asylums has increased nine per cent. since 1858, and the number of pauper lunatics in asylums and similar establishments has increased eighty-nine per cent. And it is worthy of note that the proportion of pauper lunatics in asylums to the population had decreased last year to 185 per 100,000 from 188, which was the proportion the previous year. This is the first time since the establishment of the Board that we have been able to report a decrease."

In Ireland there were in all institutions for the insane, as well as work-houses, 13,821 insane persons.[3] The increase in the number over 1882 was 377. The inspectors state that these figures do not necessarily indicate a general increase of insanity throughout the country, as they were mostly of a chronic type. The decrease of the population by emigration, which leaves the mentally and physically infirm behind, causes the ratio of the insane to the sane to be higher than it otherwise would.

The latter statement may undoubtedly be a correct one from the point of view of the Irish administrator of charity at home. As we look at the effect of immigration in this country, however, and more especially in Massachusetts, on the increase of insanity, we see the exact opposite side of the picture. The last report of the Board of Health, Lunacy, and Charity[1] states that the large hospitals have reported on the parentage of the patients admitted, and the aggregate of their statistics is as follows: Whole number of patients classified 3414; of American parentage 1500; Irish parentage 1283; Canadian parentage 181; total of foreign parentage 1914. It will be seen from these figures that only a little more than two fifths of the insane cases, as they arise, are of American parentage. More than one third are of Irish parentage. "This shows, what has long been known from other sources, that there is an undue proportion of insane persons among the recent immigrants who reside in Massachusetts or are here temporarily." A few years hence a majority of our permanent insane hospital population will show a majority of persons of foreign parentage, and almost as many of Irish as of American descent.

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[1] Thirty-Seventh Report of the Commissioners in Lunacy, March, 1883. Journal Mental Science, January, 1884.

[2] Twenty-Fifth Annual Report of the General Board of Commissioners in Lunacy for Scotland for 1883. Journal Mental Science, January, 1884.

[3] Thirty-Second Report of Inspectors of Irish Asylums, 1883. Journal Mental Science, January, 1884.

In another place[2] the report speaks of an obstacle which has for some time prevented the removal of insane persons, among the recent immigrants, to the country and place from which they came. Most of these immigrants come by English steamships, all of which have surgeons appointed by the English government, and whose decision as to what passengers shall be taken on board is final. They allow many invalid and weak-minded passengers to come to Boston (so the officers of the Board have noticed), but refuse the same persons permission to return again. One case is cited in which an Irish pauper was sent to an insane hospital two weeks after landing, and although the case was a clear one the surgeon of the steamship, to whom application was made to take him home again, refused to receive him. Difficulties of this kind have this year diminished nearly one half the number of insane persons removed from Massachusetts by order of the Board.

Another writer[3] has prepared some statistics, founded on the census of 1880, which also show the large number of insane foreigners in our hospitals and elsewhere. The aggregate number of the insane in the United States in 1880 was 91,997, and of these 26,346 were foreign born, or a little less than one seventh of the population furnished nearly one third of the insane.

(To be concluded.)

— A German physician is trying to get at data of the relation between dampness of house walls and the health of the occupants of the house. He collects samples of the plaster of walls in small glass flasks, and notes their weight before and after drying them in an oven. His experiments in his own neighborhood show that the walls of inhabited rooms, practically regarded as dry, contain about one per cent. of water. This rather curious line of investigation might possibly lead to some practical result, but we imagine that it would take a very elaborate and extended series of observations to enable any opinion of any value to be formed. — *Sanitary Engineer.*

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

S. J. MIXTER, M. D., SECRETARY.

JANUARY 2, 1884. DR. E. O. OTIS read a paper entitled

A CASE OF CYSTO-PYELITIS, OR PYELO-CYSTITIS, OR CYSTITIS COINCIDENT WITH PYELITIS.[4]

DR. INGALLS spoke of the infrequency of exploratory perineal section in Boston and vicinity, and said it was doubtful if it would have been justifiable in this case, the symptoms of which were very obscure. In case the perinephritic abscess had been aspirated and pus found, a free opening might have been made and the pus evacuated, though the general condition of the patient seems to have been such that the operation would probably have failed to save his life. Dr. Ingalls asked the reader if there was any evidence of tuberculosis found on autopsy. The reader thought not.

DR. CHEEVER said that the beginning of this case somewhat resembled a case of perinephritic abscess in his practice, caused, apparently, by exposure and sleeping on damp ground, in a person of sedentary habits. Its long course is something like pyelitis caused by stricture. The speaker had only once performed perineal section to relieve cystitis, and in that instance no relief followed the operation.

DR. WILLIAM INGALLS reported the following cases:

PREVESICAL CELLULITIS FOLLOWING HERNIOTOMY; PHLEGMONOUS ABSCESS, "SOUS OMBILICALE," IN HEURTAUX SPACE; PERINEPHRITIC ABSCESS.[5]

DR. MIXTER spoke of a case seen by him while interne at the Massachusetts General Hospital, evidently cyst of the urachus, occurring in a boy. On first aspirating the tumor a clear fluid was obtained; suppuration followed, and a free opening was made, and the cavity thoroughly drained. The tumor disappeared, and the patient recovered. Dr. Mixter also mentioned a case of umbilical abscess, the cause of which proved to be a solid mass, made up of epidermal cells, concentrically arranged, which, on dilating the small opening present in the umbilicus, was found and removed.

DR. GEORGE G. HAYWARD mentioned a somewhat similar case of umbilical abscess, in which were found several grains of wheat, apparently the cause of the abscess.

DR. BURRILL spoke of a case of perinephritic abscess occurring in a boy four months after a blow on the back. When first seen he had been confined to his bed for four weeks, and there was a large fluctuating tumor in the right loin. An incision being made at this point, a large amount of pus was evacuated, and a finger, on being introduced into the incision, could be passed upward to the kidney and downward nearly to Poupart's ligament.

DR. CHEEVER remarked that sub-muscular abscesses were much more frequent than others in the abdominal walls, being often caused by violence. It is in the space of Retzius that the bladder is aspirated in cases of retention, the operation almost never being followed by unpleasant results. Dr. Cheever mentioned the case of an old man with retention from enlarged prostate. Irregular practitioners had endeavored to catheterize him, but, failing, had aspirated at the usual point above the pubes. The sharp aspirator needle was left in for four days, at the end of which time the speaker first saw the patient. At this time there was an ulcerated opening into the bladder with urinary infiltration and suppuration in the space of Retzius extending down along the sides of the bladder. Perineal section was done, but the patient died the next day. This was the only case ever seen by the speaker which might be called pre-vesical abscess.

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[1] Fifth Annual Report, for 1883.

[2] Page xciii.

[3] The Increase of Insanity in the United States. Its Causes and Sources. By Foster Pratt, M. D.

[4] See page 290 of this number of the JOURNAL.

[5] See page 289 of this number of the JOURNAL.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR OBSTETRICS AND GYNÆCOLOGY.

C. P. STRONG, M. D., SECRETARY PRO TEM.

NOVEMBER 21ST. The meeting was called to order at eight o'clock. **DR. F. MINOT** in the chair.

DR. SWIFT presented a paper entitled

A CASE OF FACE PRESENTATION, WITH SOME REMARKS ON THE TREATMENT OF THIS CLASS OF CASES.[1]

DR. DOE inquired as to the size of the pelvis in the case reported, and asked if this abnormal presentation was not commonly found in cases of roomy pelvis, because of the relative difference in the size of the head as compared with the pelvis. He alluded to the fact that in cases left entirely to nature there was often no delay until the head came well down to the perinæum, and referred to two cases in his own practice where nature terminated the labor, one, a primipara, in twelve hours, the other, a multipara, in five hours, in both cases the delay occurring during the passage of the head over the perinæum. Should he meet with such a case again he would etherize and attempt to bring down the vertex.

DR. SWIFT said in his case, so far as he could determine, the pelvis was of normal size. He thought it quite likely that the malposition would occur in a roomy pelvis.

DR. COBB inquired as to the necessity of employing ether.

DR. SWIFT thought that it was not an absolute necessity in every case, but was certainly a great aid.

In reply to a question by Dr. McDonald, Dr. Swift said that in the case reported the diagnosis was made very early, but, of course, in this regard cases would vary.

DR. MCDONALD inquired as to the advisability of employing forceps or version instead of the operation recommended.

DR. SWIFT said that high forceps would be necessary, and the passage of the head would not be made any easier by their employment, while as to version there was the increased danger to the mother of a severe operation, and to the child the added danger of a breech presentation.

DR. PARKS asked the reader if he should ever employ forceps, having in view especially the tendency of the displacement to recur after reposition.

DR. SWIFT said that if the diagnosis was not made until the face was too firmly engaged to allow of any change in its position he should treat the case as he would any presentation of the head, and apply forceps if there were delay in the advance, although the application to the face was more difficult than to the vertex. He also stated that one of the most essential points of the proceeding he advised was, after bringing down the occiput, to hold it in its proper place until the head was so firmly engaged that the malposition could not be reproduced.

DR. HAYWARD spoke of a case he had seen in Vienna, where the patient was left unaided for twenty-four hours until the os was fully dilated, and then a modification of the axis traction forceps was used. The child was alive, but there was a tremendous caput succedaneum, which afterwards suppurated. In this case hot baths were employed to start up the pains. In another case of the same presentation, complicated by a contracted pelvis and partial placenta prævia, version was performed, and one foot brought down to plug the os, and the case was left to nature.

DR. KINGMAN inquired whether the reader would employ version or forceps in a case where the vertex could not be brought down and the chin was posterior.

DR. SWIFT replied, version. He said that the maneuver he described, to be successful, required that not only must the vertex be brought down, but the position of the body must be changed, as at the time it was in opisthotonos, and this would react on the head, and tend to reproduce the malposition. This was readily accomplished by pushing with the outside hand on the breech in such a way as to double the child up, when the head naturally tended to a position of flexion, which was desired.

In reply to Dr. Lombard, Dr. Swift said he should attempt to rectify the position in every case, whether the chin were anterior or posterior, and even if the maternal pelvis seemed roomy.

DR. LOMBARD thought authorities differed from the reader, advising that a case where everything was progressing well should be left to nature.

DR. SWIFT said that as the trouble almost invariably came when the head was low in the pelvis, and was so firmly engaged that any manipulation was extremely difficult, he certainly should endeavor in every case seen while the head was still above the brim and movable, to substitute the normal vertex presentation for the abnormal face, the more especially because the plan he suggested offered no danger, or very little, either to the mother or child, and occupied but a short time.

DR. BUNDY asked as to the frequency of face presentations, which the reader stated statistics gave as one in 250 labors.

DR. MINOT stated that when by this maneuver or by any other which gave equal safety to the child an operation such as version was avoided, it seemed to him well to adopt it, and thus free the mother from the dangers of a more serious operation. As between version and high forceps he considered version the more dangerous operation.

DR. DOE also preferred high forceps as affording better prospects for the child.

DR. SWIFT said the profession were now agreeing that for use in high-forceps cases some form of the axis traction forceps was most desirable, and especially referred to Simpson's modification of Tarnier's.

DR. HAYWARD said that in Braun's wards in Vienna a modification of Tarnier's instrument was used, and in Speath's wards Simpson's modification, and that in both places it was claimed that by their use craniotomy was in many cases avoided.

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[1] Vide page 293 of this number of the JOURNAL.

DR. BUNDY asked as to the principal cause of danger to the woman in version, which **DR. SWIFT** said was shock.

DR. PARKS asked as to the danger of displacing the placenta.

DR. SWIFT thought this danger was very small, as was also that arising from twisting of the cord about the child.

DR. OSGOOD asked as to the danger to the child in version.

DR. SWIFT said it was the same as in all breech cases.

DR. OSGOOD advised the more frequent use of forceps to the after-coming head without permitting any delay.

DR. MCDONALD asked the reader where, in a case left to nature, if the uterus ruptured, he should expect to find the seat of the rupture.

DR. SWIFT said at or near the junction of the cervix and body.

DR. DOE spoke of a series of reported cases of rupture, where it was found that the rent began at the external os and extended longitudinally through the cervix.

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THE NEW YORK ACADEMY OF MEDICINE.

THE PUBLICATION OF PAPERS.

AT a stated meeting held March 6th a communication was received from the Council, in which it was recommended that every paper read before the Academy should be presented to the Council, and, after its approval by that body, be immediately published at the expense of the Academy, as well as inserted in the volume of Transactions published at the end of the year. After the President, Dr. Barker, had explained that this would not debar any Fellow from publishing his paper in a medical journal instead, if he preferred to do so, the recommendation was adopted.

A LIBERAL DONATION.

The Council also reported that Dr. Horace P. Farnham, for several years the treasurer of the Academy, had sent his check for $1000 to aid in paying off the $7000 mortgage still remaining on the Academy's building, and recommended that the donor should be enrolled among the Benefactors of the Academy. Dr. Farnham was then elected a Benefactor, and, after some remarks by the President the check was presented to Dr. F. A. Castle, treasurer of the Board of Trustees, who stated that he had recently received $670 for the same purpose. On motion of Dr. Hubbard it was voted to pay off $2000, and have the mortgage reduced to $5000.

THE DETECTION OF ALBUMEN IN URINE.

DR. GEORGE B. FOWLER read a paper entitled The Detection of Albumen in Urine, with a Review of the Methods Recently Advanced. The paper was illustrated throughout by practical demonstrations, and after a few introductory remarks in regard to the various kinds of albumen, he proceeded to speak first of heat as a test. If any specimen of urine contained as much as nine per cent. of albumen, he said, a solid clot would be formed on the application of heat. Neither acid albumen or alkali albumen, which were both derived albumens, instead of native, were, however, coagulable by heat; but if sufficient acid were added to neutralize the alkali albumen and sufficient alkali to neutralize the acid albumen, the precipitate would take place. It was important, therefore, to see that the urine to be tested was neither strongly acid or strongly alkaline. He had found that the smallest quantity of albumen that could be detected by heat was .2 per cent.

The next agent that he mentioned was nitric acid, which he said was capable of detecting .1 per cent. of albumen. It was important, as a rule, to boil the urine before adding acids. Ferrocyanide of potassium, in connection with citric or acetic acid, afforded an equally delicate test, and the acidulated brine method, suggested by Dr. Roberts, of Manchester, was also a good one. The smallest quantity of albumen that could be detected by it, however, was 1. per cent. (In all his experiments Dr. Fowler employed urine of a specific gravity of 1022.)

Of the new tests the one that had attracted most attention was picric acid, for the use of which the profession was indebted to Dr. Johnson, of London. It was employed in a saturated solution, about seven grains to the ounce of boiling water. The solution would stain the hands of a deep yellow color, but it was not corrosive, and could be readily washed off. After Dr. Johnson communicated this test to the Clinical Society Dr. Ralph discovered that the picric acid also had the effect of precipitating peptones when they were present in the urine; so that there was seen to be a possible source of error in connection with it. It was afterwards found, also, that if quinine was present in the urine (as was very apt to be the case when this drug was being taken in any considerable quantities), or if the urates were in excess, a precipitate would be caused by picric acid. In consequence of these facts, Dr. Johnson made a series of experiments to eliminate such sources of error, and found that the precipitates mentioned, were cleared up by heat, though they were liable to return again when the liquid cooled. Picric acid, therefore, though a very delicate test, had to be used with care. When very minute traces of albumen were to be detected, it was advisable to use it according to Heller's method with nitric acid. Equal bulks of the acid solution and urine were employed; and if albumen were present the precipitate would be seen as a delicate ring between the two fluids.

Dr. Owen, of London, had proposed two excellent tests. The first was tungstate of sodium with an acidulated solution, acetic or citric acid being employed. The other, which was the most delicate test that had as yet been discovered, was potassio-mercuric iodide with an acid, and it was capable of detecting .01 per cent. of albumen. It was not original with him, but had first been mentioned by a French observer. In devising many of the later tests the aim had been to secure a practicable and convenient method for bedside use, and Dr. Owen seemed to have hit upon this in the invention of his test papers. One set of slips of bibulous paper were dipped in a saturated solution of potassio-mercuric iodide, and another in a saturated solution of citric acid. They were then allowed to dry; after which they were ready for use at any time. When the test was to be made, a slip of each kind was placed in the bottom of a test tube, and the urine poured on them; when, if albumen were present, a precipitate would be seen to be formed as the papers dissolved. On account of the extreme delicacy of this test, however, it was not adapted for use in life insurance examinations, since Dr. Fowler had found that a trace, at least, of albumen was discovered by it in almost every specimen of urine to which he applied it. Whether this presence of a minute quantity of albumen in the urine of such a large proportion of individuals were due to any diseased condition or not yet remained to be determined. The following table shows the smallest amount of albumen that was detected by the various tests mentioned in the experiments made by Dr. Fowler: —

Heat	.2 per cent.
Mineral acids	.1 per cent.
Picric acid	.1 per cent.
Acidulated brine	1. per cent.
Ferrocyanide of potassium	.1 per cent.
Tungstate of sodium	.1 per cent.
Potassio-mercuric iodide	.01 per cent.

After a few remarks by the Chair, the discussion of the paper was opened by **Dr. E. Darwin Hudson**, who said that his interest in the detection of albumen in the urine was chiefly of a practical nature. In the current of medical literature for the past few years he had watched very carefully for new light on the subject; but the more that he had learned in regard to the later tests proposed the more had he become disposed to adhere to the old-established methods so long familiar to the profession. After listening to Dr. Fowler's paper he could only say that he was still further confirmed in this conclusion. For the use of the busy practitioner he believed that heat and nitric acid were still the most trustworthy tests that could be used; although he had no doubt that even with these there was need of the explicit instructions which had been set forth in the paper. It was too common a practice among physicians to apply nitric acid before heating the urine, and he thought it was a good rule always to ascertain the reaction of the fluid with litmus paper, and then bring it to as nearly a neutral condition as possible by the addition of an alkali or acid as required, before proceeding to test for albumen. In any case where the symptoms were of a doubtful character it was a great mistake to dismiss the examination of the urine without resorting to the microscope if no albumen could be detected, even after repeated testings. In speaking of the objections to some of the new tests for albumen Dr. Hudson said that in the case of picric acid too much manipulation was required to avoid possible errors to make it of permanent practical value, and the test papers of Dr. Owen seemed altogether too delicate. For all clinical purposes he believed the old methods were sufficiently accurate.

Dr. Gaspar Griswold agreed with Dr. Hudson that the picric acid test was objectionable on account of the number of possible errors connected with it. It might be of interest from a chemical point of view to detect a minute quantity of albumen such as was shown by the potassio-mercuric iodide test, but the question was, Is it desirable, from a clinical point of view, to find these very small quantities? Albuminuria was not at the present day regarded as necessarily such a serious condition as had formerly been the case. The old tests were probably sufficient for all clinical purposes, and under ordinary circumstances heat was the most reliable if the urine was clear. It was his own practice to employ two test tubes, both of which he took care to see were perfectly clean. The urine in one was boiled, while that in the other was not, and after the boiling the two specimens were carefully compared against a black background. Afterwards he was in the habit of resorting, in addition, to Heller's cold nitric acid test. When the urine to be examined was not clear he added a fourth part of *liquor potassæ*, and filtered. If the tests for albumen were refined too much he thought they lost their practical value.

Prof. Charles Doremus thought also that cleanliness of test tubes and clear urine aided the physician more than very refined tests. When Heller's method was employed, after the addition of an alkali to render the urine clear, however, there was danger of disturbance by the ebullition of a little gas from the action of the acid, and, therefore, if it was necessary to add an alkali it was better to employ the test of ferrocyanide of potassium with acetic acid. Meta-phosphoric acid was also an excellent test.

Dr. Munn spoke of the great importance of having a properly shaded light. The way in which he arranged this was as follows: The background against which the test tube was held was a piece of black pasteboard, which was fastened immediately below a window provided with a dark shade. The shade was pulled all the way down, and the proper light was secured by holding the bottom of the shade a short distance out from the window-sill. In this way it was sometimes possible to find traces of albumen which would otherwise have escaped observation.

Dr. Maxwell made some remarks in reference to the use of the various tests, more particularly those of picric acid and tungstate of sodium, and said that he seldom or never trusted to one test alone, usually resorting to three or four different ones. Incidentally he stated that he had as yet failed to find a specimen of peptonuria. In regard to the clinical significance of these later tests, if in any case a little albumen was detected, but, after careful and repeated microscopic examinations, no casts could be found, the albumen would not be regarded as of any consequence.

Dr. Fowler then said that the object of the paper was simply to bring about such a discussion as had resulted. He was convinced that reliance should never be placed on one test alone. Heat was that which was usually tried first, but after failing to detect albumen by means of heat (or for the purpose of confirming its presence thus indicated) he thought it well to go on with some of the other tests, and he could not agree with Dr. Griswold that there was no use of investigating unexplored fields in this connection. It was only by means of these later and more delicate tests that it could be determined whether a certain amount of albumen was not a normal constituent of the urine.

NEW YORK COUNTY MEDICAL ASSOCIATION.

THE TREATMENT OF TYPHOID FEVER.

At a stated meeting of this society, held March 17th, **Dr. George L. Peabody** read a paper on the treatment of typhoid fever, which was mainly devoted to a plea for the more general use of the full cold bath in this disease. As the prophylactic treatment of typhoid fever had been so fully and ably set forth in the recent paper of Dr. Janeway before the Association, he said he would confine himself to a consideration of the treatment of a few of the more important symptoms. As a disinfectant for the stools of patients and for general use in the sick room, he thought the best and cheapest article was a solution of corrosive sublimate. It had been proved that the stools were not infectious immediately after being passed, and it was not known at precisely what period they became so; but experience had shown that after the lapse of twelve hours, at all events, they were infectious. It was also uncertain for how long a period they retained this character, but in one instance on record some workmen were taken down with typhoid fever after overturning a dung-heap under which the stools of typhoid-fever patients had been placed two years before. There was one point which was not, perhaps, sufficiently insisted upon, and that was the importance of disinfecting the contents of the intestines before throwing them into the sewer when making autopsies in the case of those who had died from typhoid fever.

One essential point in the proper treatment of this disease was that the patient should be put to bed at a very early period, and kept there until convalescence had become fully established. The importance of this matter was abundantly illustrated in the history of many hospital patients who were placed under treatment at a comparatively late period, and in whose cases in consequence the results were unsatisfactory. The bad results of late treatment were particularly well shown in the reports of St. Bartholomew's Hospital for the year 1882. After speaking of the desirability of a roomy and well-ventilated chamber, with two beds for the use of the patient, and of the greater mortality of the disease in summer than at any other season, in consequence of the higher temperature to which the patient was exposed, Dr. Peabody went on to say that it was well to humor the sick in small things as far as possible, and very important in case delirium was present that they should be gently soothed, and not forcibly restrained. Having alluded to Liebermeister's plan of administering calomel, and to the continued and systematic use of a weak solution of iodine, which, it had been claimed, materially lessened the mortality from the disease, but with which he had had no personal experience, he went on to relate the case of a willful and spoiled child in which practically no treatment was carried out, and yet in which complete recovery resulted. The temperature varied between 102.5° F. and 104.5° F. The marked impairment in digestion which was so common in typhoid fever he thought was due in some measure to the absence of saliva, so that he would advise the application of vaseline to the lips from time to time, as well as quite a free use of water. In the way of diet the main reliance was to be placed on milk, whether peptonized or not, and the patient would do well if two quarts could be taken in the twenty-four hours. Animal broths were also of service in supporting the action of the heart and the central nervous system, and in some cases rectal alimentation was called for. In regard to the use of spirits he said that they should be given early only in the case of drunkards or those habitually accustomed to alcohol. Many cases would do perfectly well throughout without any at all, but frequently they were of very great service in the later stages of the disease. In New York at the present time he thought the tendency was to resort to their use rather too early. In every case the physician was to be guided by the indications present, and in some instances it would be found that nearly a quart of spirits in the twenty-four hours would be required.

As the disease subsided he thought it was desirable to allow the use of solid food. If the proper kind of food was employed he believed there was no danger whatever in the practice, and the often-repeated assertion that an early return to solid food was accompanied by a tendency to relapse was not borne out by experience. After the intestinal ulcerations were covered with granulations the risk of perforation and hæmorrhage, he thought, was past. The muscular twitching which had been so much spoken of as a sign of ulceration did not indicate this at all. He thought it advisable that the patient should have a little meat as soon as the fever subsided, this being a food which could be digested entirely in the stomach, which was a desirable consideration in the first solid food employed. He had had no experience with the use of beef peptones.

As a rule the medical attendant's chief aim was to ward off the evil effects of long-continued high temperature. Serious parenchymatous alterations inevitably resulted from this, and Dr. Peabody's experience showed that no typhoid fever patient ever reached the third week of the disease without the occurrence of more or less granulo-fatty degeneration of the walls of the heart. The kidneys, liver, and other organs were also liable to be similarly affected, and in some instances waxy degeneration of the organs resulted. Dr. Cayley, in the Croonian Lectures for 1880, had expressed the opinion that the majority of deaths in typhoid fever were due to failure of the heart and central nervous system with resultant congestion of the lungs. The clinical indications of these parenchymatous changes incident to a long-continued high temperature had been clearly pointed out by Lauder Brunton. In order to show the superiority of the method of treatment by cold-water baths Dr. Peabody said he would first quote some statistics of cases treated under the old expectant plan. In the London Fever Hospital there were treated, during twenty years, 8000 typhoid-fever patients, with a mortality of 18.9 per cent.; at St. George's Hospital, 387 cases, with a mortality of 19.6 per cent.; at Guy's Hospital, 295, with a mortality of 19.3 per cent.; at University College Hospital, 167 cases, with a mortality of 17.7 per cent.; and at St. Bartholomew's Hospital, 635 cases, with a mortality of 16.3 per cent. At St. Thomas's Hospital the mortality amounted to 15.7 per cent., and at King's College Hospital to 12.2 per cent. In all there were 14,125 cases, with an average mortality of 17.8 per cent. At Vienna 17,000 cases were treated, with a mortality of 22.5 per cent., and at Basle, Switzerland, the mortality was 27.3 per cent. In the English army, during the six years ending with 1877, the mortality in cases of typhoid fever among the home troops averaged 24 per cent., and among the foreign troops, 40.7 per cent. In the English navy, during the six years ending with 1878, there were 414 cases of typhoid fever, with 110 deaths, a mortality of 26.5 per cent. In the United States army, during the late war, there were, among the white troops, 75,368 cases of typhoid fever, with 26,981 deaths, a mortality of 35.8 per cent., and among the negro troops 4500 cases, with 2280 deaths, a mortality of 55.6 per cent. After quoting the statistics of typhoid fever in the principal hospitals of New York, as given in the recent paper on this subject read by Dr. Francis Delafield before the Academy of Medicine, Dr. Peabody went on to say that we certainly could not be satisfied with the expectant plan of treatment unless we thought, with Skoda, that it made no difference whether typhoid fever was treated or not.

Then having spoken of the labors of John Curry in the latter part of the last century in connection with the external use of cold water in fevers, and the recent revival of the practice by Brandt, of Stetin, he proceeded to give some statistics showing the decreased mortality since the cold bathing had come into use. At the Berlin Hospital from 1848 to 1867 there were treated 2228 cases of typhoid fever, with a mortality of eighteen per cent.; while from 1868 to 1881 there were 2000 cases and 267 deaths, a mortality of thirteen per cent. If from the number of fatal cases there were deducted sixty-four which died very shortly after admission, the mortality was only 10.5 per cent. In the Prussian army the mortality among typhoid fever patients from 1868 to 1874 amounted to fifteen per cent.; while during the last seven years, when the antipyretic treatment was practiced, it was only 9.7 per cent. At Basle the mortality had been reduced from 27.3 to 8.8 per cent., at Kiel from 15.4 to 3.1 per cent., and at Stetin from 25.6 to four per cent. Brandt had reported no less than 211 successive cases without a single death. Brandt's rule was to commence the full cold bath (the temperature of the water being at from 67° F. to 70° F.) as soon as the patient's temperature, taken in the rectum, went up to 102.2° F., and Dr. Peabody thought that the adoption of this practice could not be too strongly urged. At the New York Hospital he had had a rubber bath-tub placed on wheels for use in the wards, and his own results had been quite satisfactory, although his experience was limited. He had found the cold bath useful not only in reducing the temperature but in relieving stupor, insomnia, and failure of the heart's action, and in one instance he had seen well-marked pulmonary œdema dissipated like magic by it. There was, perhaps, a greater tendency to relapse when the cold bath was used, but the relapses were not often of a serious character. It was contraindicated when there was intestinal hæmorrhage, aphonia from ulceration of the glottis, and venous congestion from chronic bronchitis or emphysema. Cold sponging in many cases, he believed, was wholly inefficient in reducing the temperature. As to the use of drugs for this purpose, he was not an advocate of the measure, since he believed that the large and frequently repeated doses of such agents as quinine, kairin, and salicylic acid which were required would have an injurious effect upon the patient if maintained for any length of time. In regard to the various complications of typhoid fever he said that he would not have time to speak, but he was convinced that they would very rarely occur in cases where the patient was systematically subjected to the cold water bath.

Dr. A. Flint, Jr., advocated, on theoretical grounds, the administration of fatty substances (such as cream and cod-liver oil), farinaceous articles, alcohol, and saccharine matters, especially glucose. After speaking at some length on the causation of animal heat, and expressing the opinion (derived particularly from experiments on the pedestrian, Weston, and on his own person) that the formation of water in the body from the union of oxygen and hydrogen was a most important factor in its production, he went on to say that in fevers there was an exaggeration of the normal process. Since the fever fed on the tissues of the body, it followed that these tissues must suffer very greatly unless some other fuel could be furnished to feed the flames, and the question arose, how could this be supplied? The answer, he thought, was found in the administration to the patient of the class of articles of diet which have been mentioned, and in regard to alcohol, at least, it was already well known, he said, that the temperature in fevers was reduced by it.

The President, Dr. Detmold, remarked that in proposing, as a physiologist, to administer these hydrocarbons to typhoid-fever patients, Dr. Flint forgot that simply introducing them into the alimentary canal did not introduce them into the tissues. He had presupposed normal digestion, while in this disease, as was well known, digestion, assimilation, and nutrition were very greatly impaired, and, consequently, the fuel which was designed to feed the flames of the fever would lie inert in the intestinal tract and be discharged inert from it.

Dr. E. G. Janeway said he feared that an erroneous impression might be derived from the statistics which Dr. Peabody had quoted in support of the advantages of the refrigeration treatment, since in Europe it was the practice to leave out of such statistics the records of all cases which proved fatal within a few hours after admission to the hospital; while this was not the case in this country. Again, in considering the high death-rate noted in the United States army, it was worthy of note that many of the cases were transported for a very long distance; it being a very common thing to bring patients in the second and third week of the disease all the way from Virginia to New York. Such circumstances as these ought always to be taken into consideration in the study of hospital statistics. Still another point. Liebermeister and others in their statistics made no reference whatever to the age of patients, while age, it was not to be forgotten, made an extremely great difference in the rate of mortality from typhoid fever. In the young the result was almost invariably favorable, but in the old, and, indeed, in all persons above the age of twenty, the disease was very much more serious. In the Mount Sinai Hospital, in which it had been noted by Dr. Peabody that the mortality was the smallest of any of the New York hospitals, the comparatively low death-rate was due, he believed, to the fact, which he had ascertained, that an unusually large proportion of children with the disease had been treated there. During an outbreak of typhoid fever a number of years ago at the Deaf and Dumb Asylum, he had treated fifty cases with only two deaths, a mortality of four per cent., and in another institution he had obtained about the same results. In these instances the small mortality was due, not to the treatment adopted, but to the fact that the disease prevailed among young subjects. At the same time he was himself a believer in the antipyretic treatment, though he thought that the mode of applying the cold water should be modified according to the circumstances and character of each particular case. In the division of Bellevue Hospital to which both he and Professor Flint were attached this had been the practice for a number of years. Dr. Janeway concluded with a few remarks on the subject of diet, in the course of which he said that he thought that the return to the use of solid food should be made with great care.

Dr. A. Flint, Sr., said that there was only one point, and that not a very important one, in regard to which he differed from the author of the paper. This was as to the value of cold sponging. His observation had led him to believe that if properly carried out it was a very efficient method of reducing temperature, though if it was not thoroughly performed it was of little use. He had also gone through the experience of Dr. Peabody with a portable bath-tub, but he had found the method extremely inconvenient, and also that, as a rule, all the advantages of the full bath could be obtained by sponging. In any case where sponging did not reduce the temperature as completely as was desired the end, he felt certain, could be attained by the use of the cold pack, the patient being wrapped in a sheet and kept thoroughly sprinkled. For several years he had pursued this plan with advantage in Bellevue Hospital, and consequently had long since dispensed with the cumbersome bath-tub. He agreed with Dr. Peabody in regard to the desirability of an early resort to the use of solid food, and thought that it was a good rule to allow the patient to have it as soon as he felt a desire for it. He did not believe that there was any specific for typhoid fever, and thought that each case ought to be treated according to the special characteristics which it manifested. In regard to the administration of alcohol, he said that he had passed through three different phases of opinion on the subject. When he first commenced the practice of medicine it was customary to starve fever patients as far as possible, and no alcohol whatever was allowed. Afterwards medical opinion went to the opposite extreme, and alcohol was given to excess, but still more recently there seemed to be a tendency, he thought, not to appreciate the advantages of the free use of alcohol in appropriate cases.

In bringing the discussion to a close Dr. Peabody said that there was an additional objection to the suggestion of Dr. Flint, Jr., and that was the difficulty that there would be in getting typhoid-fever patients to take sweet or greasy substances, since it was well known how hard it was to secure the taking of sufficient nourishment of a kind that was more agreeable to the sick. After replying to the criticisms of Dr. Janeway he remarked, in conclusion, that he did not doubt the efficacy of cold sponging if it was properly carried out, but the trouble was, according to his observation, that this was *not* done practically, as a rule, and hence he was still inclined to urge the use of the full cold bath as the most efficient means of reducing temperature in the average case of typhoid fever.

RHODE ISLAND MEDICAL SOCIETY.

QUARTERLY MEETING.

March 20, 1884. Lyceum Hall, Providence.

Dr. N. O'D. Parks read a paper on

TOPICAL CARDIAC BLISTERING IN THE TREATMENT OF ACUTE RHEUMATISM,

and recited several illustrative cases.

Case I. Mr. B. was treated for acute rheumatism by the administration of salicin, in scruple doses, with five grains of ammonia carbonate every three hours. Under this treatment he rapidly improved, and in ten days appeared to be convalescent, and resumed his ordinary pursuits. In a few days, however, a relapse was threatened, indicated by pain and swelling of the knee and tarsal joints and an endocardial murmur. A blister, five by six inches, was applied over the heart, with the happy effect of aborting the threatened relapse, all symptoms of which, including the endocardial murmur, quickly disappeared. Urine and saliva became alkaline. No return of the malady.

Case II. An old lady who, every winter, is a victim to so-called "rheumatic gout," which usually attacks each great toe in succession. On this occasion most of the joints of each foot and some joints of the upper extremities, including the metacarpo-phalangeal and phalangeal joints of both hands, were involved, with the usual accompaniment of great pain, swelling, and high fever. A blister was ordered over the heart, and the affected joints anointed with ol. gaultheriæ, which was also exhibited internally, in fifteen-drop doses, every two hours. In three days she was able to sit up, and in less than a fortnight was out driving in her buggy, handling the reins herself. No symptom of relapse.

Case III. Mrs. M., aged forty. Right toe and ankle-joints swollen and painful. Urine and saliva highly acid. Ordered ten grains of salicin and two and a half grains of ammonia carbonate, to be repeated hourly. Fly blister, four by five inches, over the heart. On the next day the left foot was attacked. Ordered salicin, fifteen grains, and ammonia carbonate, five grains, every two hours. Dressed the blistered surface with unguentum sabinæ. She did well for five days, when the right instep became swollen and painful. Blister over the heart repeated. The following day she felt much better. No pain. From this time convalescence was uninterrupted.

The history of several similar cases of acute rheumatism was given, the cure in each case being rapid and complete. The writer had tried all the modern methods of treating rheumatism, but none yielded such satisfactory results as followed the action of a blister over the heart combined with the administration of salicin or some of the salicyl compounds.

Dr. Ariel Ballou had suffered from three attacks of rheumatic fever, and had found that a blister over the heart gave relief when the fever threatened to be high. He recommended the opium treatment in muscular rheumatism, as in his experience it tended to prevent a metastasis of the disease to the heart. The treatment of this disease has hitherto been largely empirical. The speaker had gathered eighty "sure cures" for rheumatism.

Dr. Herbert Terry read a paper on

THE TREATMENT OF PUERPERAL FEVER,

founded on personal observation of eleven cases. The prevention of puerperal fever was briefly discussed. One of the most valuable prophylactic measures yet advocated is the production of a firm and continuous contraction of the uterus after the placenta is expelled. Ergot should be given in every case as soon as the after-birth is delivered, and for half an hour, at least, the hand should remain over the uterus, and any relaxation should be met by gently rubbing the uterus, cold to the abdomen, etc. After tonic contraction of the uterus is insured, and the patient thoroughly cleansed, a firm binder should be applied from the ensiform cartilage to the pubes. Ergot should be continued in smaller doses at least until the color has left the lochia.

Against vaginal douches during labor there is at least one theoretical objection. They wash away the mucus secreted during labor to aid in the passage of the head. A single injection, however, as labor begins may be advantageous.

Vaginal douches after confinement are unnecessary unless the lochia are offensive, — and then only for the sake of cleanliness. More attention might well be paid to the condition of the napkin, as offensive discharges appear to be often due to retaining a soiled napkin. In this connection favorable reference was made to Dr. Garrigues' recent paper advocating the use of a bandage composed of lint wrung out of a one to two thousand solution of bichloride of mercury and covered with oiled muslin. Three times a day the bandage is renewed and genitals washed.

The indications for treatment in puerperal septicæmia are to keep the patient alive until the morbid process ends, and also to prevent any further absorption. For the latter purpose antiseptic intra-uterine douches are the most effectual means. When in doubt as to whether the disease is puerperal fever or milk fever, or as to the location of the point of absorption, it is a good rule to wash out the uterus without delay. If carefully done, the intra-uterine douche is as safe as the vaginal injection. The Davidson was preferred to the fountain syringe, because the direction and force of the stream are under more perfect control. The choice of a tube has to do with some of the dangers alleged against this treatment. It should be large enough to avoid entering a sinus or the Fallopian tubes, yet should not block up the os, and should be about twice the length of the ordinary vaginal nozzle. Some of the tubes used for this purpose are closed at the end, with several openings in the side directed outward and backward so that not only is the force of the stream diminished but it always flows towards the mouth of the womb. It seems important, however, that the fundus of the uterus as well as other portions should be well washed, and, to accomplish this, the hole in the end of the tube should be retained. As to antiseptics, carbolic acid may be employed in a strength of one to sixty, or even one to forty. A permaganate of potash solution of four grains to the ounce is valuable. Corrosive sublimate may be used in a solution of one to two thousand.

Alcohol, opium, quinine, digitalis, and the bromides are invaluable; but without the use of some germicide intra-uterine wash they do not promptly reduce the temperature or shorten the disease.

Dr. H. G. Miller read a brief paper on

BLEPHAROSPASM.

Although usually divided into three stages according to its degree, four varieties may more properly be recognized. The first is one of the slightest and least significant of the eye troubles for which patients seek advice. A simple spasmodic contraction of a few fibres of either the upper or lower portion of the orbicularis, and which the patient often refers to the eye-ball itself. It seems to occur most frequently in near-sighted persons.

The second form, nictitation, affects the muscles of both sides at the same time and consists in too frequent or too violent winking. This is most common in children, and is frequently thought to be a manifestation of chorea. Oftenest caused by hyperæmia of the lids or chronic papillary conjunctivitis. It seems to be frequently a reflex expression of fatigue, either of the eyes themselves or of some other portion of the organism. The excessive use of tea, coffee, and tobacco not unfrequently seem to be the exciting cause.

The third form is an exaggeration of the natural effort of the lids to protect the eyes from external injury. Photophobia, whether from hyperæsthesia of the retina or more commonly from conjunctival and corneal affections, is the most common cause of this form. What at first is a mere voluntary or instinctive effort to shield the eye from harm becomes a spasmodic contraction of surprising force and indefinite duration. It even aggravates and increases the original disease, as well as interferes seriously with its proper treatment. The practiced fingers of the surgeon can almost always successfully cope with it; but to the friends to whom the details of treatment must generally be confided it presents an almost insuperable obstacle. Even when the diseased condition causing it is cured, the palpebral opening for a longer or shorter period is left smaller and narrower than before.

The fourth form is spasm of the orbicularis, usually on one side only, clonic in its character, sometimes uncomplicated but often extending to all the muscles supplied by the facialis. In its slighter degrees, occurring frequently during conversation, it gives the patient the appearance of voluntarily adding a mysterious significance to his words, often mortifying to those so affected. In a higher degree the whole side of the face is drawn and distorted. This form is sometimes associated with tic douloureux and adds terror to an already terrible malady. Unlike the other forms which are reflex in character, this one may be of central origin.

Cases were given illustrating each of the forms of the disease.

LOSS OF SIGHT FROM INJURY OF FACIAL NERVE.

Dr. O'Leary reported a case in which the sight of one eye was completely obliterated by injury of the facial nerve. The patient, while on picket duty, received a bullet wound over the eye, barely grazing the skin.

Dr. Miller thought the loss of sight was a reflex effect from shock of the facialis.

Dr. W. J. Burge reported a case of

MALIGNANT DISEASE OF THE BLADDER,

and **Dr. Caswell** exhibited the specimen. There had been symptoms of vesical calculus, for which he was sounded without detecting a stone, though he passed a small one soon after leaving Dr. Caswell's office. The evacuating tube and a current of water would probably detect a stone in such a case better than an ordinary searcher. There was entire suppression of urine for four days before death. The growth extended across the bladder so as to close both ureters. The right kidney was atrophied, and the left with its ureter dilated. The tumor had the appearance of fibro-sarcoma.

EXHIBITION OF VARIOUS SPECIMENS.

Dr. Caswell exhibited six small calculi weighing together twenty-five grains, which he removed from the roof of a urinary fistula. They seemed to have formed in the passage.

Dr. Kemp, of Lonsdale, exhibited a specimen of Aneurism of the Aorta with Cardiac Hypertrophy.

Dr. Lloyd Morton reported a case of Oblique Fracture of the Femur through the trochanteric portion, and exhibited the specimen. There was only a ligamentous union, but the patient was able to walk.

DEATHS.

The President announced the death of **Drs. T. W. Perry** and **Otis Bullock**. A committee consisting of Drs. W. E. Anthony, Ariel Ballou, and E. T. Caswell was appointed to prepare resolutions on the death of each of these venerable members.

ELECTION OF FELLOWS AND DELEGATES.

As recommended by the Board of Censors, Drs. George R. Smith, of Woonsocket, and William F. Morrison, of Providence, were elected Fellows.

Delegates to the annual meeting of the American Medical Association were elected as follows: —

Ariel Ballou, G. P. Baker, P. E. Bishop, G. A. Brug, Herman Canfield, A. C. Dedrick, J. H. Eldredge, J. W. C. Ely, C. H. Fisher, S. W. Francis, James Hanaford, G. H. Kenyon, J. H. Morgan, S. O. Myers, N. O'D. Parks, A. A. Saunders, H. W. Stillman, H. E. Turner, and A. E. Tyng.

Medical and Surgical Journal.

THURSDAY, MARCH 27, 1884.

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THE HYGIENE OF STUDY.

Ex-Surgeon-General Hammond says that children should not be sent to school until they are ten or twelve years of age, ten at the earliest. Deferring for a moment the sanitary aspects of the question, the suggestion of Dr. Hammond as applicable to the great majority of children — those especially of mechanics, artisans, operatives who require the services of their children at an early age — would be impracticable. The Massachusetts law fixes the school age at from five to fifteen, and requires that all between those periods shall receive a certain number of weeks' instruction every year; every child *must* be in school for at least twenty weeks of the year from the time he is eight until he reaches the age of fourteen years. Among the wealthier classes, and those whose means enable them to give their children a longer term of education, there is less need of beginning school instruction till the organism is somewhat matured. As a question of the amount of learning which can be gained it is probable that it would not be much if at all diminished by retarding the time when children are sent to school. A healthy, bright boy of sixteen would get more from a book in a week than a child of six would in several months, and many parents who have kept their children from books until they were seven or eight years old have found that they have made progress in their studies rapid enough to compensate for the delay. In the earlier periods of life knowledge is chiefly gained, as in the earlier history of the race, by observation, and too rapid a stimulation of mental development is likely to be followed by arrest of cerebral growth. "The brain," says Herbert Spencer, "which during early years is relatively large in mass, but imperfect in structure, will, if required to perform its functions with undue activity, undergo a structural advance greater than is appropriate to the age; but the ultimate effect will be a falling short of the size and power that would else have been attained. And this is a part cause — probably the chief cause — why precocious children and youths who up to a certain time were carrying all before them so often stop short and disappoint the high hopes of their parents."

As regards the number of hours a day which may profitably be devoted to study there can be no fixed rule; age, temperament, sex, constitution, and state of health must be taken into account. Those of tender years, and children generally during the period of growth, are less able to bear prolonged mental application than vigorous adults; nor, as before said, is it desirable to develop the juvenile brain at the expense of other organs. Those of the sanguine and nervous temperaments (if we may use terms which are becoming somewhat obsolete) are more restive, and suffer more under the restraint necessitated by study than those of other temperaments, and (other things being equal) they learn faster, owing to predominance of the circulatory and nervous energies. Females, as a rule, are capable of less continuous study than males, and those of strong constitutions in both sexes may bear, not only with impunity, but with profit, an amount of prolonged mental work which to weakly persons might be disastrous and even fatal. The same remark may be made apropos of states of health; hard and continuous exercise of the brain demanding, in order to be truly efficient, a sound condition of the organism. The truth is obvious enough, though needing frequent inculcation, that vigor of the circulation and integrity of the nutritive and other functions — a condition, in fact, of general *bien être* attended with a flow of spirits and absence of fatigue — should accompany the endeavors of the student, being essential to the successful grasp and assimilation of knowledge, while corporal inactivity, an enfeebled circulation, even a disordered viscus, entail depression or inhibition on the noblest of the cerebral activities.

To say then how much of the diurnal cycle should be devoted to study demands a knowledge of individual constitutions and capacities, and a decision can be arrived at only by an examination of particular cases. Here parents and teachers are called upon to exercise careful judgment. For the majority of children the ordinary five or six hours of daily schooling, with their recesses and interruptions, are probably not too much. Nor must it be taken for granted that these school hours are characterized by continuous application on the part of any but a very small minority, as any one observant of the habitual demeanor of juvenile pupils will testify. There are always some who learn their lessons with surprising quickness; these require to be kept back rather than urged forward, and should be allowed much play with their study. There are many more who are in no danger of excessive mental development, will never apply themselves to their books at their homes, and need all the study hours of the legal school-day for the accomplishment of their necessary tasks.

There are other aspects of the subject which we desire to take up. Mathematics, grammar, rhetoric, and other abstruse and difficult studies should be assigned to the morning hours, when the brain is fresh and vigorous; geography, history, reading, and writing, which demand less intense application, may more advantageously come up later in the day, when the mental powers are less keen. This Dr. Higgings has suggested in a late number of the *Popular Science Monthly* (Study Physiologically Considered).

Little need be said about the necessity, recognized by all institutions of learning, of bodily exercise, and it were better almost that the boy should grow up a dunce than a puny, feeble, sickly man. Even in young ladies it is now being generally conceded that a robust physique is a desirable thing, and seminaries for females are provided with play-grounds and places for gymnastic exercises.

With regard to diet we cannot too strongly insist on the need of good food as a condition of effective study. There is little danger of overfeeding in children; excess is rather the vice of adults than of the young, and the appetite is generally a safe guide. "How peremptory is the demand of the unfolding organism for materials is seen alike in that school-boy hunger which after life rarely parallels in intensity, and in the comparatively quick return of appetite." Herbert Spencer, in his treatise on Education, previously quoted from, makes some very practical suggestions under this head, which we shall do little more than condense. The degree of energy essentially depends on the nutritiousness of the food. Where energy as well as growth has to be maintained it can only be done by high feeding. Though a child of whom little is expected in the way of bodily or mental activity may thrive tolerably well on farinaceous substances, a child who is daily required not only to form the due amount of new tissue, but to supply the waste consequent on great muscular action, and the further waste consequent on hard exercise of brain, must live on substances containing a larger ratio of nutritive matter. And is it not an obvious corollary that denial of this better food will be at the expense either of growth or of bodily activity, or of mental activity, as constitution and circumstances may determine?

We propose to return to this subject in a future number.

DR. THOMAS TROTTER, PHYSICIAN TO THE FLEET.

IT is always a pleasure to add to one's list of friends a man whose aims are upright and whose talents distinguish him above those with whom he is in daily contact, and who at the same time is genial, warm-hearted, and well educated. That the man no longer walks the earth but lives only in his works does not necessarily diminish the pleasure in making his acquaintance. Dr. John M. Browne, U. S. N., figures in the last publication of the Proceedings of the Naval Medical Society as the author of an essay which he entitles An Hour with Dr. Thomas Trotter, Physician to the Fleet. Dr. Browne invited the attention of his hearers to the sanitary condition of the Royal Navy nearly a century ago, and to the multiform industry of a single individual, Dr. Trotter, in the acquisition of the knowledge of disease and of its cure and prevention, and in whatever pertained to the good of the service; whose indefatigable endeavors to mitigate the pernicious effects of scurvy, and eminent success in repressing the contagious or putrid fever, and whose general work of administration are so clearly, tersely, quaintly, and delightfully set forth in his *Medicina Nautica.*

Dr. Trotter's character is so charmingly set forth in Dr. Browne's essay and so illustrated by extracts from his writings, that we venture to say that its appearance has caused more than one copy of his books to be drawn from its dusty hiding place and that the charm of the *Medicina Nautica* has been found to exist equally in the other volumes.

There is a genuiness, a charming homeliness and simplicity in his mode of expression, that keeps the attention constantly alive. His devotion to duty, patient effort, pursuit of the practical, and true directness of purpose make his conclusions possessed of no other motive than fidelity to honest conviction.

New duties and responsibilities, which demanded independence of thought and self-reliance of character, were met and performed in a manner that made him an acknowledged authority. There are many evidences of his generosity, charity, philanthropy, and patriotism. Seemingly, he was a clever, ready, perceptive and receptive man, gifted with clear, strong, good sense; with an inquiring and studious habit of mind; genial, earnest, steadfast, sincere, and untiring — and his own nature was evidently of a gentle, charitable, and humane quality. Such is the description of the man drawn from his writings as summarized by Dr. Browne.

In addition one might say that he was a man of keen powers of observation, who could record facts as they existed without regard to existing theories and preconceived ideas. He saw with his own eyes and drew his own conclusions. He commenced early in his medical career to think for himself. He was very anxious, he tells us, that the subject of his Inaugural Dissertation when a candidate for the degree of Doctor of Medicine in the University of Edinburgh, in 1788, should be something that had never been noticed by any former graduate. This condition was fulfilled in his thesis *De Ebrietate ejusque Effectibus in Corpus humanum.* For this essay he received the thanks of the Royal Humane Society transmitted by Dr. Hawes, the illustrious founder of the institution, who observed that "the investigation of so important an inquiry, in a regular scientific manner, was never before thought of: it was a subject left, happily left, to be ingeniously executed and amplified by Dr. Trotter."

He possessed to a great degree the power of perceiving abuses of all sorts, and seems to have had that unusual ability of telling the evils that he saw, and desired to reform, in a manner that enlisted the sympathy of those in power, and aroused the least possible opposition in those interested by the sincerity and unselfishness of his motives. Impressment, want of uniform clothing, deficiencies in diet, improper hospital accommodations, are evils to which he returns again and again in different books, and to which he devotes even more attention than to the selfish disregard of the government for the medical officers of its navy. He does not hesitate to express himself clearly and with the authority born of an upright purpose in regard to reforms that he has at heart, as after speaking of his method of preserving water on voyages by charring the inside of the casks, he says, "I am not, however, satisfied with the attention the Victualing Board has given to this method, and it has never yet been practiced from sufficient authority."

He was a man of accurate scholarship and varied reading. The Latin authors are quoted sufficiently often to show that they had not slipped from his memory, and writers in the continental languages on the subjects which lay nearest his heart did not escape his attention, but if we may judge by the frequency and aptness of the quotations, the favorite companion of of his solitude, the prominent occupant of the shelves of his cabin, must have been Shakespeare.

To the striking peculiarities of the seaman he finds it necessary to devote much time, and begins with the earliest stage of the seaman's life: —

"The love of adventure and enterprise that so soon discovers itself in an active boy seems to prompt the first inclination for sea. . . . Among boys of this description the history of a broken sailor is accounted the finest piece of eloquence, and wherever he appears the narration of his voyages, battles, and shipwrecks are listened to with rapture. The voyages of Drake and Anson round the world are famous in this way, and eagerly read by school-boys, but Robinson Crusoe has made more proselytes to these kinds of adventures than all other mariners. His story, from first to last, is so full of incident; in all his difficulties he shows so much courage, address, and ingenuity, that the young reader fancies himself the discoverer of some great kingdom, and his imagination wanders in search of an island."

He describes the characteristics of the sailor due to the isolation of his sea life, his narrow-mindedness, his credulity and superstition, his heedlessness of the future, his peculiarities of speech, and his tendency to work upon the credulity of his hearers.

He then turns to his virtues, which, with a sailor's partiality for his own profession, he says are of the finest cast, and ends his eloquent tribute with the declaration, "Was I ever to be reduced to the utmost poverty I would shun the cold threshold of fashionable charity to beg among seamen, where my afflictions would never be insulted by being asked through what follies or misfortunes I had been reduced to penury."

Some new traits are engrafted on the character by coming on board a man-of-war, and by the custom of impressment, which he condemns as a most fatal and impolitic practice. "It is the cause of more destruction to the health and lives of our seamen than all other causes put together." Many a melancholy story is related to the medical attendant of a sailor, and it begets a sympathy that interests us the more in their recovery. Under this species of mental affliction numbers perish without any apparent disorder.

Certain other of Dr. Trotter's writings are as interesting as his essays on naval medicine. His treatise on scurvy advocates nearly the opinions of the present day, and shows him as an accurate observer, especially in his arguments against the theory of its contagious nature. It also shows the disadvantages of the naval surgeon's position, which he labored so earnestly to improve. "The author of the Observations, at the end of the last war, by no provision being made for the junior part of the Surgeons' List, was the first man of his *corps* who had to embrace the painful alternative of embarking on an African voyage. Much of the information contained in these pages was the result of his practice in that voyage. To find that it is of any service to medical science will, in some degree, repay him for the unpleasant months he spent in the unhallowed trade, and the sufferings of his constitution from an unwholesome climate." The Observations contain many interesting details of the disease, and a moderately full account of the voyage of the slaver. It is evident that the worthy doctor's inferences on the cruise were not confined to the physical effects as shown by the outbreak of scurvy, as a footnote on one page of the volume refers to Dr. Trotter's evidence on the slave trade before the Select Committee of the House of Commons, and we are delighted to find him using, at the close of the book, a now well-worn phrase, when he says that "few think they are trampling on the rights of a Man and a Brother."

The following quotation shall serve alike to show the zeal and energy of the Physician to the Fleet, and also the animated style of his composition: —

"It was of little moment whether the sallad ought to be considered as a part of the victualling or medicine; the public service demanded instant releif. Had it been in my power to command it, it should have been brought from the Land's-End in Cornwall before the fleet had so long groaned under the affliction. We have heard of a Minister ordering a train of ordnance across the country from Woolwich to Portsmouth to save time; in this manner would I have wheeled the product of every distant garden to Portsmouth, lest the tooth of a sailor should drop from his gums by a tardy conveyance of his deliverer. *Delibérat Roma, perit Sagantum.*" . . .

"The reader may smile at the idea of a Physician to the Fleet attending the stalls at a vegitable market, or perambulating the country to calculate the produce; but it never appeared to me below the dignity of the profession; nor did I consider it a mean task to serve the sallad with my own hands from the Charon's quarter-deck."

The last cases in which Dr. Trotter administered the juice of lemons and oranges for the cure of scurvy he thought worth narrating, and they still retain an interest for us. Some time in November, 1789, eighty Irish convicts came from Newfoundland in company with the ships returning from that station to England. These convicts to the number of 130 or 140 had been shipped at Dublin some time before. "The master of the vessel in which they sailed had orders to land or dispose of them somewhere in the territories of the United States of America. Instead however of fulfilling his contract with government and obeying orders," he received money from his prisoners for their liberty and then turned them on shore at Newfoundland, where many perished in the woods from hunger and fatigue, and the remainder were finally taken in charge by the naval commander on that station and returned to England, when they came under Dr. Trotter's care.

But these extracts are all too few to give any adequate idea of the charm of his writings, or appreciation of his personality as revealed through them. As a naval hygienist he must have been far in advance of his age; the same number of the naval journal that contains the account of this interesting man contains also an account of thirty years' progress in our own navy, from which one may infer that all the improvements Dr. Trotter advocated have not yet been fully accomplished. We are reminded of Dr. John Brown's essay on Dr. Henry Marshall and Military Hygiene. Dr. Marshall and Dr. Trotter seem to have been singularly alike in their devotion to the private soldier and sailor, alike sanitarians before that word had an existence, alike in their devotion to their profession, and through it to our common humanity.

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MEDICAL NOTES.

— Dr. Morris Longstreth, of Philadelphia, is delivering a course of lectures at the Lowell Institute, in Boston, on the Germ Theory of Disease. A very agreeable reception of medical men and others, to meet Dr. Longstreth, was held lately at the house of Dr. B. S. Shaw.

— The JOURNAL has previously alluded to the *couveuse* or artificial nest in use at La Maternité in Paris for containing premature and feeble infants. M. Auvard, who has recently published an account of its practical operation (*Archives de Tocologie*, October, 1883, and *Le Progrès Medical*, March 1, 1884), gives the following figures as to its record from November, 1881, to July, 1883: —

	Total.	Lived	Died.
Premature births	93	62	31
Asthenia	6	4	2
Cyanosis	5	5	–
Œdema	25	21	4
Apparent death	4	3	1
Respiratory difficulty	5	2	3
Inanition	3	1	2
Syphilis	4	4	
Obstetrical operation	2	2	
Fracture	1	1	
Vice of conformation	3		3
Total	151	105	46

The fortunate results are thus seen not to be confined to cases of premature birth. In œdema the mortality was only four in twenty-one, while Professor Depaul gives sixteen deaths in twenty as the ordinary proportion in this malady.

The writer points out the infrequency with which infants weighing from 1600 to 1800 grammes are saved, in spite of most assiduous care, which of course cannot be given in a hospital as it could be in a well-to-do family in private life. Of the prematurely born in the foregoing table seventy-nine weighed less than 2000 grammes. Of these forty-nine survived, giving a mortality of thirty-eight per cent; while in l'Hôpital Cochin in 1882 the mortality in children of this weight without a couveuse was sixty-six per cent.; in the Maternité, during the two years preceding the use of the couveuse, sixty-five per cent.

— At a recent meeting of the Obstetrical Society of Edinburgh one of the speakers referred to the danger which, in his opinion, existed in the lying-in room from menstruation, saying that he believed he could trace certain cases of puerperal fever to want of proper cleanliness on the part of the nurse who happened to be menstruating at the time.

NEW YORK.

— Two brothers who died of typhoid fever within twenty-four hours of each other, at Schenectady, N. Y., were buried together on the 12th of March, and two other brothers are ill with the disease, which was caused by drinking water from a well into which a cess-pool drained. The well was ordered closed by the Board of Health. The city of Schenectady has as yet no system of sewers, and it is now proposed to have one constructed.

— Three cases of typhus fever were recently discovered in a down-town lodging house. On the 5th of March a tramp suffering from the disease was removed from there to the Riverside Hospital, Blackwell's Island, and on the 8th it was found that two new cases had become developed. They were also taken to the hospital.

— A meeting of registered drug clerks was held at the College of Pharmacy, March 11th, for the purpose of aiding in the enforcement of the pharmacy law, and the members of the association bound themselves to report to the chairman of the executive committee the names of all druggists known to them who employed unregistered clerks, or who were unregistered themselves, as well as the names of such unregistered persons.

— A reception, designed as an informal house-warming, was held by the Faculty of the New York Post-Graduate Medical School at their new building in East Twentieth Street on Friday evening, March 21st.

— During the past week the State Senate Committee on Public Health has been making an investigation into the alleged illegal manufacture and sale of imitation and adulterated dairy products, the principal attention being devoted to the subject of oleomargarine, but the results of the investigation have not yet been made public. In the course of it Dr. H. A. Pooler, of Goshen, formerly connected with the New

York Board of Health, and now a member of the Orange County Board of Health, endeavored to show that in New York the number of still-births had increased out of proportion to the natural increase of population with the increased consumption of oleomargarine, — the reported number in the year 1883 being 506 more than in 1876, — and he attributed this to the benne and cotton-seed oil used in its manufacture. He and other physicians testified to the injurious effects of nitric acid, also used in making it; but rebutting testimony was brought forward to the effect that in the diluted manner in which this was employed it was not injurious. It was also stated that boiled pork, which requires one hour and forty-five minutes longer, and boiled beef suet, which requires two hours longer to digest than melted butter, were the two principal ingredients of oleomargarine.

— Dr. E. H. Bartley, chemist to the Brooklyn Board of Health, has made a report to that body in regard to the "rock-and-rye drops," which, although flavored with fusel oil, are constantly sold at the candy shops in large quantities to school children, and in it he says: In some of these candies the oil is not thoroughly mixed or diffused, and occasionally a good-sized cavity is filled with fusel oil. Estimating that a child may buy and eat a half pound of this candy, containing 5.7 grains of the oil, it will be seen that it will take the maximum dose for an adult, and will probably experience distinct symptoms, such as dizziness, headache, or even slight intoxication. A fatal dose of fusel oil is stated by the best authorities to be from 1.4 to 1.6 grammes, or the quantity found in two pounds of this candy.

— Dr. H. T. Hanks has devised a combined day-book and ledger for physicians (published by J. H. Vail & Co.), which, on account of its extreme simplicity, will, no doubt, prove a god-send to the busy practitioner who keeps his own books. On account of this simplicity its plan is certainly preferable to any of the methods now in use among the profession, and it has the additional advantage of rendering it possible to keep at the same time an exact record of all charges and payments, complete in the minutest detail, as well as to continue the account from year to year without reëntering, so that there is no waste of space. The author's claim to have arranged in this book the most exact and labor-saving system of book-keeping ever devised for the use of the physician would seem, therefore, to be a substantial one.

Correspondence.

LETTER FROM LONDON.

LONDON, *March* 7, 1884.

MR. EDITOR, — As I intimated in a former letter, Dr. John Williams's paper On the Corroding Ulcer of the Os Uteri, which was read to the Obstetrical Society last Wednesday evening, proved very interesting.

The communication was based on three cases, two of which had been under observation for between nine and ten years, the other for about two years. In the former the conditions had probably not existed long when first seen; but in the latter case the ulcerative process may have been going on for years.

Although this disease is very rare it is undoubtedly occasionally met with and mistaken for epithelioma. It is, however, quite distinct from cancerous disease, — for throughout its course the uterus remains free and movable and the glands are not affected. The disease is characterized by discomfort and a burning sensation, but there is little or no actual pain. Hæmorrhage is unimportant; but there is a more or less constant white or brownish discharge, which is very fetid. Examination shows a small ulcer on the uterine lip, which gradually enlarges, eating away the underlying tissue until the cervix is excavated, as in cancer.

Of Dr. Williams's three cases, one died at an advanced age with hemiplegia; another of uræmia; while the third is still alive, healthy and well-nourished. She has been married twice, and contemplates a third union, — which goes to show that the "corroding ulcer" *per se* is neither fatal to life or happiness. In the case of the patient dying of uræmia from kidney disease, an autopsy was made. As already stated, there were none of the characteristic conditions met with in cancer present. Microscopic examination showed nothing different from what is found in ordinary ulcer. There was a small cell — probably inflammatory — infiltration.

In one case there was some hypertrophy, with formation of nodules around the margin of the ulcer. Dr. Williams considers that this case was one of lupus.

Another case he concluded was that of slowly progressing senile gangrene, for the arteries, especially the iliacs, had undergone calcareous degeneration and broke down under the fingers. This disease was described many years ago by Sir Charles, and his brother John, Clark. Since then little has been written about it.

The President, Dr. Gervis, thought that Dr. Williams had established the existence of such a disease as corroding ulcer of the os uteri, and that it was of great importance to distinguish it clinically from cancer in regard to the prognosis.

Dr. Priestly, looking back over his practice, thought he could remember several cases which at the time were considered cancer, but which were undoubtedly corroding ulcers.

Dr. Matthews Duncan had had a large experience, and had been studying the subject for years, but he was bound to confess that he had never seen a single case of corroding ulcer. He believed that without doubt the conditions which Dr. Williams had described were nothing else than lupus. A number of other prominent members took part in the discussion.

For my own part I do not see that Dr. Williams has established that "corroding ulcer" is entitled to be considered as a distinct disease, but rather as a generic name for all destructive ulcerations of the cervix. Dr. Williams used the word "malignant" in his paper, and afterwards explained that he meant by that term merely that the disease was not curable.

Emmet, in his very scanty remarks on this subject, considers that corroding ulcer is malignant in the usual sense of the word, but as no histological description of the condition is given, one might well imagine that he was dealing with carcinoma uteri pure and simple.

All the German authorities which I have consulted refer to Clark's original paper, and declare that if such a condition — distinct from cancroid or carcinoma —

exists it must be extremely rare; and more than one suggests that the English observers may have mistaken the disease for certain conditions of the above or lupus.

The discussion of the cold-bath treatment of enteric fever, which recently occupied two evenings of the London Medical Society, excited much interest, and, as Dr. Broadbent said, marks an epoch in the treatment of that disease. The sense of the Society was decidedly in favor of the bath, pack, or sponging, and the statistics collected by Dr. Coupland and others seemed to justify this.

A surgical ward has been opened in the children's department at Dorset House branch of the Samaritan Hospital, and placed under the care of Mr. W. A. Meredith.

Last week Mr. Meredith removed a sarcomatous kidney from a girl four years old. The tumor, which extended from above the ensiform cartilage down into the pelvis, on the right side, was first noticed by the patient's mother four weeks ago. Since then it has rapidly enlarged. The contents of the tumor was soft and almost diffluent, so that in removing the mass it was considerably broken up. The whole weighed two and a half pounds. The child died of septicæmia on the third day, and at the autopsy the lungs were found to be studded with secondary sarcomatous deposits.

Mr. Skene Keith has resigned his position as assistant surgeon to the Samaritan Hospital, and will, I understand, return to Edinburgh.

Permit me a non-professional word in closing. It is the general opinion of Americans here that the Longfellow bust recently placed in Westminster Abbey is a worthy tribute to America's greatest poet. The likeness is excellent. Lord Granville was overheard by a friend of mine to remark, when the bust was unveiled, "If my mother had given me such a head as that I might have been a poet too."

Yours truly, W. P. M.

Miscellany.

THE OHIO STATE MEDICAL SOCIETY AND MEDICAL EDUCATION.

The Trumbull County (Ohio) Medical Society has issued a circular addressed to the "Members of the medical profession interested in the elevation of the standard of preliminary education," proposing a list of subjects in which all applicants for admission as students of medicine under the tuition of members of the State Society should be required to pass before a board of Medical Examiners appointed by the State Society. The schedule of subjects for examination is the same as that laid down in a resolution by the Medical Society of the State of Pennsylvania in 1878, and adopted in 1883.

At the meeting of the Trumbull County Medical Society called to consider this subject, the following resolutions, among others, were adopted:

"That no member of this Society shall receive any person as a student of medicine unless he present a favorable certificate from the Board of Medical Examiners.

"That the time of study required by members of this Society shall be five (5) years, including lectures.

"That members of this Society shall recommend their students to attend only such medical colleges as either require an examination for admission similar to the one required by this Society or make the full three years' graded course of study obligatory for graduation therefrom, and otherwise endeavor to elevate the standard of medical education.

"That this Society requests the Ohio State Medical Society to adopt the foregoing schedule of requirements and to use its influence to secure legislation making the same obligatory upon persons entering their names as students of medicine in the State of Ohio."

HYDATID CYST OF THE ABDOMINAL WALL.

A case is reported in *L'Union Médicale* (17th February, 1884) of a somewhat unusual character, occurring in the service of M. Polaillon. The patient, aged sixteen, printer, had had no history of previous illness except a fall from a third story a year before, which had left no mark, but which had been followed in a month by the first development of the present tumor. The swelling was situated in the right iliac fossa; had always been painless except that for the few days before he came under observation there had been a little discomfort. In July, 1883, he entered the hospital with an ovoid tumor in the right iliac fossa, having its long axis parallel with the inguinal fold, non-reducible, fluctuating, and of the size of a cocoa-nut. The skin was healthy and movable. The growth seemed to occupy the thickness of the abdominal wall. The good health of the patient and the absence of any sign of bone disease made an abscess seem improbable. There was, moreover, a sonorous zone between the tumor and the liver, and there was none of that peculiar quiver on percussion which is supposed to characterize hydatid of the liver. The tumor was aspirated, giving a clear, serous, slightly yellowish, urine-like fluid, which showed, under the microscope, red and some white globules. No hooklets, but a little shred of membrane resembling that of a hydatid cyst. A few days after the puncture the patient left the hospital, but the fluid began to accumulate again, and he returned August 15th with the tumor as large as ever. A second puncture gave a fluid which showed a few hooklets. The diagnosis was then made of hydatid cyst of the abdominal wall. A free incision was made, and the cavity washed with carbolic solution, one to twenty. Two days later there was some headache, but no local pain, and but little fever. Suppuration ensued, and the pus accumulated in the sac to the size of a fœtal head. August 28th another incision of three centimetres was made, and pus flowed. Drainage and Lister dressing were used. The carbolic irrigation was repeated every two days. Occasionally the washing brought away shreds of membrane. The suppuration was moderate, and the health excellent.

During September and early October the cavity did not close, but the patient felt well, and was up daily. October 18th he was suddenly seized with pain in the iliac fossa, and the next day there was found, engaged in the orifice, a large, thick, hydatid membrane. Attempts to withdraw it by forceps tore it, but compression on the abdominal walls brought it out entire. It was followed by a gush of thick, greenish, and fetid pus. The membrane expelled was white, two to three millimetres thick; it formed an oval sac as big as a fœtal head. It was made up of layers of transparent, structureless, lamelliform substance like the fragments which had before been washed out. On the interior wall of the sac there were no traces of other hydatid cysts. A rapid diminution of the purulent secretion followed, and November 19th the cavity was closed, the fistulous orifice was healed, and there was no retraction of the abdominal wall.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 15, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	633	212	14.56	15.20	2.24	5.76	1.12
Philadelphia	927,995	430	137	18.77	17.77	.46	6.21	4.14
Brooklyn	644,526	273	98	17.02	28.49	1.11	6.29	2.22
Chicago	632,100	—	—	—	—	—	—	—
Boston	423,800	158	57	20.16	17.64	1.68	8.19	2.52
Baltimore	408,520	171	71	22.04	13.92	.58	5.84	1.74
St. Louis	400,000	117	50	17.95	11.12	1.71	7.70	4.28
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	148	47	26.52	19.32	2.07	1.38	.69
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	94	33	19.14	12.72	3.18	2.12	5.30
Pittsburg	180,000	56	27	14.32	14.32	7.16	1.79	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	36	8	8.34	19.46	2.78	2.78	2.78
New Haven	62,882	27	8	11.13	14.84	—	—	11.13
Nashville	54,400	21	6	23.80	28.56	3.71	3.71	—
Charleston	52,286	36	8	2.78	25.02	—	2.78	—
Lowell	71,447	28	11	25.00	17.85	—	10.71	3.57
Worcester	69,442	19	9	26.30	26.30	5.26	—	5.26
Fall River	62,674	21	8	4.76	9.52	—	4.76	—
Cambridge	60,995	19	7	5.26	10.52	—	5.26	—
Lawrence	45,516	20	6	30.00	15.00	—	—	—
Lynn	44,895	9	0	—	33.33	—	10.00	—
Springfield	38,090	10	5	20.00	10.00	—	10 00	—
Somerville	31,350	10	3	—	10.00	—	—	—
Holyoke	30,515	11	4	9.09	45.45	—	9.09	—
New Bedford	30,144	9	3	22.22	11.11	11.11	—	—
Salem	29,503	17	4	23.32	23.32	—	—	—
Chelsea	24,347	7	3	14.28	14.28	—	14.28	—
Taunton	22,693	6	2	16.66	33.33	—	—	—
Gloucester	21,400	11	2	27.27	9.09	—	18.18	—
Haverhill	20,905	8	3	12.50	12.50	12.50	—	—
Newton	19,421	3	2	—	—	—	—	—
Brockton	18,323	5	1	—	40.00	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	6	3	50.00	16.66	—	—	33.33
Fitchburg	13,433	7	3	—	—	—	—	—
Eighty Massachusetts towns	408,767	105	21	13.33	19.04	—	5.72	1.91

Deaths reported 2531 (no reports from Chicago, Cincinnati, and Milwaukee): under five years of age, 862: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 434, consumption 404, lung diseases 387, diphtheria and croup 138, scarlet fever 59, diarrhœal diseases 45, measles 42, typhoid fever 41, malarial fevers 23, cerebro-spinal meningitis 21, small-pox 20, whooping-cough 19, erysipelas 13, puerperal fever 13. From *measles*, Baltimore 15, New York and New Orleans eight each, District of Columbia four, Brooklyn three, Nashville two, Philadelphia and Lawrence one each. From *typhoid fever*, Philadelphia 21, New York five, Boston three, District of Columbia, Pittsburg, Worcester, and Westborough two each, Brooklyn, Baltimore, Lawrence, and Merrimac one each. From *malarial fevers*, Brooklyn seven, New York six, Baltimore four, New Orleans three, St. Louis two, Philadelphia one. From *cerebro-spinal meningitis*, New York and Lowell three each, Lawrence two, Philadelphia, Boston, Baltimore, St. Louis, New Orleans, Worcester, Cambridge, Springfield, New Bedford, Taunton, Melrose, Dedham, and North Andover one each. From *small-pox*, New Orleans 19, Pittsburg one. From *whooping-cough*, New York five, Boston three, Philadelphia, Brooklyn, Baltimore, New Orleans, and District of Columbia two each, Gloucester one. From *erysipelas* Brooklyn five, New York four, Philadelphia three, Boston one. From *puerperal fever*, New York and Philadelphia three each, Brooklyn two, Boston, Baltimore, St. Louis, Nashville, and Newburyport one each.

Two cases of small-pox were reported in St. Louis; scarlet fever 53, diphtheria 30, typhoid fever 17, and measles one in Boston; measles 16, scarlet fever six, and diphtheria five in Providence.

In 101 cities and towns of Massachusetts, with an estimated population of 1,428,666 (estimated population of the State 1,955,104), the total death-rate for the week was 17.07 against 20.31 and 18.00 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending March 1st, the death-rate was 20.3. Deaths reported 3417: acute diseases of the respiratory organs (London) 334, whooping-cough 121, measles 87, scarlet fever 75, fever 40, diarrhœa 37, diphtheria 29, small-pox (London eight, Sunderland six, Birmingham two, Liverpool and Sheffield one each) 18. The death-rates ranged from 12.1 in Norwich to 29.5 in Manchester; Birkenhead 15.5; Leicester 16.9; London 19.3; Leeds 20.1; Birmingham 21.4; Blackburn 21.7; Sheffield 21.9; Bristol 22.3; Nottingham 23.1; Liverpool 23.3; Sunderland 23.7. In Edinburgh 20.1; Glasgow 27.7; Dublin 25.7.

For the week ending March 1st, in the Swiss towns, there were 33 deaths from lung diseases, consumption 28, diarrhœal diseases 27, typhoid fever nine, diphtheria and croup six, whooping-cough five, measles, scarlet fever, and puerperal fever each one. The death-rates were, at Geneva 24.5; Zurich 17.7; Basle 12.4; Berne 27.8.

The meteorological record for the week ending March 15th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1884.	Daily Mean.	Daily Mean	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 9	30.067	27	35	17	84	98	94	92	W	NE	N	11	13	11	O	S	R	—	—
Mon., 10	30.103	30	40	23	94	62	70	75	NW	NW	NW	12	18	10	S	C	C	—	—
Tues., 11	30.280	35	42	22	74	77	96	82	NW	S	SW	6	12	12	O	O	O	—	—
Wed., 12	29.941	47	58	40	93	80	69	81	SW	SW	W	16	17	10	F	O	F	—	—
Thurs., 13	30.083	38	49	34	84	77	50	78	SW	W	SW	8	15	10	F	O	O	—	—
Fri., 14	30.304	41	47	33	65	69	100	70	W	E	N	4	4	6	O	R	R	—	—
Sat., 15	29.911	35	40	31	98	72	68	79	N	NW	NW	11	12	11	R	O	C	—	—
Mean, the Week.	30.098	36	45	29				79										43.25	78.00

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OBITUARY. DR. L. P. YANDELL.

Dr. L. P. Yandell, of Louisville, Ky., Editor of the *Louisville Medical News*, and an incumbent successively of chairs of Materia Medica and the Theory and Practice of Medicine in the University of Louisville, has recently died at the age of forty-seven. He was of a family of note in the medical profession in the South, and leaves a brother, Dr. David W. Yandell.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MARCH 15, 1884, TO MARCH 21, 1884.

Bache, Dallas, major and surgeon. Leave of absence still further extended seven days. Paragraph 1, S. O. 50, headquarters Department of the East, March 14, 1884.

Matthews, Washington, captain and assistant surgeon. To be relieved from duty in the Department of the Missouri, and to report in person to the Surgeon-General of the Army for duty in his office. Paragraph 12, S. O. 62, A. G. O., March 15, 1884.

Black, Charles S., first lieutenant and assistant surgeon. Assigned to duty at Fort Concho, Texas. Paragraph 6, S. O. 30, headquarters Department of Texas, March 10, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MARCH 22, 1884.

Streets, T. H., passed assistant surgeon, from Museum of Hygiene, Washington, for duty in the Coast Survey Service.

Hall, C. H. H., passed assistant surgeon, from the Naval Academy to the Museum of Hygiene.

Stewart, Henry, surgeon, ordered before the Retiring Board.

Suffolk District Medical Society. Surgical Section. — There will be a meeting of the Section at 19 Boylston Place on Wednesday evening, April 2d, at 7.45 o'clock. Communication: On Operative Interference on Curved Bones in Children, Dr. E. H. Bradford.

S. J. Mixter, *Secretary.*

Books and Pamphlets Received. — A Companion to the United States Pharmacopœia, being a Commentary on the Latest Edition of the Pharmacopœia, and containing the Descriptions, Properties, Uses, and Doses of all Official and Numerous Unofficial Drugs and Preparations in Current Use in the United States, etc. Designed as a Ready Reference Book for Pharmacists, Physicians, and Students. With over 600 Original Illustrations by Oscar Oldberg, Phar. D., and Otto A. Wall, M. D., Ph. G. New York: William Wood & Co. 1884.

Legal Medicine. Vol. II. Legitimacy and Paternity, Pregnancy, Abortion, Rape, Indecent Exposure, Sodomy, Bestiality, Live Birth, Infanticide, Asphyxia, Drowning, Hanging, Strangulation, Suffocation. By Charles Meymott Tidy, M. B., F. C. S., etc. Philadelphia: Henry C. Lea's Son & Co. 1884.

Spinal Irritation. Probable Cerebral Origin of the Symptoms sometimes classed under this Head. By G. L. Walton, M. D. (Reprint.) 1884.

Neglect of Ear Symptoms in the Diagnosis of Diseases of the Nervous System. By G. L. Walton, M. D. Boston. (Reprint.)

Thirtieth Annual Report of the Trustees of the State Lunatic Hospital at Taunton for the Year ending September 30, 1883. Boston. 1884.

Report of the Memorial Meeting of the Medical Society of the District of Columbia in Honor of Dr. J. Marion Sims. Held November 21, 1883. (Reprint.)

Excerpts from Prof. Hugo Schulz's Treatise on Eucalyptus Oil. Translated and Supplemented by Baron Sir Ferd. von Mueller, K. C. M. G., etc., Government Botanist in Victoria. (Reprint from Australasian Medical Gazette for 1883.) Sidney. 1883.

Ueber das Verhalten des Catgut im Organismus und über Heteroplastik. Van Dr. L. von Lesser, Privatdocenten der Chirurgie in Leipzig.

Transactions of the American Ophthalmological Society. Nineteenth Annual Meeting. Catskill Mountains. 1883. New York: Published by the Society. 1883.

What Shall We Name It? A Dictionary of Baptismal Names for Children. New York: John C. Stockwell.

Year-Books of Medical Progress. A Year-Book of Therapeutics for 1883. Edited by Royal W. Amidon, M. D. New York: G. P. Putnam's Sons. 1884.

A Short Manual for Monthly Nurses. By Charles G. Cullingworth, M. D. Philadelphia: P. Blakiston, Son & Co. 1884.

A Practical Treatise on Surgical Diagnosis. Designed as a Manual for Practitioners and Students in Medicine. By Ambrose L. Ranney, A. M., M. D. Third Edition, thoroughly Revised, Enlarged, and profusly Illustrated. New York: William Wood & Co. 1884.

Aural Complications of Inflammatory Conditions of the Nose and Throat. By Beverley Robinson, M. D. (Reprint.)

Hygienic Institutes, the Utility of their Work of Investigation, and the Need of it in this Country. By Prof. George A. Smyth, M. D.

Report of Special Committee on the Sanitary Condition of the School-Houses of the City of Lynn, December, 1883.

Clinical History of Recurrent Dropsy of the Left Middle Ear, Complicated, after Eight Years' Duration, by an Acute Attack of Monocular Optic Neuritis (Choked Disk) on the same Side, followed by General Tabetic Symptoms. With Remarks. By Charles H. Burnett, A. M., M. D., and Charles A. Oliver, A. M., M. D. (Reprint.)

Elements of Pharmacy, Materia Medica, and Therapeutics. By William Whilta, M. D. (Q. U. I.). With Lithographs and Wood-Cuts. Second Edition. London: Henry Renshaw, 356 Strand. 1884.

A Text Book of the Principles of Physics. By Alfred Daniell, M. A., Lecturer of Physics School of Medicine, Edinburgh. London: Macmillan & Co. 1884.

The Diseases of Children. A Hand-Book for Practitioner and Students. By Armand Semple, B. A., M. B. Cantab., M. R. C. P. London. New York: G. P. Putnam's Sons. 1884.

Lectures.

INSULAR SCLEROSIS OF THE POSTERIOR COLUMNS OF THE SPINAL CORD.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.[1]

BY WILLIAM PEPPER, M. D., LL. D.,
Professor of Clinical Medicine in the University of Pennsylvania.

GENTLEMEN, — This patient has been sent to me by a friend in the city, who states that he thinks that this man has sclerosis of the posterior columns of the spinal cord or progressive locomotor ataxia. He gives the following history: He is forty years old, a farmer, married; has been married for seven years. Has one child, who is three years old and healthy. The symptoms of the present disease manifested themselves in February, 1881. While loading hay he slipped, but apparently did not hurt himself much. The following day the legs began to get stiff and numb. He, however, continued to work until August, 1882. The limbs were not as strong as before, but he was still able to do his work, and walk twenty miles in hauling hay to the city. In May of 1882 one eye began to fail, and seven months ago the second eye began to be affected. He thinks that if he could see he would be able to work as well as before. About the time that the numbness first appeared he had occasional pains in the limbs, but during the past year they have, at times, been unbearable. They shoot through the thighs like lightning, darting from one joint to another, and from one leg to the other. These pains are worse at night. About a year ago he had severe shooting pains across the forehead. He has had no pains in the arms. The parts where the pain appeared never became red and swollen. There have then been fulgurant pains through the limbs, presenting the characteristics of those met with in ataxia. With this perverted sensation there have been some numbness and tingling, some impairment of feeling, and some loss of power, with amaurosis coming on within the last year, the amaurosis being preceded by fulgurant pains in the neighborhood of the eyes.

Let us now study further in regard to the development of the symptoms. There has been no jerking of the legs. He has not lost much flesh, but the limbs are somewhat wasted. Appetite and digestion are good. He states that once in a while he has bilious spells, but does not vomit at such time unless he has sick headache. He is very subject to sick headache, having, on an average, an attack about once a month. The bowels are regular, and there is no trouble with the bladder. There is a total absence of bladder and rectal complication. The time at which these organs become involved varies, but, as a rule, they are affected sooner or later.

There has been present in this case that which is frequently met with in ataxia, namely, gastric crises, attacks apparently not dependent upon indiscretion in diet, taking cold, or other obvious cause, in which there is neuralgic pain associated with loss of appetite, nausea, and very often vomiting. Not rarely ataxic cases will be found to present attacks of this kind. In some cases they are extremely well pronounced, while in other cases the disease runs its entire course without the appearance of such attacks. I do not know that I am right in saying so, but I think that my experience will bear me out when I state that these crises are more marked where amaurosis is present and distinct. Where sclerosis of the higher centres governing the eyes makes its appearance disturbance of the pneumogastric tract is more common than when the sclerosis is limited to the posterior columns of the cord.

So much, then, for the history, which points to progressive locomotor ataxia. Let us now see if the present condition bears out this suggestion, first directing our attention to the eyes, then to the power of locomotion, and finally to the condition of the muscles of the affected part.

The right eye was the one first affected, but both are now in about the same condition. He can distinguish light from darkness, and that is about the extent of his vision. This man unquestionably has degeneration of the optic nerve and retina, but the eyes will be subjected to a careful ophthalmoscopic examination. These degenerative changes are found in locomotor ataxia when the sclerosis involves the higher centres.

He states that he has no difficulty in walking except that which is due to his inability to see where he is going. Before the eyes were so much involved he was able to walk twenty miles a day with a load of hay in all kinds of weather. The legs, he thinks, do not feel so stiff as they used to. As he walks across the floor he certainly walks very well, but, as you see, there is a certain amount of incoördination of the muscles; but when the length of time which the disease has lasted and the condition of the eyes are considered the amount of incoördination is extremely small. He is not at all giddy.

Examining the patella reflex I find that there is no response whatever in either limb. The condition of the reflex patella and ankle furnish interesting and important signs which you should always study in cases of suspected organic change of the spinal cord. As you are aware, irritation of certain areas of the skin produce certain reflex movements of the muscles of other parts of the body, so that by a study of these reflex movements the location of the disease of the cord can often be determined. Thus irritation of the skin of the inside of the thigh produces a cremaster reflex, while irritation of a patch of skin a little higher produces a reflex movement in the muscles of the abdomen. These symptoms are always worthy of study. I have been a little disappointed in the use of these signs, because I have found cases of functional disease of the cerebro-spinal axis where the patella reflex was totally lost, and yet where the course of the case proved conclusively that the affection had been one merely of anæmic exhaustion without any organic disease whatever. I find that others have observed the same thing. The law laid down as to the absolute pathognomonic value of the absence of patella reflex as a sign of advanced posterior sclerosis must be regarded as subject to exceptions. At the same time it is a symptom that possesses a certain value, and when we find, in connection with fulgurant pains and incoördination of the legs, a total loss of patella reflex we know that in all probability there are changes in the posterior columns of the cord.

In this patient the legs feel numb, but sensation is not entirely lost. This is commonly the case. A critical study of the condition of sensation, for which we have not time to-day, might reveal that in some areas there was actual loss of sensation, while in others the anæsthesia was not absolute.

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[1] Reported by William H. Morrison, M. D.

This is not an ordinary case of sclerosis. It is an example of what is called insular sclerosis. This is a rare disease. The posterior columns are affected, but not in the way that they are in ordinary locomotor ataxia. As you probably know, the earliest symptoms of this latter disease are perverted sensation, fulgurant pains, increasing incoördination of the muscles of the leg, and slight wasting, but no actual paralysis. These are the symptoms of the early stage. The disease advances up the posterior columns, following the physiological course of the fibres. As the disease involves a higher portion of the cord the movements of the arm become affected. When the disease has reached the lower cervical region the eyes become involved, and amaurosis is apt to be developed. Later the sclerosis may affect the crura of the brain, and may extend into the expansion of these columns.

In the present instance the disease has pursued a less regular course. There have been unmistakable symptoms of sclerosis, beginning in the lower portion of the cord. There has been perverted sensation, incoördination of the muscles, fulgurant pains, and loss of patella reflex; but these symptoms have not been present to such a degree as to indicate that the entire posterior column had passed a state of degeneration. If this spinal cord could be examined I have no doubt that small islands of gray degeneration would be found scattered through the posterior columns, and, corresponding with the development of the marked ocular symptoms and the severe cerebral attacks, that insular sclerosis had developed high up, possibly involving the crura, pons, or higher centres. These cases of insular sclerosis are less common and less regular in the development of the symptoms than are cases of ordinary sclerosis of the posterior columns, but they are usually recognizable with a little care.

We shall next consider the ætiology, prognosis, and treatment of this case. Of late years there has been an attempt made to establish an absolute connection between sclerosis of the posterior columns and syphilis. Erb and Rosenthal probably represent the advanced advocates of this view. The French, American, and English schools take a more moderate and fairer view of the matter. I have met with a number of cases where the most careful investigation of the individual life and of the family history has failed to reveal any evidence of syphilitic taint. In the present instance the patient positively denies ever having had any venereal disease of any kind. His father died at the age of ninety. His mother is still living at the age of ninety. His parents had ten children, of whom seven are living, and all are healthy except himself. One brother died suddenly of what was supposed to be heart disease, but he does not know what the others died of. The assumption that every case of posterior sclerosis depends on a syphilitic taint is unfounded. The question should, however, always be investigated most critically, because it has an important bearing upon prognosis and treatment. Other causes of this affection are venereal excesses, overexertion, exposure, and the like. In some cases it is impossible to discover any cause. This patient has led a life of hard work and exposure. This may have had something to do with the development of the disease. While it is true that there are a large number of men engaged in farming, and locomotor ataxia is rare among them, yet there are tendencies in certain individuals to certain forms of disease developed by this exposure. He states that he has not indulged in sexual excesses, and that he has not lost sexual desire or power. This retention of sexual powers indicates, as does the retention of control over the bladder and rectum, that the deeper portions of the cord have not become affected, and makes the prognosis more favorable. Unfortunately the disease has involved the centres governing the eyes, and I fear that we shall find that there is no chance of restoring the lost vision. If this is the case the fact that we can arrest the progress of the disease and improve the condition of the limbs affords but little satisfaction.

The prognosis as regards duration of life is, I think, favorable. As far as regards arresting and improving the condition of the limbs it is favorable, but as far as vision is concerned it is unfavorable; but in order to decide this point a careful examination of the eye-ground is necessary.

These are cases for which a great deal can be done in the way of treatment. It is, of course, of the first importance to decide whether the disease is functional or organic, whether the symptoms are due to alteration of the circulation or to actual tissue degeneration. Cases are occasionally seen which present marked symptoms of locomotor ataxia and yet recover absolutely. For instance, not long ago I saw a case like this. A man working hard, with heavy financial responsibilities resting on him, gets into the habit of eating rapidly and irregularly, and takes to using tobacco to great excess, partly for the purpose of taking the place of food which he has not time to eat, and partly to divert the mind. He soon finds that his sleep is disturbed, and that he wakes early in the morning; sick headaches appear, with vomiting spells. Then he finds that he cannot walk at night as well as usual, that his legs get tangled up under him. His gait becomes worse, and people notice it on the street, and think that he is intoxicated. There is a little peculiarity in his appearance, but vision is not particularly affected. The patella reflex is entirely lost, and the man has a high degree of locomotor ataxia. He cannot walk with his eyes shut, and walks with his eyes upon his legs. The cutting off of the tobacco, stopping work, with complete rest, and a prolonged course of careful diet, restores him to absolute health. The ataxia disappears, he gains flesh and strength, returns to his work, and there are no further symptoms of the disease. I have seen such cases repeatedly. When in a case of this kind no cause such as syphilis, excessive venery, the immoderate use of tobacco, or overwork can be found there is more reason to suspect organic change than when some such cause exists.

When a definite cause is found the first thing to be done is, of course, to remove the cause.

If there is no such special cause as has been mentioned it will be found that in the early stages of the disease absolute rest exercises an extraordinary influence over the course of posterior sclerosis. Where a patient presents fulgurant pains, impaired patella reflex, ataxia, and gastric crises you will do well to order such a patient to bed and keep him there for a long time, unless you find that he does sufficiently well with a small amount of carefully-regulated exercise. I have seen cases where there was a distinct development of the symptoms where I could find no cause which could be regarded as having produced the disease, and where I had no doubt that there was incipient change in the posterior columns, get entirely well by absolute confinement to bed, with carefully-regulated diet, and attention to the state of the muscles. It is the rest which does the good. By this protracted rest symptoms will be relieved which can be affected by no remedies.

I saw the other day an interesting case. A man consulted me for a condition of this kind. I gave him an unfavorable diagnosis and prognosis. He then went to New York, and consulted a prominent physician of that city, who gave him the same opinion that I had done. While walking along the street he slipped, and fell and broke his thigh. This confined him to bed for nine months. When he got well of the fracture he was well of the ataxia. He got out of bed practically a well man. The ataxia and pains had disappeared, and for a considerable time there has been no return of the symptoms. I would warn you against hastily giving an unfavorable prognosis. The removal of the cause and the securing of absolute or at least considerable protracted rest should rank as the first elements of the treatment.

A course of tonic treatment is, I think, always essential. Such patients are nearly always anæmic and below par. They usually do well under large doses of iron when given in some digestible form. The iodide of iron is a valuable preparation in this disease. It is useful in those cases where there is a catarrhal condition and a tendency to pulmonary troubles. The vegetable salts of iron, or dialyzed iron, may also be given. Iron should be used in large doses and long continued. In cases where there is a syphilitic history I need not say that antisyphilitic remedies should be administered. The best form is iodide of potassium in ascending doses until a large amount is taken. You will, however, be disappointed in many of these cases, even though they are originally of a syphilitic character, for the sclerosis, when once established, often resists specific treatment, and although you may arrest the progress of the disease and relieve some of the more troublesome symptoms, especially the pain, the degenerated fibres remain degenerated, and the damage that the disease has done will not be removed. It is not like those cases in which a gumma presses upon the cord. If the gumma is removed the pressure will be relieved and the function of the cord restored. In such a case a perfect cure may be obtained.

In cases where there is no syphilitic history, and yet where, despite the removal of all ascertainable causes, the use of rest, tonics, iron, and cod-liver oil, the disease continues to progress and the irritative symptoms remain, you will find that prolonged courses of nitrate of silver will occasionally exert a beneficial influence. I shall not consider the manner in which this does good. Only under the circumstances which I have mentioned would I recommend the use of this remedy. Nitrate or oxide of silver given in large doses for a considerable period exerts a beneficial influence upon the progress of the disease.

A large number of drugs have been recommended for the treatment of this affection, but I should dread the effect of many of them upon the general health. A vast deal of harm is done by overdrugging. The same is true of the use of electricity. This remedy is usually indicated. If the patient is put to bed it is indicated to supply the necessary exercise. But if the patient is allowed to move about it is not usually demanded. The slowly-interrupted galvanic current is the one to be employed. If the pains are severe this will often relieve them.

This man's condition is one in which it is difficult to give advice. So far as the lower part of the body is concerned we should have no difficulty, but in the presence of this blindness, which I fear is due to organic change in the optic nerve and retina, we shall have to treat him without reference to the head symptoms, and endeavor to restore the power to the legs and arrest the change in the columns of the cord, with the idea that he will learn some new trade which a blind man can practice. The prognosis and treatment must be governed by the condition of the legs.

I should advise this man to go to bed, have the muscles kneaded every day, and take but little exercise. The diet should be carefully regulated. With this I should give remedies to restore the exhausted nervous force, and large doses of iron continued for a long time. I should use no iodide of potassium or other alterative.

Original Articles.

ON MILK SUPPLY IN LARGE CITIES.[1]

BY J. CHESTON MORRIS, M. D.,

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Probably few persons whose attention has not been especially called to this subject have any idea of its importance in an economic as well as sanitary point of view: and it may therefore be well to preface what I have to present to you to-night with a statement, unfortunately only approximate, as full and reliable figures are hard to obtain, of the amount of milk — or what purports to be such — required daily in our large cities.

Dr. H. A. Pooler, of Goshen, N. Y., estimates the amount sold daily in the cities of New York, Brooklyn, and Jersey City, at 500,000 quarts or 182,500,000 quarts annually. I have elsewhere shown from the statistics furnished by the Railroad Companies and the Board of Revision of Taxes, that the amount in Philadelphia alone is 57,548,470 quarts. The supply of Boston I have sought for but have not received a reply from the Secretary of the State Board of Health. But if we compare these figures with the population of the four cities named we find in round numbers as follows: —

182,500,000 quarts consumed among 2,500,000 persons.
57,500,000 " " " 900,000 "
240,000,000 " " " 3,400,000 "

or about 70.6 quarts annually, or not quite $\frac{2}{5}$ of a pint daily for each man, woman, and child. This is rather more than the average of England, less than half that of Wales, not one third that of Scotland or Ireland, and far below that of Norway, Sweden, Switzerland, and the Tyrol, as we learn from Edward Smith "On Foods," and Brassey "On Food and Labor." We may therefore fairly conclude that this is not an overestimate of the actual supply in these cities. If we now multiply these 240 millions by six cents, the *lowest* price paid by the *consumer* for the article, we obtain the amount annually paid by the inhabitants of these four cities, namely, $14,400,000 or nearly $40,000 daily. Surely then we may well pause for a moment to consider what it is that we buy at such a price, and what its real value is to us.

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[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene, of the Suffolk District Medical Society, February 27, 1884.

From Simon's Animal Chemistry, vol. ii., p. 62, we may deduce the composition of cows' milk as follows:

Water			860 parts.
Solids,	Butter	36 parts	
	Casein	68 parts	
	Lactin, coloring matter, etc.	30 parts	
	Salts	6 parts	
	in all —		140 parts.
			1000 parts.

And Dr. P. Vieth in the *Analyst*, for March, 1883, gives the results of 12,430 analyses made for the Aylesbury Dairy Co. in London, during 1882, which practically accord with the above.

A quart of milk, of the average sp. gr. of 1.031 as given by Dr. Vieth, would then weigh at 60° F., about 15,092 grains, of which 12,979 grains would be water, and 2,113 solids. Of the latter there would be

Butter	543.3 grains, or nearly	1¼ oz. avoirdupois.
Casein	1,026.3 grains, or more than	2¼ oz. avoirdupois.
Lactin, etc.	452.8 grains, or more than	1 oz. avoirdupois.
Salts	90.6 grains, or nearly	one fifth oz. avoirdupois.

If we now take these quantities and value them at market rates, say roughly —

1¼ oz. butter @ 30 cents per lb.	.02
2¼ oz. cheese @ 6 cents per lb.	.01
1 oz. milk sugar @ 8 cents per lb.	.005
one fifth oz. phosphates, etc.	.005
	$0.04

we obtain a value of milk which corresponds curiously with its *wholesale price* paid to the producer in the vicinity of Philadelphia and New York and its actual minimum cost of production. The latter may readily be ascertained approximatively by estimating the average annual yield of a good dairy cow at 2000 quarts and the food required at five tons of hay or its equivalent, besides some bran, cornmeal, roots, etc., so that the farmer is only selling his hay at $15 per ton when he receives four cents per quart for his milk, besides taking all the additional labor, investment of capital, and risk of loss.

I have spoken thus of the pecuniary value, let us now consider its food value. By comparing the statements of Valentin, Lehmann, Bidder and Schmidt, Chossat, Béclard and Carpenter, as to the amount of food required daily, with the rations of the British and French armies and those of the United States (as will be seen on referring to my article in the *Philadelphia Medical Times*, June 21, 1879), and with the amount of solids as given above it will be seen that *two quarts* of fresh milk and twelve ounces of bread would be sufficient to maintain a laboring man in full health and strength, the amount of nutritive material being greater than the ration of the French cavalryman. On three quarts milk and twelve ounces bread a man would soon fatten. By comparing the cost of sufficient milk and bread to nourish efficiently a man with that of any other food we shall be struck with its cheapness. But it is not in this that its greatest value lies. It is in the exact adaptation of the various constituents, the fatty, the starchy, the saline, and the nitrogenous, to the wants of the human economy, adaptation both in proportion and kind: so that no other article comes so near to being the universal food of man. Not only does he as all other mammalia depend upon it almost exclusively during the first two years of his existence, but during childhood and adult life milk or its products are essential to our well-being, while for invalids it furnishes the most available and reliable form of nourishment, in many cases the only form. Nor does any mode of preparation enhance its nutritive value. In by far the greater number of instances it is more wholesome and nutritious, more easily digested and more readily absorbed just as it comes from its source than in any other guise. It satisfies the appetite, quenches the thirst, relieves weariness, sustains for the work more surely and quickly than anything else.

Of course its mode of administration and the quantity taken must vary with the age of the individual and the object sought to be attained. We frequently hear from patients the complaint that they do not like milk, and never did, that it never agrees with them, constipates them, etc., etc. Now, in most instances, this is merely prejudice, based sometimes on injudicious mode of taking, or on an inferior article, or on the total absorption of the amount taken which thus leaves no mass of undigested residue to act (as is the case with food containing woody fibre) on the coat of the bowel as a mechanical irritant. If milk is given in divided doses at intervals of three or four hours, to be sipped slowly, while a little bread is eaten with it, it rarely fails to agree with a healthy stomach or even to restore a debilitated one; if there is any sense of oppression it is a good plan to give one or two teaspoonfuls of liquid rennet with, or immediately after, it. While any tendency to constipation may be met by the addition of a little *cream* to the whole milk or the use of a rhubarb pill at night. The benefits of an exclusively milk diet in cases of enfeebled digestion, chronic liver and kidney disease, consumption and impaired nutrition generally, will hardly be believed by those who have not made a thorough trial of it.

Such, then, as briefly as I can give it, is the value of milk from a physiological and medical point of view. No dietary is complete without it or its products, and we all feel keenly its loss when compelled to do without it. But how shall we get it pure and good, — so perishable, so prone to change, so apt to absorb impurities, and to be the carrier of the zymotic elements of disease instead of the genial nourishment which vivifies?

In the country, in small towns and villages, we may fairly attribute the health we often see among those subjected otherwise to many privations to the ease with which this great necessary of life is procured. But as cities grow in size, as more second and third parties have to come between the producer and consumer, the difficulty of procuring reliable, nutritious milk increases. Human cupidity comes in, and the bountiful nourishment is robbed of its richness by degrees; water is added, cream is abstracted, and what is sold to the mother for her hungering babe is but the ghost of its former self. Some years ago, in the Campo Santo, at Munich, I walked through the halls where are laid the corpses of those awaiting interment. That day there were over thirty, and all but two or three were those of children. I asked my guide if any epidemic was raging. He looked surprised, and said "No." When asked how there came to be such an excessive proportion of young children, he shrugged his shoulders and said, "Many are the children of poor seamstresses and store girls. They have little to eat themselves, and nothing to give their children; the latter are starved and die, often much to their parents' relief." As I looked at the poor, pale, pinched cheeks and wasted bodies, and thought of the effects of cholera infantum, diarrhœa, tubercular enteritis, etc., which play such sad havoc among our children in large cities, the thought occurred to me, how much of all this is the result of the miserable trash with which we delude ourselves and the poor little innocents committed to our care, calling it milk forsooth! Bad air has its victims by thousands, bad food by its tens of thousands. In New York City alone, as I am informed by Dr. H. A. Pooler, the number of deaths among children under five years of age was reduced 3673 in last year below that of 1882 in consequence, as he believes, of the improvement effected there already in the milk supply, the adulteration having been lessened to the extent of 100,000 quarts daily.

Various methods have been devised in the effort to remedy this supply of adulterated milk. Systems of inspection under governmental authority have been largely resorted to, and with excellent effect; they should be increased and made more stringent. But they are cumbersome and expensive, and too often fail to protect the very classes that need it most. The Aylesbury Dairy Company in London has a most efficient and extensive system of inspection and delivery, but this must increase the cost to the consumer. In Paris a Mr. D'Arcy has successfully introduced the method of supply in glass bottles; and in New York Mr. F. Ratchford Starr has done the same; while in Boston Mr. Burnett and others I believe are largely engaged in distributing milk by the same method. I have also been doing so in Philadelphia since 1878, and my example there was followed by a number of others, so that I feel justified by the results of experience in urging the members of our profession and others who are interested in the welfare and health of the community to endeavor to extend the use of milk shipped in glass jars.

The method which I have adopted, for which the Agricultural Society of Pennsylvania awarded me an honorary diploma in 1879, is as follows: —

The cows are well fed, and kept clean: before being milked the udders are always thoroughly freed from dirt. The milk when drawn is strained into a large can in which is suspended a smaller one filled with ice and salt, so as to cool it as rapidly as possible. It is then thoroughly stirred, so as to equalize the distribution of cream; and from a faucet at the bottom of the large can the milk is drawn into quart jars, each of which is then closed and sealed with a label bearing the name and address of the producer and the date of shipment; twenty jars are then packed in a box and sent to the city. The empty jars of the previous day are returned, cleansed, and prepared for shipment again.

The advantages of this method over the usual one among us in large cans are: —

(1.) The milk must be clean; any dirt would show at the bottom of the jar.

(2.) It is free from contamination by foul air, etc., in transit, as the jars are hermetically sealed.

(3.) Each customer gets an exact quart, as the jars must be *filled* to prevent "churning."

(4.) Each customer gets his own share of cream, neither more nor less, as it is put up before the cream has a chance to separate.

(5.) It is for the interest of each producer to send the best article he can, as his reputation — and therefore the price he gets — depends upon the quality of the article which bears his name; and he can guarantee to the consumer, as long as his label is undisturbed, the quality of the article furnished.

And this brings us to the consideration of a most important point. As I have shown, good milk *costs* four cents a quart to produce; but the competition of trade often drives the wholesale price down to three and a half or three cents. In the eyes of the dealer and too often of the too close-buying customer milk is only milk — all milk is alike — and the honest man who sends whole (pure) milk gets no more for it than his neighbor who removes half the cream, or adds a little water "to pay the freight." So long as this is the case in the estimation of the community, so long may they expect to be imposed upon. Just as soon as they recognize the justice and propriety of paying their milk producers in proportion to the quality and value of the article sold there will be no difficulty in having on our tables in large cities milk just as pure, just as good, just as sweet, nutritious, and wholesome, as if taken immediately from the spring house in the country. There is a difference too — and a great difference — in the milk produced by different breeds of cattle. Those commonly known among us may be divided into three groups: the Jersey, or Channel Island; the Devons, or long-horns; and the Durhams, or short-horn. The latter yield abundantly a rather pale blue milk moderately rich in casein, but not in cream or sugar. The Jerseys yield a smaller quantity of milk, rich in yellow cream, but poor in casein and sugar. The Devons, or long-horned red cattle, yield a white milk nearly equal to the Jerseys in cream, and very rich in casein and sugar, and hence having the highest nutritive value. Next to them comes that from grade Jerseys: next, that from good common cows. That from pure Jerseys is deficient in casein, that from pure Durhams is watery.

I have thus, I think, called your attention to a matter of vital importance, and tried to show the way out of the great difficulties which surround the distribution of milk — pure milk — in large cities. The measure of success which has attended this method and its more and more extensive adoption lead me to hope that in the not distant future its cleanliness and superiority in every respect will put an end to the present milk-can system with all its dirt and liability to fraud and deception.

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THE MILK SUPPLY OF BOSTON, AND THE BENEFIT TO BE DERIVED FROM THE SPAYING OF COWS.[1]

BY MR. LLOYD F. ABBOTT.

The milk supply of Boston may be divided into three classes: first, that brought in on the cars, and commonly called railroad milk; second, that brought in wagons from the surrounding country, and called out-of-town milk; third, that from cows kept within the city limits. Each one of these may be divided into three classes: first, from the new milch cow; second, from the farrow cow, or one that has been milked for a year or more; third, from a springer, or one with calf. The nature of the new milk is very loosening; it is well known among farmers that the first milkings given to a calf three or four weeks old will scour it to death. This milk changes as it increases in age, until at the end of a year the milk of a farrow cow becomes very astringent. This milk, if given to a calf a week old, would have exactly the opposite effect of the other. The milk of the springer gradually changes until near calving; it becomes more watery, and has a limey taste.

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[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, February 27, 1884.

Let us first consider the railroad milk. The distance from the city and the number of hands through which this passes (all of which have to be paid) make the farmers' returns small. The difference between a farrow cow milked out and a new milch cow is usually from twenty to twenty-five dollars; the farmer can better afford to let his cows go dry from two to three months than to pay the difference. Railroad milk is therefore mostly produced from new milch cows and springers. Let us visit Mr. B.'s dairy. He makes milk the year round and has cows coming in constantly. Some cows may be milked up to the time of calving, but in most cases they will go dry from one to three months, — usually about two, — and will give but little milk for some time before. The low price that Mr. B. receives for his milk and the loss he sustains while his cow is giving none, make it necessary for him to use all that he can of it. This, together with the fact that he does not see or know the parties who use it, makes it natural that he should send to market milk that he would not use himself. Mr. B. commences to milk at one end of the barn; the first cow may be a new milch cow, possibly the first milkings, and will fill, or nearly fill, a can. The next may be a farrow cow that has been milked for a year or more, or may be a springer about to calve; in either case will give but little, and it will take the milk of two or three of them to fill a can. Therefore the milk from the same dairy may be of the greatest possible extremes. Mr. B., having finished his milking, the milk being at a temperature of 100° F., sets it in cold water, which will reduce the temperature to about 55° F. or 50° F. The milk is thus disposed of for the night. The morning's milking is managed in the same way, perhaps with the exception that the collector comes before there is time to cool the milk off. It is then placed in a wagon and carried from one to seven or eight miles to the depot, by which time the milk is thoroughly shaken up and the temperature has risen several degrees. If the car starts from this place the milk may be put on and iced immediately; otherwise it must wait until the train comes along, and reach a still higher temperature. When on board the cars, it is iced, and by the time it has reached the city, from eight to ten A. M., the temperature has been reduced to 50° F. or 45° F. It is then taken from the car to the milk stable, where it remains usually from one to two hours before it is prepared for the consumer and iced. In the mean time the temperature has risen several degrees. The milk remains in the ice chest until two or three o'clock the next morning, when the temperature has been again reduced several degrees. It is then loaded on the wagon and delivered to the consumer. If there is any left over it is taken home, iced, and used the next day. This milk, therefore, is from twenty-four to thirty-six hours old before it reaches the consumer, and what is left over has twenty-four hours more added to it, and still people wonder why milk does not keep longer. This is the supply which reaches the city from eight to ten A. M. There are cars which reach the city from one to three A. M., which bring the milk of the night and morning before; a part of this is used the same day, but most is not used until the following day. It therefore may be used twelve hours fresher, but oftener twelve hours older, than that reaching the city earlier in the day.

As this milk comes from so great a distance it does not pay to carry out brewery grains or refuse vegetables from the markets. The cows are fed on such fodder as is raised in the nighborhood and on meal or shorts. But the milk dealer in the city is so far from his source of supply that he knows but little or any more about the cows or the condition they are in, or upon what they are fed, than the person who uses the milk.

The producer of the "out-of-town milk," being nearer the city, receives more for his milk, which, together with the extra risk of miscarriage from the effects of feeding on brewery grains, makes it about an even thing with him whether he changes his cows once in twelve or eighteen months, or has them "come in" in that time. This milk is from new milch, farrow, and springer cows, and is produced to a great extent from brewery grains; it receives very nearly the same care as the "railroad" milk until it reaches the stable of the dealer instead of going to the depot. The driver of this team starts from twelve to one o'clock A. M., which makes it impossible to bring in the morning's milk, and as the milking is the last chore at night, but few of the out-of-town men raising their own milk, and the dairies being scattered, milk is usually collected in the morning for the next day. It will be seen that the "out-of-town" man may bring in the milk of the night before, but as a rule does not; it is usually from twenty-four to thirty-six hours old. As the "out-of-town" man goes home in the heat of the day, often reaching it at three or four o'clock, it is impossible for him to keep his surplus over. He has a certain poor neighborhood where he skippers his surplus milk, that is, sells it on the street, or from door to door, from a third to a half less than the usual price, often making up the difference with water, and the poor will buy it because it is cheap, though not so good. Several years ago, when milk was selling for eight cents per quart, I knew one man who used to make his extra milk one half water, and sell it for five cents per quart, thus making a "good thing" of it.

The milk raised in the city should be divided into two classes: first, that from cows kept to produce milk for market; and, second, that of cows kept for family use. The first class is found near breweries, or near the salt marshes, and to a great extent the food is brewery grains and rotten potatoes, or other refuse vegetables. Many who have cows keep a team to haul brewery grains and go around the market and collect refuse vegetables. The Milk Inspector, in one of his reports, mentions finding rotten potatoes in a milk stable, but as he did not find the cows eating them did not consider it a case with which he could interfere. This milk may be, and often is, delivered to the consumer warm from the cow, but is thinner in quality, and will not keep as long as milk from cows fed on whole grain, grass, or hay. In fact, the milk partakes to a great extent of the substance on which the cow is fed. The dealer realizes a good price for his milk, and can better afford to pay twenty or twenty-five dollars difference in changing his cows than to keep one three or four months that is giving little or no milk. This milk is produced mainly from new milch cows, farrows, and light springers. It is the custom with this class of milk producers to buy a new milch cow and keep her farrow a year or more, and then get her with calf, which gives her a more suitable plumpness, by which means she is disposed of with better advantage to the butcher.

The second class of city cows are those kept for family use, usually well fed, and often overfed. A person wishing a cow for family use, not being posted in the market and no judge of a cow, usually pays a high price; if he is fortunate and secures a good one, he receives a good supply of rich milk. If he keeps a daily record of the amount of milk obtained, he will find that once in about three weeks there will be a time, sometimes affecting three milkings, that the cow will not give more than one half or two thirds as much as usual, and that after each one of these turns there will be a gradual decrease, until at the end of a year she will not give one half as much as at first, and that not nearly as good. Not giving much milk, and constantly giving less, she must be disposed of for beef at a loss, or, if the owner wishes to keep her and have her come in once a year, he must have her got with calf three months after she has come in, when the milk will decrease in quantity as well as in quality. To sum up, the owner of a cow under these circumstances is sapping the milk which he intended for his family for six or seven months, and going without for two or three months, for the purpose of getting his cow to give milk again and producing a calf, which, although the material he has consumed, if devoted to milk, would be worth a great many dollars, will scarcely bring a dollar, and often has to be given away. Besides this, the owner hes to run the risk of his cow's coming in in bad shape, or of miscarriage. There is no domestic animal so liable to accidents of this kind as the cow, owing to her being milked, a disadvantage which no other domestic animal labors under. In such a case she will give little or no milk.

What I propose as a means of improving the quality of the milk, and at the same time reducing the cost of production, is the spaying of cows for milk, an operation but little known even among veterinary surgeons. After two years' experience and inquiry I have been unable to find any one in Boston familiar with the operation. It consists of removing the ovaries from a new milch cow, which takes away all desire or ability for reproduction, and makes of her a constant milker ever after. These are some of the advantages gained by the operation: first, an increase in the quantity of milk, as the animal has nothing else to do but give milk or grow fat, and by giving milk-producing food the quantity may be increased a third. Secondly, the certainty of having a constant supply of milk of the same quality. Thirdly, producing a richer milk and of even quality, as the animal is always in the same condition, all causes of change having been removed; this alone is inestimable in its advantages to the sick, or delicate children. Without this operation milk obtained from a new milch cow under the most favorable circumstances will vary much; once in three weeks there will be a time often affecting three milkings that the milk is at fever heat, and will not keep as long by one third as when the animal is in the ordinary condition. It is not an uncommon occurrence for a person in delicate health, or a child, fed on a milk diet, although the milk be from one cow, and the greatest possible care taken of it, to have a bad day or a feverish night, for which no reason can be assigned, but which may be traced to such a cause as this. Fourthly, decrease in the cost of keeping, for by the operation causes are removed which produce waste of material that now goes to milk. Fifthly, by this operation cows may be kept for years, giving the same quantity of milk, thus avoiding the loss sustained while the cow is dry and the liability to accidents during calving. Sixthly, the spayed cow fattens more easily, its flesh is better than that of the ox, more tender and more juicy; indeed, no one is ignorant of the fact that all domestic animals, female as well as male, deprived of their procreative organs, fatten more quickly than those that retain them, and the flesh of the spayed female is more tender and juicy than that of the male. By this means the farmer will realize a better price for his cows when they have passed their days of usefulness as milkers, and the public will be protected from a practice often resorted to by farmers to obtain the best possible price for old cows, that is, to bring them to the bull, intending that gestation should give them more suitable plumpness, so that they may be disposed of to better advantage to the butcher. The result of this is mere bloated, flabby flesh, which easily taints; broth made from it is not rich, and is without flavor.

I first became interested in this operation early in 1880, through information obtained from a work translated from the French. I afterwards obtained other treatises on this subject, and soon became convinced of the advantages to be obtained by it. I made inquiries among veterinary surgeons, but could find none familiar with the operation. While making inquiries upon this subject I learned that Hon. Josiah Quincy had had the operation performed at his farm in Quincy nearly twenty years ago. I was told that it was a failure. To ascertain the facts in the case, I called on him at his home. He told me that spaying was performed under the direction of his foreman, and that although he lost a number of cows by the operation he considered it a success, and of great benefit to both the producer and the consumer of the milk; that the cows continued to give a large quantity of milk for a number of years, and that the milk was of a superior quality. It is by his permission that I refer to this. He also informed me that at one time he thought of publishing an article calling the attention of the public to the advantages of this method of producing milk.

My experience teaches me that it will increase the flow of milk and also improve the quality, and that although there will be a slight decrease at the end of a year, the daily average will be equal to that given at the time of the operation. I have one cow that was spayed in November, 1880, was then giving ten and one half quarts per day, and now, after nineteen months of constant milking, nine and a half quarts, and she now comes to the barn every night with milk flowing from her bag. To make a comparison: I have talked with those who have had a longer experience in keeping cows than I have. They all agree that this is a liberal estimate: a cow giving fourteen quarts of milk when she comes in is an extra good one; that at the end of ten months (she coming in once a year) she would not be giving more than three or four quarts, and that not suitable for use, at which time she should be dried off and not milked the other two months; or that an average of nine quarts a day for ten months and none the other two months is all that could be expected, and that this result can be obtained only under the most favorable circumstances. This would give 2736 quarts. Now I claim that under this operation a cow giving fourteen quarts may be made to average that for three hundred and sixty-five days in the year, as she would increase enough after the operation to make up for any slight shrinkage at the end of the year, making 5110 quarts against 2736 and also better milk.

I do not wish to lead any one to think that this operation is without risk, but after two years of practical experience I am convinced that the risk, when the operation is properly performed, is less than in ordinary cases of calving.

A YEAR'S EXPERIENCE IN TRACHEOTOMY.

BY GEORGE W. GAY, M. D.

During the year 1883 I performed tracheotomy twenty-one times for croup. Eleven patients recovered. All but one, a fatal case, were treated in the City Hospital. The cases were not selected, every one coming under our charge being operated upon if requiring it.

Many of the patients had diphtheritic croup, a few membranous, and, occasionally, it was not easy to make an exact diagnosis. Cases presenting enlarged glands and a nasal discharge early in the disease were undoubtedly diphtheritic. On the contrary, cases beginning as an ordinary cold, with no membrane visible in the fauces, no septic symptoms, but having a severe and constant dyspnœa, were called membranous croup. It is not of the utmost importance that much time be spent in discussing the difference between the two varieties of croup, considering the fact that both are extremely dangerous to life, and that both demand essentially the same treatment. Suffice it to say, that all of the cases presented severe and continued dyspnœa, due to an acute laryngeal obstruction of from one to five days' duration.

One patient was twenty-four years old (died); the age of the others varied from eleven months to nine years; a majority were four or five years old. The youngest who recovered was three.

The duration of the disease at the time of the operation ranged from one to eight days; the dyspnœa from one to five days. As a rule the shorter the period of obstructed respiration the more favorable the result.

No ether was used in eight cases, and only a few whiffs in the others; merely enough being given to partially control the struggling and fright. Generally the patient had rallied from the anæsthetic before the tube was secured in its place.

Two children died of shock and septicæmia a few hours after the operation; the other fatal cases survived from two to five days. None died from hæmorrhage. Death resulted from either bronchitis or blood poisoning. Every case but one derived more or less temporary relief from opening the trachea, and, so far as I know, no life was shortened by the operation. The upper rings of the trachea were usually incised, and also the isthmus of the thyroid, if necessary. In a baby lately operated on at the age of nine months the cricoid cartilage was divided with the result of greatly facilitating the introduction of the tube.

Venous hæmorrhage was quite free in many cases, but no trouble was ever experienced from blood getting into the bronchi. By inserting a tenaculum or hook into the trachea just below the cricoid cartilage and lifting it up the windpipe is under control, and it is not necessary that the rings be exposed before they are divided. At all events I have not found it to be so in many of my later operations. Beginners, however, had better see the rings before they cut them. The tube having been secured by tape, a piece of cotton flannel spread with cosmoline is placed between the plate and the skin to prevent irritation.

After Treatment. Milk, ice cream, and beef tea were the favorite articles of food. Nourishment was also administered by the rectum. Alcohol was never given unless the patient exhibited symptoms of marked exhaustion, when champagne was added to the diet. Several of the successful cases received no liquor during the treatment. Quinine and aromatic spirits of ammonia were given in every instance, while iron and chlorate of potash were not resorted to.

Next to nourishment, I consider *steam* to be the most important part of the treatment. It is conducted from the radiator through a rubber tube, and directed upon the neck of the patient. The vapor is warm, moist, and does not condense in sufficient quantity to saturate the clothing. Atomized or medicated liquids are not used at present. Lime water often produced a disagreeable erythema of the face, and thinking that possibly it might act as an irritant to the air passages, pure steam was substituted, and so far it seems to act as favorably as did any of the sprays formerly in vogue.

In all cases the patient received steam half the time, while to the more serious it was constantly supplied. The very great benefit derived from breathing the warm vapors was demonstrated beyond a doubt in many instances. Under its use the secretion would soften, the respiration would become easier, the child would become quiet, and fall asleep. The importance of a constant and generous supply of steam cannot be overestimated in this affection.

In the favorable cases the tube was worn from six to fifteen days; the average time being nine days and a half. I have found the most satisfactory way of getting rid of the tube to be as follows: At the end of a week, if the respiration is free, the tube is taken out quietly, and the child is let alone. No trials are made to see if he can breathe through his mouth. As the tracheal wound contracts natural breathing through the larynx is gradually restored. With one exception this plan has worked well. In the case of a little girl, after the tube had been taken out, occasional attacks of dyspnœa would come on, which were relieved by the nurse's opening the wound with the dilator, and turning on more steam. The child soon learned to call for this instrument whenever she felt an attack approaching. The use of the tube was not again resorted to, and in a few days the dyspnœa ceased, and the patient recovered.

I cannot close this paper without calling attention to the very great importance of having intelligent, skillful, and devoted nurses in charge of these patients. Two sets are necessary, one for the day and another for the night, and they should have received special instruction in taking care of the tube, and also in removing or replacing it in an emergency. I cannot but feel that my success during the past year was due in no small measure to the admirable care which the patients received from the nurses of the hospital training school.

RECENT PROGRESS IN THE CONSTRUCTION OF INSANE HOSPITALS AND MANAGEMENT OF THE INSANE.[1]

BY WALTER CHANNING, M. D.

CARE OF THE CHRONIC INSANE.

This is a subject which every year thrusts itself more and more on the public attention, and must continue to do so for some years to come. The opinions of alienists have been very different in regard to it, but they are gradually becoming more harmonious. Experiments of various kinds have been tried, the Williard plan proving the most successful, but not always the most practicable.

An often-proposed plan, now meeting with especial favor because of its expediency, so dear to the public heart, is that of the erection of additional buildings in connection with existing asylums. The last report of the Board of Health, Lunacy, and Charity [2] considers our present hospitals too large and too much occupied by the incurable insane to furnish the best treatment for curable cases. The Board favor the erection of small hospitals for the particular treatment of recent cases, leaving, it is to be inferred, the present hospitals filled with the chronic cases. Dr. Earle, superintendent of the Northampton Hospital, has recommended the building of a small hospital on the land owned there by the State.[3] The site spoken of is excellent, and the plan looks feasible. In Dr. Earle's opinion if there were no insane hospitals at all in the State it would be well to build ten or twelve small ones, judiciously scattered about the State, instead of the five large ones we have at present.

The "annex," as he would call the small one to be connected with his present hospital, would be about a quarter of a mile distant. It would have no independent barn, stables, laundry, etc., but would otherwise be erected like an entirely separate institution. The effect would be to give the hospital "the combined advantages of both a large and small institution."

In the "annex" the recent or curable cases should be treated, while the incurables would be cared for in the old hospital building.

At the Connecticut Hospital for the Insane the *chronic class* have been provided for in a supplemental building [4] for two years, the plan being the reverse of that recommended by Dr. Earle. This experience convinces Dr. Shew, superintendent of the hospital, that the plan of supplemental buildings is the true solution of the problem of how best to provide for the chronic insane. Dr. Godding has adopted the same plan at the Government Hospital for the Insane at Washington, D. C., and the State of Illinois has adopted it at Jacksonville.

Dr. Shew has found his supplemental buildings so successful that he wishes for another in which to place the sixty-seven epileptics now in the hospital under his charge.

Dr. R. S. Dewey [5] in a paper read last September before the Conference of Charities urges the adoption of the separate building plan for all classes of the insane. Among other arguments he presents is that of greater cheapness. Every State, he says, with 1,000-000 inhabitants has now, or soon will have, 2500 insane persons to provide for. The average cost *per capita* of the congregate or linear hospital, will be $1000, or $2,500,000 as a first appropriation for buildings alone. On the other hand, very good and substantial detached buildings, generally two stories in height, have been erected for sums varying from $200 to $500 per patient, or about one third the cost of the congregate asylum *per capita.*

FORCED FEEDING OF THE INSANE.

For a number of years, as well as at the present time, one of the fundamental principles in the treatment of the insane has been the administration of the most liberal nourishment, both in quality and quantity. Dr. Clouston has recently called particular attention to the subject.[6] He has given enormous quantities of eggs and milk, often a dozen of the former and six or seven pints of milk daily. This is an excess of nourishment, as he would formerly have thought, and even now food must be given in a hap-hazard sort of way, but he has seen patients gain two or three stone in weight, and acquire nervous stability, on the liberal diet he speaks of.

In America the subject of properly nourishing the insane by force, if not otherwise, was incidentally considered at the meeting of the superintendents of American Hospitals for the Insane, held in 1883. At this meeting Dr. Rogers read a paper,[7] in which he spoke of the need of abundant nourishment in mania and melancholia. "Food," he said, "may be given by the stomach pump, or nasal tube with a fountain syringe. . . . The will of the patient not to take food or medicine should never be an obstacle to the physician."

Dr. Hurd described at the same meeting in a paper read by him [8] the apparatus used by him in forced alimentation through the nose. This apparatus consists of a Jacques or Nélaton soft rubber catheter attached to the largest-sized Hall's health syringe. The catheter is passed through the nostril and food is injected by pressure upon a bulb provided with a valve.

In the discussion which followed the reading of Dr. Rogers's paper on the Therapeutics of Insanity, Dr. T. W. Fisher spoke strongly in favor of the use of the nasal tube, and said that the patient should be fed three times a day with large quantities of nutritious, liquid food. He had recently had very favorable results in nearly a dozen cases. In several he thought life was saved by the artificial feeding. Dr. W. W. Godding thought that it was almost criminally wrong to allow a patient to remain for more than a short space of time without food. Dr. J. W. Draper believed in the necessity of forced alimentation. Dr. W. B. Goldsmith thought that a large amount of food was necessary in acute maniacal excitement, but in melancholia with stupor and less exhaustion and waste, he thought a fourth as much nourishment would be sufficient. His practice was to put a patient in bed while he was fed with a tube, as his circulation and general nutrition would then be better. Dr. Catlett thought it best not to feed too soon, but ultimately if necessary. Dr. Hill used both the nasal and stomach tube in feeding, but tried moral suasion with patients first. Dr. Gale used the nasal and stomach tubes, but resorted to every other device first. Dr. Steeves thought it easy to fall into a perfunctory habit of using the tube, and continuing its use too long. A patient may at any time be induced to take food, and various expedients should be resorted to to restore the habit.

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[1] Continued from page 297.

[2] Fifth Annual Report, for 1883.

[3] Annual Report State Lunatic Hospital at Northampton, 1882.

[4] Eighteenth Annual Report of the Connecticut Hospital for the Insane for the Year 1883.

[5] Congregate and Segregate Buildings for the Insane.

[6] Annual Reports of the Royal Edinburgh Asylum for the Years 1881, 1882.

[7] Report on the Therapeutics of Insanity, by Joseph G. Rogers, M. D., American Journal of Insanity, January, 1884.

[8] The Minor Treatment of Insane Patients, by Henry M. Hurd, October, 1883.

The above and other members of the Association spoke on the subject of administering food to the insane. The articles chiefly recommended to feed with were milk and eggs, sometimes beef extract; combined with these things stimulants and tonics.

An elaborate and interesting contribution to the same subject has appeared in recent numbers of the *Archiv für Psychiatrie*, etc., by Dr. F. Siemens, Director of the Provincial Lunatic Asylum at Ueckermünde.[1] In the last number he says refusal of food by the insane is often a symptom of diminished tissue change and lack of assimilative power, and in such cases feeding should not be pushed too far. It is questionable if forced feeding attended with struggles and exhaustion on the part of the patient does not do more harm than the food does good. Melancholic patients with stupor are like animals dormant in winter, and a lessened amount of nourishment makes little difference to them.

The abstinence from food in typhoid fever is interesting as bearing on the question of nourishment for the insane. In this fever we see a patient live for weeks on almost no nourishment. From the investigations of Chossat it appears that until forty per cent. of weight has been lost life does not become extinct, and taking the supposed daily loss of weight, it would require a period of eight weeks in an average case of fever before death would ensue from this cause. The elevation of the temperature in the fever, a product of the combustion of tissue, would appear to be a means of prolonging the life of the emaciated patient. Cohnheim has said that *die febrile consumption als unmittelbare Todesursache keine zu grosse Rolle spielen.*

Numerous cases are to be found scattered through the writings of various authors, of prolonged abstinence from food. Among these are Falret's case of a forty days' fast; Wiegand's case of an insane person who lived for sixty-three days without food. Sondèn described a case in which only snuff was used for three weeks, and then for a period of thirty-five days nothing but water. The patient continued the entire time fresh and cheerful, although "sein Bauch ganz und gar einsank." He finally began to eat ravenously, and without the least injury. Bourneville's idiot fasted for twenty-eight days, during which time he had no passage of the bowels, little urine, no vomiting, fever, or pain. When three years old he fasted for three weeks, which seems to show that mentally defective children can endure abstinence better than healthy children.

Stolz, and later Schlangenhausen, described a remarkable case in a Tyrolean insane asylum. The patient was an old woman. She weighed, on admission, one hundred pounds, having previously fasted at home. She was fed artificially, but her weight sank to sixty-six pounds. She then fed herself, and her weight increased to ninety-six pounds. According to Schlangenhausen she was twenty-three years in the institution. She was fed with the tube 12,037 times, and for an unbroken period of twelve years, and her weight fell off to fifty-four pounds. She became scorbutic, lost her teeth, etc.

This case shows the extraordinary tolerance of this patient in regard to a great degree of inanition, and the existence of all the unfavorable conditions which the believers in forced feeding say are avoided by this process.

Dr. Siemens' investigations led him to give up forced feeding except in the rarest cases of injury or paralysis. Unwilling patients were fed with a spoon, but if they objected by closing the teeth, crying, etc., even this was given up. The means of giving food relied on consisted in keeping food constantly either where it could be given to the patient or he could get it himself.

A special department was fitted up in Dr. Siemens' asylum, with nurses day and night, and every wish or whim of the fasting patient was gratified at the earliest moment. After a long-continued fast the patient was put in bed. Little rooms were arranged where the patient could be alone with food. On the window-seats, or on little tables by the beds, food was placed. In cupboards tea and coffee were to be found, as well as raw and cooked eggs, fruit, wine, etc. With these very thorough arrangements, and the greatest care on the part of officers and nurses, Dr. Siemens allowed his patients to go for many days without food.

He details fifteen cases in which patients went for long periods of time without food. Case IV., for instance, of dementia paralytica, went once nine days, another time fourteen days, without food. Case VIII., of melancholia, abstained thirty-three days, with slight interruptions; loss of weight thirty-three pounds. Another time fourteen days, with thirteen pounds loss of flesh. Final result, complete recovery. Case IX., of mania, fasted absolutely for thirteen days; loss of weight fourteen pounds. Then took food regularly for twelve days. After this fasted for thirty days, taking water, however. Loss of weight the second time twenty-seven pounds. Final result, improvement.

Dr. Siemens ends his paper with twelve conclusions, some of which have been briefly indicated above. The fourth conclusion is especially interesting. This is as follows in substance: Voluntary abstinence, from purely psychical causes, is followed by no grave symptoms, either mental or physical, provided the period of abstinence does not exceed fourteen days without water, or fifty days with water, and the loss of weight does not exceed forty per cent.

— The chaplain of the Massachusetts Senate opened the session of the House the other day with a prayer for "pure air, pure water, and unadulterated food." The members will have a chance of showing their faith by their works, and at the same time of giving a striking illustration of the fulfillment of prayer.

— A case of poisoning of a New Jersey family recently occurred from the administration of "Rough on Rats" an arsenical preparation widely advertised, and carelessly handled by the public.

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[1] Zur Behandlung der Nahrungsverweigerung bei Irren, Arch. f. Psychiatrie und Nervenkrankheiten, Band xv., Heft 1, s. 15.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

SPECIAL MEETING.

February 27, 1884. Meeting called to order at eight o'clock, Dr. Robert T. Edes, Chairman, presiding.

The Chairman announced that Dr. Morris, of Philadelphia, who was expected to present an essay, was detained by sickness and would not be at the meeting. Dr. H. O. Marcy, however, had received the paper from Dr. Morris, and would read it. The title of the essay was

THE MILK SUPPLY OF LARGE CITIES.[1]

The paper was attentively listened to, and on its conclusion an interesting discussion was opened by

Dr. H. J. Barnes, who said: Personally my experience with the milk supply of Boston has provoked the greatest indignation. It begins as a producer on my father's farm sixteen or eighteen years ago, when we, in common with our neighbors, were in a continued state of irritation by what seemed unfair treatment by the contractors. The violation of agreement as to what they would pay for the milk of a stated season, the sending back of sour milk, usually with the cream taken off, the necessity of holding the milk ourselves when at certain seasons the contractors found they had engaged more than they could dispose of, were among the causes of trouble, which continue to the present time, judging from the expressions of views at the recent largely attended meeting of producers in Boston, and from the following letter just received from a milk producer: —

"The contractors hire the car, and although obliged to carry milk for private parties, yet they generally dictate terms, so it is almost impossible for producers to get at the consumers direct. Twenty-seven cents per can of eight and a half quarts, or three and three seventeenths cents per quart, is what my neighbors have had thus far this winter. This month one cent more per can, or three and one fourth cents per quart, while consumers, some of them at least, pay eight, and get extended "topped" milk at that. Producers are compelled to keep a part of their milk at home in order that these cormorants may supply to the good people of Boston milk watered and skimmed, with other abominations thrown in. Right glad would the producers be to send their milk direct to the consumers, if it were possible, but now it must go through the same old channel."

There is an inevitable variation in the supply and in the demand for milk. The farmers dispose of the milk to contractors who make a price for a certain time and agree to take all the milk the farmer produces. Often the quantity is much in excess of the demand and the contractor frequently breaks his bargain with the farmers, who then are obliged either to accept a smaller price for the milk or to make butter or cheese in order to utilize the surplus.

The laws of trade ought to regulate this matter, but if a farmer withdraws his dairy, and attempts to make butter he is met in competition by the manufacturers of oleomargarine, and it does not pay to make honest butter. One of the most objectionable features in our system of supply is the custom of holding the milk in Boston. In many instances milk produced in the morning is taken to the car in the evening, and transported to Boston during the night. The next forenoon it is delivered to the distributers, who take it to their barns or sheds, and there put it in the small service cans for delivery the next morning. It is then forty-eight hours old, sixty before the last meal of that day, and seventy-two hours old before a fresh supply is obtained. Except with the greatest care milk will not keep in good condition this length of time, and I am informed by men engaged in the business that it is common to use chemicals for the purpose of preserving it. The advantages of holding it this length of time accrue wholly to the milkman, for it gives time for "topping," so called, which means the rising of cream, rendering its easy separation from the milk possible, and how often this condition of the milk is taken advantage of we are informed by the analyses of the State Board. It had become a "recognized industry" among the milkmen. The milk should be delivered to the consumer on the day of its arrival in Boston.

As a consumer in Boston my experience has not been less exasperating. During the first few years of my practice I endeavored to employ cow's milk as a substitute for mother's milk, but always with indifferent success or failure, which necessitated its final abandonment. The paper of Dr. Lynde, read before the State Society, prompted me to try its use once more, and this time on my infant daughter. It soon provoked a diarrhœa, and after floundering about with the trial of a number of artificially prepared foods condensed milk agreed with her, and this was used until going into the country, where I obtained a supply of pure cow's milk, upon which she continued to thrive. Returning to Boston I engaged milk of a friend (?), who said he would give me pure milk, but the child soon showed the effects of the change in the quantity of water eliminated. It was impossible to keep her otherwise than in a constant state of irrigation, but not until a diarrhœa ensued, followed by intestinal catarrh, was the milk abandoned, and then only to be tried several times during the winter, again, each time, provoking disturbance of the digestive organs. Setting the milk for cream revealed the fact that it was regularly and systematically robbed of the cream. The following summer my child took cow's milk in the country, and did well. The next fall I made another change, after a long conversation with the new milkman, the substance of which was that I wanted "straight milk," as the life of my infant depended upon it. This he engaged to furnish, but, if possible, it was poorer than any I had ever before had. Although of the color of Jersey milk it had scarcely a trace of cream, and I went to the office of the city milk inspector to see what I could do about it. I was there informed that much of the complaint of adulterated milk was groundless, but if I wished to prosecute I should have the assistance of his office, but that "the department labored under great embarrassment for the want of a horse." I did not see fit to involve myself in litigation, and wrote to the milkman never to show himself on my premises again except to obtain a settlement of accounts, but up to this day he has never sent a bill. I then engaged milk which, I am happy to say, is of satisfactory quality, and my baby is doing exceedingly well with its use.

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[1] See page 315 of this number of the Journal.

I trust and hope the influence of this Society will be exerted in support of the State Board in prosecuting these ungodly men, who by their wickedness compromise the health and lives of our little ones, an expression you will not think too severe when you remember that of the samples of milk analyzed by the Board in Boston ninety per cent. were found to be adulterated.

In regard to putting the milk in glass jars, I am informed by Mr. Burnett that after a trial of one year he found it impracticable. The breakage amounted to a loss of $150 per month in a supply of four hundred quarts a day. He now uses large steel cans holding sixty gallons, and is enabled by their use to deliver the milk to consumers but twenty-four hours old, and this is certainly an advantage and would be a great improvement in the system of distribution of railroad milk.

A gentleman doing business in the way of supplying milk to the consumers in Boston, and a member of the Milk Producers Association, who was present at the meeting by invitation of the Secretary, spoke as follows: —

This question naturally divides itself into three distinct parts, the production, the transportation, and the city delivery. Let us first look at the subject from the stand-point of the producer. He may be a wealthy man, perhaps living in or doing business in the city. He owns a farm for the fun of it, and because he must have a way of providing a summer residence for his family. He buys first-class stock, hires men to do the work, makes a large quantity of milk, which is very likely not to be of a superior quality for the reason that all means possible are taken to produce a large flow of milk, and from the lack of personal supervision of the men who do the work. This is the class of men who are agitating all kinds of innovations, putting fancy names on their farms, and a team in Boston to sell their supply, which they add to if necessary by purchases from neighboring farmers. It is possible for them to find ways of disposing of it to personal friends in the city, and others who are led by judicious advertising or the desire to see a new thing succeed. That these methods are not business like is proved by the fact that there is hardly one genuine success in the large number who have at various times attempted it; and no opposition is feared so little by the trade as that from a farmer who undertakes to sell his own supply.

Next we find a large class of farmers who are not rich men, who are farmers because they must be; they may own their farms and stock clear, and may have business talent enough to read the papers, buy their grain at the right time, and dispose of their products to the best advantage. Milk being by far the most desirable of these products they naturally make all other interests subservient to it. Such men have from eight to twenty cans per day, give their personal attention to it, take pride in their reputation, and are a reliable source of supply. As such, they are in great demand, not only among the contractors, but the milkmen themselves, who maintain a jealous watch lest some one more favored by the contractor shall get what they esteem to be their best dairies.

A very general impression has gained ground from misrepresentation and ignorance, that the farmer is the victim of an immense monopoly from which he has no escape. Nothing can be further from the truth. Imagine one man, as described, with eight or twenty cans of eight and a half quarts each to sell. He can hardly be so located within thirty miles of Boston that he cannot choose to which of two or three contractors he will sell his milk, to say nothing of butter makers and creameries. If he is so near the car that he can deliver it himself so much the better for him; if he is not, a team belonging to some contractor will either pass his house, if on a main road, or if not he can carry his milk out to the corner of the main road, where it will be taken up as the collector passes. He receives a certain price for his milk delivered at the car, and the rates vary from one to two, or in some cases two and a half, cents per can for the carting, the collector being able to do the work for the minimum rate because he goes loaded, few farmers preferring to hitch up and drive three or four miles for sixteen to forty cents. If for any reason one farmer desires to be independent of the contractor, he can, as many do, make butter, or if he does not wish to do that, he can come to Boston and find a milkman who wishes also to be independent, and they having traded, notify the contractor, who is compelled by law to freight the milk, the price being regulated by the Railroad Commissioners.

A third class of farmers are those who keep only one or two cows and make a small quantity of milk, who never become an important factor in the problem. All these various producers raise fruit, vegetables, grain, and hay, and expect, if they sell them, to be subject to the law of supply and demand, and to be able to receive only so much as is the ruling price on the day the sale is made; but when we look at the milk question we find a very different state of affairs. Our farmers appoint a meeting of a committee from their number who consult on the price to be established for six months from April 1st to October 1st, or from October 1st to April 1st, as the case may be. The stipulations are that the contractor shall take all the milk produced for six months at a price which he is expected to name in advance, and pay for the same by the 15th or 20th of the month succeeding the delivery. He, using his best judgment, establishes such a price, and agrees that it shall not be changed except with the consent of the above named committee. When all the facts are considered it is not to be wondered at that mistakes are sometimes made. Has he a remedy? Let us see. The summer of 1882 was very hot and dry in August and the first of September. The price was arranged on a basis of forty-three cents per can at the cars in Boston. From September 20th to October 20th it rained a little almost every day, the fall feed was a marvel, the cows gave more milk than in June, and seventy per cent. of the milk that came to Boston was enough to supply the entire demand. The farmers added all the new-milch cows to their herds that could be bought, sold all their calves, and literally flooded the market. January 1st, after three months of ruinous business, the price was lowered three cents per can, trade was stimulated somewhat, and the supply was not in such a tremendous excess of the demand; but the six months' business was a disastrous one, owing to the mistake. On the other hand if butter had been high and grain high, and the fall as dry as the fall of 1883, the farmers would have felt perfectly justified in selling their cows if they wished, or keeping the calves to use the milk, or making butter, and the last thing in the world that would have troubled them would have been whether the people in Boston were supplied with milk or not. The short-sighted policy of the farmers in such respects, more than anything else, prevents the relations existing between them and their customers being as amicable as might be desired.

How to get cans enough to take all the milk he chooses to produce is the one great trouble every farmer has. The contractor tries to have every milkman furnish cans to take the milk from certain dairies, but has those of his own to send to supply any deficiency. These cans go up on the car dirty, and are left by the collector free of charge; are all of a size, eight and one half quarts wine measure. The farmer, having washed them, strains his milk into them, and puts them into the place he has arranged for cooling the milk. In many cases this is a covered tub or trough near the well or connected with running water from a spring. The contractor or milkman to whom he sells his milk frequently suggests and often helps to pay for this arrangement, which is of vital importance, as upon the care of the milk for twenty minutes after being drawn from the cow depends the value of it as an article of commerce.

How long milk may be preserved by good care and still be as good as fresh milk is a question upon which I would prefer the opinion of scientific men to my own. Certainly experience teaches that it is more desirable to most consumers (if they do not know of the fact) after twenty-four or even forty-eight hours. There is no trouble whatever in keeping it sweet three or four days, if a temperature of 50° F. is steadily maintained, but my experience also teaches that the baker must have as fresh milk as can be obtained if he wants to make a custard of it and get good results. A better cheese can be made from new milk than it is possible to make from that over twenty-four hours old.

The farmers, at their meetings and through the press, are frequently influenced by impractical men, who do not make milk, but who want to seem interested in their welfare, to do away with all middle men, and come directly in contact with the consumer. As before intimated, this has been done in isolated cases, but not yet successfully. Surely if practical men, of years of experience in the business, actuated by every feeling of rivalry and ambition, can see no way to improve the present plan, it is an indication that none can be found.

Let us now look at the second branch of our subject, transportation. Here enters upon the scene the much-berated milk contractor. This system has been the growth of years of experience, and many men have made financial shipwreck in the attempt to fill the position. With the plans and failures of the past we need have nothing to do, suffice it to say the only chance for any profit as it is now arranged is by saving a little here and a little there, by doing a large amount of work for a very small commission, and utilizing the surplus milk so as to make the smallest possible loss. The prices paid in the country as well as those obtained in the city are published, and the commission, about eight cents per can, or one cent per quart, is known to the farmer as well as to the milkman. The Railroad Commissioners, after thoroughly going over the matter, have allowed the contractor to charge six cents per can freight for milk brought thirty miles, which is a very close approximation to the actual cost. Out of this he has to pay freight to the railroad, buy ice to ice the milk in summer, and coal to heat the cars in winter, hire men to load the cars and deliver the milk upon its arrival in Boston, and guarantee it from accident or loss. If he buys and sells the milk he has two cents per can over the six for freight to protect him from loss in the transaction of his business and the surplus milk. As intimated before, he makes a one-sided contract by which he agrees with the farmer to take a large quantity if it is for the farmer's interest to make it, and to get along with a small quantity if the farmer thinks it is not in his interest to make it. On the other hand, he contracts with the milkman to give him just what he wants whether the farmers make it or not. In order to be safe he perforce buys all the milk on a large territory, preferring to manufacture a large surplus into butter to saying to his customers "I cannot supply you, and you must look elsewhere."

(*To be concluded.*)

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THE NEW YORK ACADEMY OF MEDICINE.

LOCOMOTOR ATAXIA AND SYPHILIS.

At a stated meeting of the Academy held March 20th, Dr. Leonard Weber read a paper on the above subject. He commenced by saying that although the pathologist had not succeeded in establishing such a condition as syphilitic sclerosis of the posterior columns of the spinal cord, there had been collected a certain amount of clinical evidence that went to show an apparent connection between syphilis and locomotor ataxia. In a résumé of the history of the subject he spoke particularly of the publication of Fournier in 1876, which was mainly based on statistical data, and which recognized three forms of tabes: (1) the lumbar, which was exclusively spinal, (2) the cephalic, in which the cranial nerves as well as the cord were affected, and (3) the ophthalmic or amaurotic. After alluding to the opinions and researches of other authors, he quoted the remarkable paper of Erb, published in 1879, in which out of 100 cases of tabes reported it was claimed that no less than 61 occurred in syphilitics. When Erb presented his views at the International Medical Congress in London, in 1881, however, they were not received with much favor, and among those Dr. Weber mentioned as distinctly opposed to them were Moxon, Lancereau, Westphall, and Rosenthal. But still more recently Erb has published a second series of 100 cases in which no less than 91 per cent. were syphilitic, while in 1200 patients over the age of twenty-five suffering from nervous affections other than ataxia only 22½ showed a syphilitic history. His conclusion was, therefore, that tabetic patients were very frequently syphilitic, and it was altogether probable that tabes was a syphilitic disease. His opponents claimed, on the other hand, that there was no ætiological connection between the two affections, and that the prognosis was no better in those tabetics who had had syphilis than in those in whose cases there was no such history. After giving statistics from various writers Dr. Weber then referred to the paper of Dr. R. W. Birdsall, of New York, read at the meeting of the American Neurological Association in June, 1883, in which he reported a series of 42 cases of locomotor ataxia with a percentage of only 9½ of syphilitics. In comparing the statistics of different observers, he continued, one could not but be struck by the very great discrepancy that existed in regard to the frequency with which tabes and syphilis were associated; but it was reasonable to suppose that it was not until quite recently that systematic attention had been given to the matter.

Having spoken of masturbation as a special predisposing cause of ataxia, he said that in all the cases of tabes that occurred in his practice he endeavored to exclude syphilis as a cause, as far as possible, by placing the patient for a time on specific treatment, and as the result of his experience it seemed to him that in certain instances there appeared to be some connection between syphilis and tabes, although it was not such a direct source of origin as rheumatic trouble. From a clinical stand-point there was a great difference between the symptoms in different cases, and great difficulty in ascertaining whether the diseased area was confined to the posterior columns or extended to neighboring parts, such as the lateral columns and the anterior cornua. In syphilitic tabes he believed that other parts were especially liable to be affected. The pathological and clinical manifestations of tabes were protean in character, and it was in the atypical cases that syphilis was most frequently found associated with or antecedent to it. As for the symptoms in general they were the same, as a rule, in syphilitic and non-syphilitic cases. In regard to the prognosis, this was relatively favorable when the syphilitic trouble was not of long duration, and when the symptoms were of irregular character and yielded to specific treatment.

It was a fact worthy of note that the results of antisyphilitic treatment had by no means fulfilled the anticipations formed by those disposed to accept the proposition that tabes was a syphilitic disease. The special treatment that Dr. Weber advised was a thorough course of inunction with mercurial ointment, as well as the use of iodide of potassium and baths. In all his cases of syphilis he had been more successful during the past ten years than during the ten years preceding, and he attributed this to the fact that ten years ago he had given up the internal administration of mercury, as a rule, and substituted inunction for it. While there might be occasional exceptional instances in which inunction would not be well borne, or could not be successfully carried out, he believed that all who would adopt this form of treatment would secure quicker, better, and more permanent cures than in any other way. In case of sudden and threatening outbreaks in old syphilitic patients there was nothing so immediately effective as large doses of iodide of potassium.

Out of 134 cases of syphilis in his practice the central nervous system was affected in 18, or 13½ per cent. In eight of the 18 the trouble was located exclusively in the brain, two of the patients being females and the other six males. In five (all men) it affected the brain and spinal cord both, and in five (one woman and four men) it was confined to the cord alone. Two of the first eight patients had died of cerebral syphilis. The other six were still alive, but not cured. Of the five in whom both the brain and cord were diseased, two had died and five were living, and of the last five one (the woman) had died of syphilitic hemiplegia. Dr. Weber then gave a brief outline of seventeen cases of locomotor ataxia which he had met with in his practice. Three of the seventeen patients had had syphilis, but in one case the syphilis was not contracted until several years after tabes commenced. In the two other cases it seemed to constitute an important ætiological factor. His conclusions were: —

(1.) That there was not sufficient evidence to show that syphilis was a direct cause of locomotor ataxia.

(2.) That there was plenty of proof that syphilis affected the cord, as well as the brain and meninges, and that it might be followed by tabes.

(3.) That such trouble occurred most frequently in those not efficiently treated.

(4.) That syphilitic lesions of the central nervous system were seldom, if ever, cured, and the necessity of early and long-continued treatment in all cases of syphilis was, therefore, apparent.

(5.) That the systematic use of inunction afforded the best means at our disposal for reducing the disease to early and harmless latency.

The discussion of the paper was opened by the President, **Dr. Barker**, who related three cases of paralytic and ataxic trouble, in only one of which there was a distinct history of syphilis, but in all of which marked benefit was derived from antisyphilitic treatment, though they were not apparently cases of true locomotor ataxia; and he said that he mentioned them simply to illustrate the point that light in regard to pathology was not infrequently furnished by the effect of therapeutic measures.

Dr. Amidon said that he desired to put himself on record as very much opposed to calling typical ataxia a syphilitic disease. This supposed connection between the two affections was based on purely statistical data, but Dr. Birdsall's carefully-recorded cases showed only 9.5 per cent. of syphilitic patients. The fact that the statistics of different authors, as given by Dr. Weber in his paper, varied to such a vast degree (the percentage of syphilitic cases ranging all the way from one to ninety-one per cent.) showed conclusively that statistical inferences were altogether worthless. In addition, the deduction that could be drawn from treatment showed that tabes was not a syphilitic disease. It might be true that a good many cases of apparent ataxia were relieved or cured by antisyphilitic treatment, but he was positive that not a single case of sclerosis of the posterior cords had ever been cured by such treatment. Dr. Amidon then spoke of the pathology of tertiary syphilis, illustrating the subject by a description of the localized and clearly defined cicatricial lesions resulting from the retrograde metamorphosis in gummatous deposits in the liver, and said that the characteristic lesions, affecting uniformly the whole tract of the posterior columns of the cord, were of an entirely different character. In conclusion, he said that the history of the entire course of the disease was against its syphilitic origin, for while its development was very slow and gradual the manifestations of tertiary syphilis appeared suddenly, and were characterized by great activity.

Dr. R. W. Taylor said that he had already placed himself on record as in accordance with the views just expressed, and he was very glad to perceive the cautious manner in which Dr. Weber had handled the subject. The possible syphilitic origin of tabes had been first hinted at by Duchenne, as he was naturally struck by the fact that in a considerable proportion of cases of ataxia coming under his care he found that the patients had had syphilis. Antisyphilitic treatment proved of no service in these cases, however, and he came to the conclusion that there was in reality no connection between the two diseases. Until Fournier's publication, therefore, the primary cause of ataxia was sought in sexual excess, alcoholism, gout, rheumatism, and exposure to cold; but when he reported that out of 30 cases no less than 24 were in syphilitic subjects, it began to be suspected that syphilis might be a very important factor in the causation of tabes. Having devoted some time to a consideration of Fournier's views, Dr. Taylor went on to say that in his last work that author had reported 94 syphilitic cases out of 103 tabetic patients. He also gave the statistics of a number of other writers (among them those of Rosenthal, one out of 65), and remarked that in these figures there was certainly sufficient disparity to throw doubt on any conclusions derived from them. In addition, he criticised the manner in which Erb and Fournier's cases were recorded, saying that it was painful to note the meagre and unsatisfactory data which they regarded as positive evidence of antecedent syphilis. As to the matter of pathology, he could only reiterate what he had said in the work in which he had acted as the collaborator of the late Professor Bumstead. Locomotor ataxia was known to be caused by sclerosis of the posterior columns, a lesion exactly limited to this portion of the cord, though often involving it to a considerable extent. The lesions of syphilis, on the contrary, were patchy and less diffused, and, moreover, always originated in investing structures, subsequently involving the cord itself. The same was true of cerebral syphilis, in which the lesions began in the meninges or bones and afterwards induced softening or induration of the brain. It was true that ataxic symptoms sometimes arose in the course of tertiary syphilis; but a careful study of the case would show that the trouble differed in many respects from true progressive locomotor ataxia.

Dr. Birdsall, having stated that he fully concurred in the conclusions of Dr. Weber in regard to locomotor ataxia and syphilis, said that the most of the cases which he had reported in his paper had been under his own personal observation. Out of 42 cases four were syphilitic, a percentage of 9.5, and he was surprised that this result differed so greatly from the statistics reported by Erb and some others. He then repeated the statistics given by various authors, and said that up to the present time, not including Erb's last hundred cases, there had been collected 525 cases, with an average of forty-three per cent. in syphilitics. This number, he thought, however, was entirely too small to base any definite conclusions upon. While, therefore, it would not do to ignore statistics altogether, any deductions derived from them in the present state of the question ought to be received with caution. In regard to Erb's remarkable figures, it might be explained that many of his so-called syphilitic cases would not be accepted as such by dualists, from the fact that he made no distinction whatever between chancre and chancroid, regarding the existence of either as conclusive evidence of syphilis; but if it was really found that there was a syphilitic history oftener in cases of ataxia than in other affections of the nervous system, the idea of a certain connection between the two diseases ought not to be rejected entirely. At the same time he was free to confess that up to the present no convincing proof of the existence of any such connection had as yet been presented. But while the lesions of syphilis in the nervous system were pretty well understood and generally recognized as distinctly different from those occurring in typical locomotor ataxia, the time might perhaps arrive when we should have to recognize syphilis, like sexual excesses, as one of the predisposing causes of ataxia.

Dr. E. L. Keyes thought that on account of the weight of authority supporting the figures the statistical element of the question could not be altogether disregarded. Personally, he did not believe that pure sclerosis of the posterior columns was caused directly by syphilis, but he could not see why it should be excluded altogether as a possible ætiological factor in tabetic trouble. Dr. Keyes had had one or two instances in his practice where ataxic symptoms had been distinctly relieved by antisyphilitic treatment. He used mercurial inunction and the iodide of potassium; commencing with the iodide, and pushing it to the limit of tolerance. In addition, baths were employed, in accordance with the Hot Springs method. While none of his cases had been cured, the benefit received had sometimes been so marked that he was fully convinced of the efficacy of specific treatment in certain cases with ataxic symptoms.

Dr. A. McLean Hamilton thought that the whole trouble in regard to the matter lay in the fact that two distinct forms of disease had been more or less confounded with each other, namely, classic sclerosis of the posterior columns of the cord and cerebro-spinal syphilis. In regard to the former he had found that not more than twelve per cent. of the subjects of it had ever had syphilis. In irregular ataxic cases there was a much larger percentage of syphilitics; and in these he had seen marked benefit derived from the use of iodide of potassium, given in the most heroic doses.

Dr. F. N. Otis said that it seemed to him that we could hardly afford to disregard the experience of such distinguished investigators as Erb and Fournier, however much we might ordinarily be disposed to distrust statistics. In their respective fields these men occupied the most exalted position, and their opportunities for observation and research had been unsurpassed in extent. Although his own personal experience on the subject was small, Dr. Otis said, his knowledge of syphilis in general led him to believe that the disease in question might, perhaps, be of syphilitic origin. As a disease of the connective tissue it acted apparently in the same way as syphilis when located in the testicle or liver, for instance. Having explained the pathological process in syphilis at some length he went on to say that the lines of cicatrization, which were characteristic of the late stages of the disease, were believed by the best authorities to follow closely the lymph distribution of the part or organ affected. When these cicatricial tissues were once formed there was very little hope left of accomplishing anything by way of treatment. He quoted from Erb to show that very little was yet known of the true character of the pathological process in locomotor ataxia, and stated that that recognized as taking place in syphilis would satisfactorily explain all the phenomena observed if it could be proved that the cord was supplied with lymphatic vessels. It was only a short time since the presence of these vessels had been demonstrated in the bones, and it was not improbable that ere long they would be shown to exist here also. The impossibility of removing cicatricial material by any therapeutical measures that had yet been discovered would also account satisfactorily for the fact that ataxia was not, as a rule, benefited by antisyphilitic treatment. That relief was afforded in a certain proportion of cases by specific treatment, however, was shown by some instances which had occurred in his own practice. In three cases of ataxia marked benefit had been derived from it, and in two of these he had found by the relief which followed the division of a contracted meatus that all the urinary trouble experienced was not due to the tabes alone. In all ataxic cases, therefore, he thought it best to give the patient the benefit of the doubt, and institute a thorough course of antisyphilitic treatment before giving up the case as altogether hopeless.

Dr. E. C. Spitzka said that he thought the question had been looked at from too narrow a point of view, since an important set of facts had been ignored. In secondary syphilis the cerebro-spinal axis was sometimes affected, and it had been shown that in certain instances there was complete abolition of tendon reflex. Why, then, might not this also take place in tertiary syphilis? In his own cases two thirds of the patients had had syphilis, though in none of the only four cases occurring in females which he had had was there any such history. After referring to paralytic dementia as a disease, which, like locomotor ataxia, frequently occurred in syphilitics, he said, in conclusion, that ataxia was not strictly a systemic disease, since other portions of the cord besides the posterior columns were not infrequently affected.

Recent Literature.

The Pathology and Treatment of Venereal Diseases. By Freeman J. Bumstead, M. D., LL. D., and Robert W. Taylor, A. M., M. D. Fifth edition. Revised and Rewritten, with many Additions, by Dr. Taylor. With One Hundred and Thirty-nine Wood-cuts and Thirteen Chromo-Lithographic Figures. Philadelphia: Henry C. Lea's Son & Co. 1883.

Few American books on medicine have met with greater success than Bumstead's Venereal, and the present edition by Dr. Taylor, whose name was associated with the original author's in the fourth edition, shows conclusively, if such a showing were necessary, that the mantle has fallen upon no unworthy shoulders.

In his preface Dr. Taylor pays a tribute to the memory of his friend and colleague which deserves repetition in speaking of the book which remains as his proudest monument: "No nobler figure is to be found in medical literature. As a man he was broad, genial, and lovable; as an author he was erudite, clear, and concise; and as a physician in his department he was preeminent. As the French can point with pride to their still living Ricord, and the Germans to their deceased Sigmund, so we Americans can point to our Bumstead as the pioneer and master. His friends loved him, he was respected by every one who knew him, and all bowed the head in sorrow when he passed from among us."

The first edition of Bumstead's Venereal Diseases was published in 1861 "with many misgivings" on the part of the author. It met with unexpected success in our own country, and was translated into more than one foreign language. It was not the author's first appearance as a writer, as he had previously edited and translated Hunter's Venereal with Ricord's Notes. The second edition of the Venereal Diseases appeared in 1864, the third in 1870, and the fourth, with Dr. Taylor as coadjutor, in 1879. These various editions show in general the prevailing beliefs at the time of publication among syphilographers, and the series forms a history of the progress of syphilography during the past twenty years. As an instance of the beliefs that have figured largely only to disappear we need but refer to the chapter on syphilization, which, in the third edition, was even illustrated with a full-page outline figure showing the site and date of a very large number of inoculations. In the present edition the subject has shrunk to a scant two pages, and is regarded only as an interesting matter of history. The brain and nervous system, which were supposed to suffer but rarely from the ravages of syphilis at the time of the first edition, now occupy a position of great prominence in connection with the disease, and their consideration fills many pages.

The recommendation of the abortive treatment of gonorrhœa is retained in this edition, and, though guarded, it might quite as well have been omitted. With the abandonment of the belief in a single specific virus in gonorrhœa the principal logical argument for a belief in the efficacy of a substitutive medication is gone. The directions for its use allow it only in one case in a hundred, and never after acute symptoms or scalding have set in. It is not every one who can feel sure of a diagnosis between the slight mucous discharge of a bastard gonorrhœa and the beginning of the more severe form before the scalding appears. Logical as this treatment was to the believer in the specific contagium of gonorrhœa its actual working was unsatisfactory, and its use is condemned by the majority of recent authors, even those who retain a belief in the specific nature of the disease to be cured.

Slight additions have been made to the text which show the present state of belief in regard to the existence of syphilis in animals and micro-organisms as a cause of syphilis.

The growing size of the book has already rendered it somewhat ponderous as a text-book for beginners, for which the earlier editions were better qualified, and has made a place for smaller hand-books which avoid discussions on unsettled questions, and confine themselves to plain statements of facts and principles. At the same time certain things might be pointed out which are by no means fully treated, as the subject of syphilis and marriage, which has a slight mention in this last edition. But after all, after pointing out what one believes to be its sins of omission and commission, after saying that it is too large for a manual and too small for a complete treatise, it remains to repeat what has been said of it in almost every notice which has appeared from the first edition to the present time, that it is certainly the best single treatise on venereal in our own and probably the best in any language.

Bacteria and the Germ Theory of Disease. By Dr. H. Gradle. Chicago. 1883.

This little book contains a series of eight lectures delivered at the Chicago Medical College. There is nothing new or original in the compilation, and it merely adds another to the list of such works, already too long. Its value and the necessity for its publication must be entirely local.

— The students at Edinburgh numbered, last year, 3340. When its new buildings are completed it is claimed it will be the largest university in the world.

Medical and Surgical Journal.

THURSDAY, APRIL 3, 1884.

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THE SANITARY CONDITION OF THE SCHOOL-HOUSES OF THE CITY OF LYNN.

We have before us a report of a special committee, of which Dr. J. G. Pinkham was the chairman, appointed to examine into the sanitary condition of the school-houses of Lynn. The city of Lynn being a place of 44,000 inhabitants, occupied largely in manufactures requiring a considerable degree of intelligence, and having, apart from this, every reason ourselves to believe that it is possessed of at least an equal public spirit and appreciation of the advantages of a public school education as other places of its class in the State of Massachusetts, the results of the committee's investigation should present more than a passing interest for parents and for those concerned with school hygiene, especially as one or two points seem to have been worked out by the committee in their report with more than ordinary care. Moreover, the Hygiene of Study, of which we spoke in our last issue, is a vain problem without hygienic surroundings.

We shall confine our comments to the two important particulars of lighting and ventilation, the defects in which, as shown by the Lynn schools, no doubt exist largely elsewhere in this State, and if in Massachusetts, where so much attention has been given to public schools, then probably in a still greater degree elsewhere.

In the matter of lighting the committtee adopt the usual minimum standard of authorities on this subject, which is, that the size of the windows collectively should equal at least one sixth of the floor space or sixteen per cent. Cohn, in Germany, requires a ratio of at least a fifth or twenty per cent.

In Lynn it was found in ninety-one school rooms that the ratio of window surface to floor space was too small, in some being as low as a twelfth, or eight per cent. only. Of the large grammar school buildings only one is reported as well lighted, the percentage of window to floor space being sixteen; in the other buildings this percentage ranges from ten to thirteen, and, we are told, the evil of insufficient light might easily have been avoided in the construction of these buildings had the architects (or builders?) been reasonably well informed in regard to the amount of light required in school rooms.

"Out of one hundred and twenty rooms visited, only three have light from the front; four have windows at the right only; four at the left only; twenty-eight at both sides, nineteen at the rear and both sides. The remaining rooms are lighted from the rear and one side. The middle rooms in two buildings, eight in number, have one window on each side near the back part, so that the light practically all comes from the rear, with reference to the greater number of pupils, — a very objectionable arrangement. In some school rooms with side windows the strongest light comes from obliquely in front of the pupils; as, for instance, in the building on Baltimore Street, where the light from the windows near the rear is cut off by trees. This difficulty could be obviated in a measure by reversing the arrangement of the desks.

"In many rooms the window sills are on a level with, or below, the eyes of the pupils seated.

"One building in particular is arranged on the worst possible plan. Both ends of the building are taken up by entries, shutting out light and air from the four rooms on every side except one. Sufficient light and air are clearly impossible under these conditions. The rooms on the north side, constituting one half the occupied part of the building, are absolutely sunless during school hours."

To the subject of ventilation especial attention was given by the committee, and the report shows a condition needing especial attention. As a standard of purity of air for respiratory purposes, that laid down by Dr. Parkes was adopted, namely, that air containing more than six parts of carbonic acid per 10,000 volumes (.06 per cent.) is unfit to breathe, and that with a ratio of eight, nine, or ten parts per 10,000 the air smells stuffy and close, and beyond this becomes foul and offensive. Accurate analyses of the air of a certain number of school rooms were made by Professor Hills, of the Harvard Medical School, and are given in the following table taken from this report, in which is included an analysis of air from out of doors, taken at the same time. It is fair to suppose that in all the instances given the carbonic acid had no other source than the respired air from human lungs, and therefore represented the measure of irrespirability of the atmosphere.

Place.	Day.	Hour.	Tem. of Room.	Outside Tem.	Carbonic Acid per 10,000 Vols.
Room 10, Whiting School	Nov. 28	11.25 A. M.	72° F.	40° F.	18.15
Primary No. 14, School Street	Nov. 28	11.35 A. M.	70° F.	40° F.	17.05
Primary No. 12, Baltimore Street	Nov. 28	11.50 A. M.	72° F.	40° F.	12.65
Primary No. 33, Chase Avenue	Dec. 3	3.45 P. M.	68° F.	25° F.	29.10
Master's Room, Shep. School	Dec. 3	4.00 P. M.	70° F.	25° F.	17.95
Primary No. 30, Elm Street	Dec. 5	10.28 A. M.	68° F.	41.5° F.	17.21
Primary No. 8, Parrott Street	Dec. 5	11.35 A. M.	68° F.	41° F.	15.17
Master's Room, Cob'et School	Dec. 6	11.30 A. M.	76° F.	41° F.	12.82
Out of Doors. Silsbee Street	Dec. 6	11.55 A. M.	–	41° F.	3.69

These analyses show the air in some of the rooms to be *very bad*, much worse in some instances than that of school rooms in Boston as exhibited in the second report of the Massachusetts Board of Health, and these analyses gave far from favorable results, as may be seen by the following table giving a portion of the analyses taken from the report of the Board: —

AIR OF SCHOOL-ROOMS IN BOSTON.

Grammar Schools.	Date.	Hour.	Carbonic Acid per 10,000 Vols.
Myrtle Street	March 24, 1870.	10.25 A. M.	13.43
Dartmouth Street	March 25.	10.30 A. M.	12.91
Hawkins Street	March 29.	10.20 A. M.	9.74
Tremont Street	March 29.	3 P. M.	14.33
Waltham Street	March 29.	8.30 P. M.	12.11
Common Street	March 30.	10.05 A. M.	17.68
Blossom Street	April 5.	10.30 A. M.	19.03
Richmond Street	April 11.	10.10 A. M.	17.78
Primary Schools.			
Appleton Street	March 25.	3.15 P. M.	10.09
Hanover Street	March 28.	10.30 A. M.	14.29
Poplar Street	April 5.	11.15 A. M.	11.17
North Bennet Street	April 6.	10.25 A. M.	16.82
Richmond Street	April 11.	10.20 A. M.	8.10
Phillips Street	April 12.	10.20 A. M.	8.97

OTHER LOCALITIES FOR COMPARISON.

	Date.	Hour.	Carbonic Acid per 10,000 Vols.
Music Hall, Tremont Street	May 4	4.05 P. M.	14.04
Tenement House, known as "Crystal Palace"	May 17.	2.30 P. M.	09.53
Hall of Y. M. C. U.	April 27.	9.05 P. M.	15.23
Municipal Court Room	April 20.	1.30 P. M.	12.04
Office Secretary of State	March 22.	2.45 P. M.	8.91
Printing Office	April 4.	3.30 P. M.	16.18
Selwyn's Theatre	April 11.	9 P. M.	14.43
St. Paul's Church	April 15.	11 A. M.	5.92
Public Library, Waiting Room	March 19	2.30 P. M.	13.66
Public Library, Waiting Room	April 20.	7.50 P. M.	19.35
Out of Doors	May 17.	2.50 P. M.	3.97

The Lynn school rooms from which air was taken for analysis are said to be representative of the rest, and the reasons given for the condition found are that (1) the cubic air-space allowed to each scholar is too small, making good ventilation without draught difficult or impossible; (2) the means of ventilation employed are, as a rule, wholly inadequate for their purpose, and would be so, in most instances, even if there were much less crowding of the rooms.

The cubic air-space per scholar in the majority of the rooms is reported at less than 200 feet, in some being but little over 100 feet. The inadequacy of such a provision is readily shown by remembering that with the minimum air-space (220 cubic feet) allowed by authorities on hygiene the air would have to be changed seven times every hour to provide even 1500 cubic feet of fresh air per hour, or half the amount held to be necessary for adults. It is extremely difficult to effect the change of the air of a room as often as seven times in the hour without creating an objectionable draught. From one room, that of the Principal of one of the schools which was tested, air was found to be escaping from the outlets at a rate giving a change of not quite once in two hours, the Scylla of a draught having here been avoided for the Charybdis of impurity, or, as is more probable, very little thought having been given the subject.

Even the American brain is still subject to natural laws, and will not perform its functions, much less develop properly, in an impure or poisonous atmosphere, although the too common condition of school rooms and court rooms shows that such expectations are tacitly entertained of it. The Egyptian task-master was far less unreasonable in demanding from bondmen bricks without straw than are our own people in demanding from fellow-citizens and their own offspring sound and invigorating mental labor without a suitable supply of oxygen.

It is hoped by the reporting committee that the evils at Lynn are sufficiently plain to lead to the appointment of a supervisory committee. In these columns we have frequently had occasion to advocate the appointment of health supervisors or instructors in hygiene. We have no prejudices as to the title or composition of the office intrusted with hygienic supervision of schools in cities and large towns, but continue unaltered in the conviction — the expression of which has hitherto, it must be confessed, borne but little visible fruit — that such supervision should be provided and intrusted to special and qualified officers.

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THE FOOT AND MOUTH DISEASE.

The recent introduction of this distemper by means of an importation of some infected cattle into the country at Portland, Maine, its dissemination to a certain extent among neighboring native cattle, its supposed subsequent outbreak first in Kansas, then in Iowa and Illinois, seems to indicate that there exists at this time, among those whose duty it is to prevent just these occurrences, an amount of carelessness or ignorance entirely inexcusable, and which, if continued, will surely lead sooner or later to causes that will in their effects upon our public health and wealth be most disastrous and lasting. To show this let us, very shortly, review facts as reported from various sources.

During the summer of 1881 "under authority conferred by the sundry civil appropriations bill" the Secretary of the Treasury on July 16th appointed three persons upon a commission to be known as the "Treasury Cattle Commission." Of these three, the chairman was a veterinary surgeon, another had practiced as such for a long time, and the third was an editor of a live-stock journal. To this commission, after a time, it came to establish at several of our ports quarantine stations that they might *aid* the government in preventing the importation and spread of exotic contagious diseases of cattle, two of which, specific pleuro-pneumonia and epizootic aphtha, were well known to exist in Great Britain, from whence we were receiving numbers of animals.

The Board labored with this newly imposed duty, and among other results there was established at Portland a "cattle quarantine," to reach which, as we are informed, cattle landing from the steamers must be driven for a considerable distance over a public highway upon which it is possible for them to meet or be followed by other and native cattle without any restraint whatever; and to the actual occurrence of this chance is due the existence of foot and mouth disease among cattle about Portland. If the statements of competent eye-witnesses concerning the methods, or perhaps it would be better to say the lack of methods, pursued within the "quarantine" are correctly reported, the negligence and stupidity of those in charge of it are almost beyond belief. One instance, as related to us by a person who witnessed the incident, will perhaps suffice to show this sufficiently for present purposes: —

Some imported cattle coming to the station a little time after the diseased cargo, were put by themselves in a barn at some little distance away from the sick ones. Upon a certain occasion it became necessary to have for a little time a few extra men in attendance upon them, and one of the members of the commission, who happened to be present, ordered that certain men who were then in attendance upon the diseased animals be called to come directly and give the required assistance. To this the owner promptly objected, referring the matter to his own veterinary surgeon, there present, who sustained the objection; the order was countermanded, and the blunder prevented.

When it is understood, as it is among all properly qualified men, that the contagious principle of foot and mouth disease is surely and easily conveyed by media, as of clothing, ropes, pails, litter, and the like, one is forced to the conclusion that this unqualified member of the commission had better be superseded by a capable man, or else that the government holds itself fairly open to the criticism of keeping an establishment for the propagation of contagious diseases among cattle. Is it that even this service must be so strangely mixed up with politics and political expediency in this country that nothing but a *show* of action in this direction is tolerated by the authorities at Washington? Or is it, perhaps, that properly qualified men are so few among us that their services for this work cannot be obtained. Let us look at another phase of this same matter.

During the month just passed we were informed by the daily papers, which had received the news by telegraph, that foot and mouth disease was reported by "the United States veterinary surgeon at Fort Leavenworth," who had been detailed to investigate the matter as existing in a certain part of Kansas. In the dispatch there followed such a description of the nature of the outbreak as to lead any one with a knowledge of matters of the sort to decide at once that whatever the disease was it was *not* "foot and mouth."

Rapidly following this outbreaks were reported from at least two other States. Much excitement was worked up, and a large appropriation was obtained to "stamp out" what we were told, a little while after, by another governmental veterinary surgeon, if he is correctly reported, was "ergot in the hay." In view of the rather farcical ending of the whole matter we can this time — if we do not belong to the veterinary profession — afford to smile, but still the more thinking mind will ask itself what the meaning of all this is. In the first place the government has employed an unqualified man; in the second, one who is a graduate of a school in which the total time demanded for professional study is something less than ten months. Perhaps we need look no further. If it is true that the "principles and practice" of veterinary medicine are to be "picked up," or even that the science is to be sufficiently mastered by about nine months of special study, what cause of wonder is there that these mistakes occur, for it cannot be a science of any depth or stability. On the other hand, if it is true that there is a real science of the sort, which can, by being allowed to exercise its proper function, be made to do service in protecting public health and domestic industry, then why is it that a government, which should foster the interests of the people, is so unfortunately advised in this matter?

The general public is beginning to realize how important a bearing the diseases of domestic animals and their control by proper measures resulting from their intelligent study is destined to exert upon the material prosperity of the country. People do not yet appreciate, however, the intimate connection which a more exact ætiology and pathology have shown to exist between many of the diseases of domestic animals and of men. This very foot and mouth disease which has of late been occupying so much attention is an excellent illustration of such connection. An extensive epidemic of aphthous sore throat at Dover, England, having its origin in a dairy supplied with milk from infected cattle, is at this very time under investigation by the medical health officer of the district. That man is liable to contract the disease has been sufficiently proved before.

We do not know how many epidemics, among animals and human beings, nor how much loss must take place before the needed lessons are taken to heart, but fear that the process will be expensive if not slow.

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MEDICAL NOTES.

— Dr. D. Humphreys Storer, of Boston, celebrated his eightieth birthday last week, when "honor, love, obedience, troops of friends," found themselves appropriately and happily sheltered beneath his roof.

— The Legislature of Connecticut, in session at Hartford, passed a bill recently prohibiting the sale, for hotel or family use, of any ice cut from waters made impure by sewage, mill refuse, etc. There was no objection in the bill to the use of such ice by market men or others for preserving articles. After a very short debate a member rose with an amendment that the bill should not go into effect until next November. He frankly stated that one of his constituents had a lot of impure ice, and as he had expended his money in cutting and housing it it was only fair that he should be permitted to sell it wherever he could. In spite of the whimsical character of this objection the House, to the surprise of everybody, agreed to the amendment. The Senate promptly concurred, but within the next few days so many indignant protests were received that the Senate, last week, recalled the bill, and struck out the obnoxious amendment.

— M. Jaccoud, in an analysis of a large number of temperature charts in typhoid fever (*Journal de Médecine*, February, 1884), shows that the general impression as to the average date of the attainment of the maximum temperature in that disease is not correct. Not the sixth to eighth day, but the fifth represented the maximum; in fact it was not very rare for the maximum to be reached on the second day. In the light of these observations it evidently is unsafe to exclude typhoid on the score of having a temperature of 104° F. on the second or third day. The examination of these charts showed that precocity of the fever constituted a rather unfavorable element of prognosis.

— At the "Health Exhibition" to be held in South Kensington, England, in May next, food, dress, the dwelling, and the workshop are to form the staple attractions. The exhibition of food will, we learn from the *Lancet*, be international, and will embrace raw food substances from all parts of the world, and the different methods of preparing food which are in vogue in different countries will be fully illustrated. The storing, conveying, and preserving of food, as well as its adulteration, and the diseases produced by unwholesome food, will all form the subject of exhibits. Educational machinery and the hygiene of the school-room will also form subjects for illustration. Surgeons J. S. Billings and J. S. Brown, United States Army, have been detailed to attend this exhibition. They will also represent the United States Army Medical Corps at the International Medical Congress, which will convene at Copenhagen in August next.

— The question has been raised as to the frequency of epilepsy in the colored race, by the following remark of Dr. Lawson Tait in a discussion as to deafness in white cats (*Nature*, xxix., 164): "Every kind of white animal I have kept as a pet has proved to be the subject of epilepsy; and the association is suggestive, when we are told, as I have been frequently, that the disease is unknown among negroes." In *Science*, February 29, 1884, Alexander Graham Bell, in a communication, denies this assumption regarding the colored race, at least in America. Another writer, in the same periodical, claims that epilepsy is more frequent in negroes than among whites, which claim is apparently borne out by the following table furnished Mr. Bell by General Seaton from the unpublished figures from the tenth census: —

Percentage of epileptics in the United States, 1880, *by race and sex.*

White male	.004749
White female	.003751
Black male	.005011
Black female	.004267
Indian male	.002942
Indian female	.003084
Chinese male	—
Chinese female	.020925

NEW YORK.

— The annual commencement of the New York College of Pharmacy was held at Steinway Hall on the 17th of March. The graduating class numbered seventy-one, and among them there were two young women.

— The projectors of the new cancer hospital have published a letter from the late Dr. Sims in regard to the matter, written a few weeks before his death, in the course of which he says: "A cancer hospital is one of the great needs of the day, and it must be built. We want a cancer hospital on its own foundation, wholly independent of all other hospitals. . . . Its medical board ought to be men who go into it with zeal, determined not only to give temporary relief to human suffering, but to do something toward discovering better methods of treatment. We are now making great progress in every department of medicine. Why should not cancer derive some benefit from this general onward movement? Doubtful points of practice can only be settled in the wards of a great hospital, and success in treatment can only here be demonstrated. We want a medical board of large and liberal views. I would take knowledge wherever it can be found. I would invite any man who claimed to have a specific to come and try his remedies under the supervision of a committee specially appointed for that purpose. I would offer a large premium for any improvement, whether in constitutional or local treatment. I would do everything to obtain practical knowledge on this subject, regardless of the source from which it emanated. . . . Let me beg you to take steps at once to inaugurate a movement which must culminate in a great work so much needed here and now. The subject of cancer is too large and its interests too great to be lodged in a pavilion subsidiary to any other hospital, whether special or general."

Correspondence.

ARTIFICIAL INFLATION OF THE COLON WITH GAS.

Boston, *March* 20, 1884.

Mr. Editor, — In regard to the artificial inflation of the colon with gas, as recommended by Professor von Ziemssen, and mentioned in No. 12 of the Journal, it may not be wholly useless to quote the statement of Austin Flint in his Practice of Medicine,[1] who, in treating of Intussusception, says: "I have known rupture to result from the injection successively of an acid and alkaline liquid, giving rise to the evolution of gas by combination within the intestine." It is also on record that injections of water, given to relieve intussusception, have ruptured a portion of normal intestine, below the displaced part, so that it seems clear that, in clinical experiments, we should keep very far on the safe side of an "enormous degree of inflation" or even "extreme expansion" of the colon.

Respectfully yours,

Herman F. Vickery, M. D.

Dr. Flint gives no particulars as to the condition of the intestine to which he refers, nor do his words indicate whether the accident occurred within the writer's personal knowledge or was merely reported to have happened. On the other hand, V. Ziemssen's language is very explicit, especially in regard to the experiments on intestines immediately after death. We should think by following the suggestion as to introducing the acid and alkali in divided portions any danger of rupture would be easily avoided. Water, from its weight, is probably more dangerous than gas. — Ed.

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[1] Fifth edition, 1881, page 490.

Miscellany.

A CONTRIBUTION TO THE SURGERY OF THE BRAIN.

A patient was recently exhibited by Dr. Macewen before the Pathological and Clinical Society of Glasgow,[1] whose brain had been operated on for the relief of left hemiplegia, and who has recovered the power of movement to such an extent as to enable her to walk freely about, though with a paraplegic gait, to raise her arm to the level of her shoulder, and to grasp with considerable power, though there is a deficiency in coördination of movement of the hand.

She had a syphilitic history. The hemiplegia was preceded by a tingling sensation and a numbness of the left arm and leg, which increased until it ended (within six weeks from its commencement) in complete motor paralysis and a deficiency in the perception of touch. The left side of the face was also slightly affected. This was accompanied by mental confusion and loss of memory. Full antisyphilitic treatment had been tried along with counter-irritation to the head, previous to her coming into the Royal Infirmary, and while she was in the medical wards of that institution. These did not seem to have relieved in the slightest the condition spoken of above.

Trephining was performed over the middle of the ascending frontal and parietal convolutions. The internal table of the disk removed was found softened and thicker than usual, having on its internal surface a series of projections or roughnesses, some protruding for nearly one eighth inch beyond the general level. A second opening was made over the occipital region, and a similar thickening of the internal table was found. Opposite to the first opening the dura mater was paler than normal, and somewhat thickened. It was elevated, and a false membrane of yellow color, and about one sixteenth of an inch in thickness, was removed. An incision was made into the brain in the direction of the paracentral lobule, when a gush of grumous red-colored fluid escaped out of the opening. Its quantity was not measured, as it could not have been collected. Approximately, there would be about a couple of drachms. The brain pulsations previously were not discernible, but, after the escape of this collection of fluid, it was thought that very feeble pulsations were seen. Some of the surgeons standing by doubted the presence of the cerebral pulsation. The disks of bone were carefully divided into segments and replanted, and are now quite firm. Wounds treated without pus production.

The day after the operation the patient expressed herself as very much better. On the third day she moved her toes. Within a week she lifted her leg from the bed and stated that she was so much better that she could turn in bed, and believed she could walk. The fingers were moved within a week. Her mind greatly changed for the better, her memory improving, and her intelligence becoming much brighter. She can now walk freely about, and does a considerable amount of domestic duty in the ward. She lifts her arm to the level of her shoulders, and can grasp with considerable force.

In the discussion which ensued upon the exhibition of the patient the improvement was attributed to the result of the operation by surgeons who had seen the patient before it was performed. Regarding the division of the disk of bone before its replacement, it was held by one speaker that it was a decided advantage to divide the disk of bone into parts, and he was of opinion that it would be a still greater if the centre of the disk were perforated before dividing it, so as to admit of the insertion of a small drainage tube. Granulation tissue was apt to block up the spaces between the particles of bone and prevent free drainage. Dr. Macewen in closing the discussion said that on two occasions he had introduced the disk of bone entire: one did well; a small portion of the other necrosed, and the whole had is consequence to be elevated. The advantage of having the bone in small pieces was that you could, under these circumstances, easily remove the affected portion and leave the remainder.

THE SURGICAL ABUSE OF SPONGES AND OF SILVER WIRE.

Under the somewhat sensational title of "Seven Surgical Follies," Dr. John B. Roberts (*Polyclinic*, February 15th) considers what he calls the ether folly (the abandonment of ether for chloroform on account of lack of knowledge of how to secure anæsthesia by the former), the incision folly (too short incision), the styptic folly (use of styptics to control hæmorrhage), the adhesive plaster folly (plaster in the place of sutures), the dose folly (inadequately small doses), the sponge folly, and the suture folly. On these last two points he says: —

"What I term the sponge folly is the habit of employing sponges for absorbing blood from wounds, when napkins or towels are always obtainable, and are far less liable to introduce septic material into the wound. Sponges, while too expensive to be thrown away after each operation, are cleaned with great difficulty. Servants and nurses, therefore, not appreciating the importance of thorough cleansing and disinfection, often neglect this duty. Hence I prefer towels, and if I do an operation at a patient's house, always use clean towels obtained there. Thus I secure an almost certain immunity from purulent or septic dirt in the articles used for absorbing blood. Perfectly clean surgical sponges are the exception, but clean household towels are the rule. At the polyclinic I use for this purpose, to a considerable extent, Japanese paper napkins, which are thrown away after being once used. Absorbent cotton is too expensive for such uses, except to a limited extent, and besides, has a tendency to leave filaments entangled in the wound."[1]

Regarding the "suture folly," the author says: —

"I do not refer to the erroneous opinion, long held, that sutures should not be used in the scalp. This tradition has been disproved so often that few surgeons would now hesitate to use sutures as freely in the scalp as elsewhere. What I call the suture folly is the adherence of many to the theory that silver wire only should be employed for suturing purposes. Nothing could be more fallacious. Do we use silver hare-lip or acupressure pins? Why, then, employ silver sutures, when iron wire is stronger and far cheaper? When large and gaping wounds require the sutures to stand much tension, silver wire, if used, must be very thick. Iron wire of much smaller diameter, and therefore much more flexible, gives an equally strong suture, and in addition to being better adapted to the purpose is much cheaper. I recollect that, in hospital practice, nearly eight years ago, I discarded silver wire, which cost one dollar for each small coil, and bought, at a hardware store, enough iron wire for ten or fifteen cents, to last many months. The nicest iron wire I have seen, and which I now use for the purpose, because it is strong, very flexible, and free from elasticity, can be bought for five cents a spool. If it becomes a little rusty, it can be rubbed clean in a moment, should the operator object to the small amount of oxide of iron upon it."

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[1] Glasgow Medical Journal, February, 1884.

[1] We learn by a note in another part of the same journal that these Japanese napkins are found by Dr. Roberts as efficacious and clean as cotton ones, and are so cheap that they can be thrown away after being used. They cost from $6 to $7.50 a thousand. The cost of washing a large number of ordinary towels is thus avoided. The paper towels are scarcely suitable for drying hands after washing, unless several towels are used at once, because the large amount of moisture on the hands soon saturates a single towel. For removing blood from wounds, a paper towel is crumpled up into a sort of ball and then used as a sponge. Such balls absorb blood rapidly. The crude ornamental pictures, in color, on the towels, are of no advantage, nor are they, as far as is known, any objection.

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NEW FACTS ABOUT DR. O. W. HOLMES.

The following amusing instance of English insularism was handed us by a friend who chanced to consult a paper on Oliver Wendell Holmes, his Writings and Philosophy, by Robert F. Green, which occupies thirty-two pages of the thirty-fifth number of the Proceedings of the Literary and Philosophical Society of Liverpool for 1881. Among other "facts" about Dr. Holmes the writer gives these: "Besides the Professorship at Dartmoor, he founded and carried on a medical school at Tremont and had a large private practice."

It must be confessed that this is no more singular than the biography of Tennyson we recently saw in an Indiana newspaper headed by a cut of Longfellow.

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THE BERLIN POLICLINIC.

The Berlin Policlinic, 3 Fiegelstrasse, celebrated last November its first anniversary day. During this time more than two hundred medical men, amongst them many strangers, have attended it.

Specialties are taught in monthly courses which begin every first working day of the month and last every day during the whole month except Sunday and holidays.

To the Berlin Policlinic two laboratories, one for chemistry and one for histology, are attached. In both medical men find ample opportunity for executing researches on scientifical objects. The first of January a third laboratory, destined for working in Bacterioscopy, will be opened. At the same time a monthly course of Bacterioscopy will join the other courses.

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RELATIVE COST AS LEGAL STANDARDS, OF UNITED STATES PHARMACOPŒIA AND DISPENSATORY.

It is to be presumed that those who wish to have the United States Dispensatory, a commentary upon the Pharmacopœia, substituted for the Pharmacopœia itself as the legal standard for drugs in this State, at the least wish it to be always the latest edition of their favorite authority. As it is now the fifteenth edition of the Dispensatory which comments upon the sixth revision of the Pharmacopœia, if they wish to keep up with their standard they must buy a copy of that work twice and a half as often as they would of the Pharmacopœia, the present standard, and as the retail price of the Pharmacopœia is $4, while the Dispensatory is $8 — twice as much — it would cost them, even at the present rates, just five times as much to enjoy their desired uncertain standard. But as the publication of the Pharmacopœia began thirteen years before its commentary, the Dispensatory, and the price of the former edition of the Pharmacopœia was only about $1.50, while that of the Dispensatory has always been about as much as now, it would, with the former editions of these works, have cost really much more than this.

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ELECTRIZATION OF THE SYMPATHETIC AND PNEUMOGASTRIC NERVES, WITH SIMULTANEOUS BILATERAL COMPRESSION OF THE CAROTIDS.

Dr. J. Leonard Corning, of New York, writes in the *New York Medical Journal* (February 23d) advocating a method of electrization which he believes to possess a substantial value.

Advantage is taken of the fact that at a point situated between the angle of the lower jaw and the hyoid bone, on the one hand, and between the internal border of the sterno-cleido-mastoid muscle and the continuation of the tracheal line on the other, one may embrace by one electrode three important structures at once, namely: (1) the internal carotid; (2) the pneumogastric nerve; (3) the sympathetic nerve. Besides these important structures, we have the jugular veins, adjacent subsidiary nerve-stems, etc. Taking into account the physiological functions of the three principal structures named, it will be seen that galvanization exerts a threefold action on the encephalon, due to (1) diminution of the amount and pressure of the cortical blood-stream; (2) contraction of the cerebral capillaries; and (3) retardation of the heart's action (*when currents of considerable strength are employed*).

The apparatus consists essentially of a bifurcated conducting rod admitting of the application of an electrode on the two sides of the neck simultaneously, with provisions for adjusting accurately the current through each pole. Of course, precautions are laid down in view of the importance of the structures acted upon. The amount of compression of the vessels as well as the strength of the current must be carefully watched. Dizziness and syncope must never be allowed to be produced.

Therapeutically the author reports admirable results in congestive headaches, which may be cured in a few minutes. He also has hopes (the experience being not yet sufficiently extended to prove their success) of its value in epilepsy and incipient general paralysis. The galvanic current is generally preferable to the faradic.

Besides the more obvious physiological effects already referred to, the author notes the following phenomena in connection with the procedure described: (1.) Dilatation of the pupil. (2.) Drowsiness. (3.) Dizziness (where too great pressure or excessively strong currents are employed). (4.) Drooping of the eyelids. (5.) Retardation of the heart's action (where strong currents are used. (6.) Pallor about the lips and upper portion of the face. (7.) Muscular weakness, as proved by the dynamometer; the subject, if standing, complains of weakness in the knees. (8.) If the compression and strength of the current be great, syncope may be produced. (9.) Diminution of the temperature over the parietal bones. Lombard's thermo-electric differential calorimeter shows a very considerable difference between the peripheral temperature and that of the head. (10.) Very interesting is the observation that the primary stage of excitement incident to etherization is cut short by resort to this method, and the amount of the anæsthetic required proportionately reduced.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 22, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	672	—	15.30	18.30	2.55	3.90	3.60
Philadelphia	927,995	376	141	23.76	15.93	1.35	7.56	3.24
Brooklyn	644,526	252	104	16.00	16.20	4.80	4.40	2.40
Chicago	632,100	204	86	20.58	11.76	.98	6.86	3.92
Boston	423,800	198	61	16.32	14.28	6.12	6.12	2.55
Baltimore	408,520	157	61	18.56	17.92	1.28	5.12	2.54
St. Louis	400,000	143	44	12.60	9.80	.70	4.20	1.40
Cincinnati	272,400	102	31	7.84	20.58	.98	1.96	—
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	102	33	18.62	17.64	1.96	2.94	10.78
Pittsburg	180,000	61	25	11.12	11.12	—	3.28	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	17	7	—	23.52	—	—	—
Nashville	54,400	17	7	11.76	41.16	—	—	—
Charleston	52,286	25	6	4.00	20.00	4.00	—	—
Lowell	71,447	28	14	14.28	10.71	3.57	7.14	—
Worcester	69,442	18	11	—	16.66	—	—	—
Fall River	62,674	16	6	12.50	12.50	—	6.25	—
Cambridge	60,995	25	6	12.00	16.00	—	8.00	—
Lawrence	45,516	21	5	23.80	14.28	—	4.76	—
Lynn	44,895	20	2	—	12.00	—	—	—
Springfield	38,090	12	3	16.66	8.33	8.33	8.33	—
Somerville	31,350	6	3	—	33.33	—	—	—
Holyoke	30,515	10	5	40.00	—	10.00	—	—
New Bedford	30,144	16	4	6.25	12.50	6.25	—	—
Salem	29,503	13	4	23.07	38.45	7.69	—	—
Chelsea	24,347	8	2	12.50	25.00	12.50	—	—
Taunton	22,693	6	3	16.66	—	—	16.66	—
Gloucester	21,400	6	0	—	16.66	—	—	—
Haverhill	20,905	5	1	—	20.00	—	—	—
Newton	19,421	6	0	—	33.33	—	—	—
Brockton	18,323	3	0	—	33.33	—	—	—
Malden	15,273	2	0	—	—	—	—	—
Newburyport	13,947	6	2	—	16.66	—	—	—
Fitchburg	13,433	3	3	66.66	—	—	—	—
Eighty Massachusetts towns	347,988	75	13	14.66	17.29	—	5.32	—

Deaths reported 2641 (no reports from New Orleans, Buffalo, and Milwaukee): under five years of age, 694: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 434, consumption 425, lung diseases 406, diphtheria and croup 125, scarlet fever 98, diarrhœal diseases 54, typhoid fever 43, measles 20, whooping-cough 20, puerperal fever 19, erysipelas 18, cerebro-spinal meningitis 17, typhus fever six, small-pox three. From *typhoid fever*, Philadelphia 14, Chicago five, New York, Brooklyn, Baltimore, and Lawrence three each, Boston, Cincinnati, Pittsburg, and Holyoke two each, St. Louis, District of Columbia, Fall River, and Salem one each. From *measles*, New York eight, Baltimore six, Philadelphia and Brooklyn two each, District of Columbia and Pittsburg one each. From *whooping-cough*, New York four, Pittsburg three, Philadelphia, Boston, Baltimore, Cincinnati, and Fitchburg two each, Brooklyn, District of Columbia, and Cambridge one each. From *puerperal fever*, Chicago seven, St. Louis three, New York two, Philadelphia, Boston, Baltimore, Cincinnati, Nashville, Salem, and Northbridge one each. From *erysipelas* New York 10, Chicago three, Baltimore and St. Louis two each, Philadelphia one. From *cerebro-spinal meningitis*, New York six, Chicago, St. Louis, Lowell, Lawrence, Holyoke, Quincy, Woburn, Amherst, Holliston, Nantucket, and Natick one each From *malarial fevers*, New York five, Brooklyn and St. Louis two each, Philadelphia and Baltimore one each. From *typhus fever*, New York and Brooklyn three each. From *small-pox*, Philadelphia two, Nashville one.

Five cases of small-pox were reported in St. Louis, Cincinnati one; scarlet fever 35, diphtheria 13, and typhoid fever 11 in Boston.

In 101 cities and towns of Massachusetts, with an estimated population of 1,428,666 (estimated population of the State 1,955,104), the total death-rate for the week was 18.21 against 17.07 and 20.31 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending March 8th, the death-rate was 22.5. Deaths reported 3773: acute diseases of the respiratory organs (London) 384, whooping-cough 138, measles 109, scarlet fever 94, fever 44, diphtheria 25, diarrhœa 25, small-pox (Sunderland seven, Birmingham four, Liverpool two, London and Wolverhampton one each) 15. The death-rates ranged from 13.8 in Birkenhead to 35.1 in Preston; Birmingham 19.6; Bradford 20.2; London 21.3; Leeds

21.7; Leicester 22; Sheffield 24.5; Liverpool 25.6; Nottingham 26.2; Blackburn 26.9; Sunderland 28.4; Manchester 29.3. In Edinburgh 20.3; Glasgow 27.5; Dublin 26.

For the week ending March 8th, in the Swiss towns, there were 49 deaths from consumption, lung diseases 22, diarrheal diseases 25, diphtheria and croup 12, whooping-cough 12, typhoid fever five, erysipelas two, puerperal fever two. The death-rates were, at Geneva 35.7; Zurich 11.8; Basle 13.9; Berne 33.3.

The meteorological record for the week ending March 22d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 16	30.234	32	40	26	77	41	68	62	NW	NW	W	7	21	8	O	C	C	—	—
Mon., 17	30.158	38	46	26	66	49	82	66	SW	SW	W	5	17	12	C	O	C	—	—
Tues., 18	30.317	36	42	32	60	48	60	56	NW	NW	NW	20	13	4	C	C	C	—	—
Wed., 19	30.190	36	41	28	68	52	100	73	NE	SE	E	1	11	28	O	O	R	—	—
Thurs., 20	29.819	36	39	32	100	100	89	96	NE	N	NW	16	17	8	R	S	O	—	—
Fri., 21	30.296	37	43	34	62	77	93	77	NE	E	S	8	9	2	O	O	C	—	—
Sat., 22	30.240	44	57	31	72	46	77	65	W	W	NW	8	10	5	C	C	C	—	—
Mean, the Week.	30.179	37	44	29				71										36.05	1.91

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MARCH 22, 1884, TO MARCH 28, 1884.

Hammond, John F., colonel and surgeon. Now in New York City, on sick leave of absence, will, after the expiration of his sick leave, await orders in that city. Paragraph 8, S. O. 70, A. G. O., March 26, 1884.

Gibson, R. J., first lieutenant and assistant surgeon. Relieved from duty at Fort Hays, Kans., and ordered to Fort Wingate, N. M., for duty. Paragraph 3, S. O. 58, headquarters Department of the Missouri, March 18, 1884.

Crosby, William D., first lieutenant and assistant surgeon. Relieved from duty at Fort Huachuca, A. T., and ordered to Fort McDowell, A. T., for duty. Paragraph 1, S. O. 20, headquarters Department of Arizona, March 15, 1884.

Edie, Guy L., first lieutenant and assistant surgeon. Assigned to duty at Fort McIntosh, Texas.

Robertson, Reuben L., first lieutenant and assistant surgeon. Assigned to duty at Fort Ringgold, Texas.

S. O. 33, paragraphs 3 and 4, headquarters Department of Texas, March 17, 1884.

Gandy, Charles M., first lieutenant and assistant surgeon. Assigned to duty at Fort Brady, Mich., as post surgeon. Paragraph 6, S. O. 56, headquarters Department of the East, March 22, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MARCH 29, 1884.

Green, E. H., passed assistant surgeon, to the Greely relief steamer Thetis.

Marsteller, E. H., passed assistant surgeon, to the receiving ship Colorado, New York.

Bryan, I. H., passed assistant surgeon, resigned, to take effect April 10, 1885, with leave of absence till that time, and permission to leave the United States

Rush, C. W., passed assistant surgeon, to the Naval Academy.

Gynecological Society of Boston. — The next regular meeting of the Society — a quarterly meeting for informal discussion — will be held at the Medical Library Rooms, second Thursday of April, at four o'clock P. M. It is especially desired that all members should be present. Lunch served at this session. **Henry M. Field**, M. D., *Secretary*.

Suffolk District Medical Society. Special Meeting. — A special meeting of the Suffolk District Medical Society will be held at 19 Boylston Place on Wednesday, April 9th, at 7.45 o'clock, to appoint delegates to the meeting of the American Medical Association. By order of the President.

H. C. Haven, *Secretary*.

The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, April 9th, at eight o'clock. Dr. F. I. Knight will present a paper upon The Laryngeal Complications of Pulmonary Phthisis. Drs. S. W. Langmaid, E. W. Cushing, and F. H. Hooper will open the discussion. Dr. G. L. Walton will read a paper entitled Hysteria as affected by Removal of the Ovaries. Dr. John Homans will open the discussion. **Albert N. Blodgett**, M. D., *Secretary*.

Books and Pamphlets Received. — History of the Discovery of the Circulation of the Blood. By Henry C. Chapman, M. D. Philadelphia: P. Blakiston, Son & Co. 1884.

The Cinchona Barks Pharmacognostically Considered. By Friedrich A. Flückiger, Ph. D. Translated from the Original Text, with some Additional Notes, by Frederick B. Power, Ph. D. With eight Lithographic Plates and one Wood-Cut. Philadelphia: P. Blakiston, Son & Co. 1884.

Illustrations of the Influence of the Mind upon the Body in Health and Disease. Designed to Elucidate the Action of the Imagination. By Daniel Hack Tuke, M. D., F. R. C. P., LL. D. Second American from the Second English Edition. Philadelphia: Henry C. Lea's Son & Co. 1884.

Thirteenth Annual Report (Year 1883) of the Board of Directors of the Children's Hospital of the District of Columbia. Washington. 1884.

Transactions of the Medical Association of the State of Missouri at its Twenty-Sixth Annual Session, held at Jefferson City, Mo., May 15–17, 1883.

Eczema and its Management. A Practical Treatise based on the Study of 3000 Cases of the Disease. By L. Duncan Bulkley, A. M., M. D. Second Edition. New York: G. P. Putnam's Sons. London: J. & A. Churchill.

Medical Education and the Regulation of the Practice of Medicine in the United States and Canada. Prepared by the Illinois State Board of Health, and Published by permission of the Board. Revised and Corrected to March 1, 1884. Chicago: W. T. Keener. 1884.

Circulars of Information of the Bureau of Education. No. 1. 1884. Meeting of the International Prison Congress at Rome, October, 1884. Washington. 1884.

Sixth Annual Report of the State Board of Health of the State of Connecticut for the Fiscal Year ending November 30, 1883. Hartford, Conn. 1884.

Lectures.

THE OPERATION OF OVARIOTOMY.

A LECTURE DELIVERED BEFORE THE FOURTH CLASS STUDENTS IN THE HARVARD MEDICAL SCHOOL.

BY JOHN HOMANS, M. D.,

Surgeon to the Massachusetts General Hospital, and Clinical Instructor in Harvard University in the Diagnosis and Treatment of Ovarian Tumors.

In publishing the following lecture to students it may be proper for me to say that I have opened the abdomen for various purposes two hundred and three times. I have done the operation of ovariotomy one hundred and fifty-nine times. My first five cases of ovariotomy were performed without any antiseptic precautions whatever and all died. In the next one hundred cases I used antiseptic agencies, including spray. Of these thirteen died and eighty-seven recovered. Since then I have operated for ovariotomy fifty-four times with four deaths. My last thirty cases have all recovered. I ought, in this connection, to say that I have never declined to operate but once, the patient in that case having been already tapped to the amount of 2270 pounds in five years. I have operated upon all the other cases that have come to me, and although my late continued success is doubtless owing to good fortune, I feel that I can now perhaps do the operation better than I could at first.

THE OPERATION OF OVARIOTOMY.

Preparation of the Patient. Usually little preparation is required. For forty-eight hours before the operation I restrict the diet to flour gruel made by boiling equal parts of milk and water together for about an hour, gradually adding the flour until the gruel is made smooth and free from lumps. I order half an ounce of castor-oil about twenty hours before the operation, and an enema just before etherization. The object of these measures being to empty the bowels completely so that they will not interfere with the operation by their distention, nor by being plugged prevent the passage of flatus afterwards. If the patient has not taken a hot bath for some weeks, and if her strength will permit, I order one the day before operating.

The Anæsthetic. Ether is the best. It does not cause much vomiting if nothing is taken into the stomach for five or six hours before its inhalation.

Menstruation. I prefer not to operate while the menses are present, and seldom do so. The best time is about two days after the catamenia have ceased.

Exceptional Procedures. Sometimes it is necessary to tap the patient a week or two before ovariotomy to enable her to breathe more easily, to take more food, to lie down, to secrete more urine, or to lessen her weight and size that she may bear transportation. I have done it in exceptional cases for all these reasons. I drew by tapping sixty pounds of ovarian fluid from a woman in a tenement house out of town, brought her to the city in an ambulance,[1] and removed an ovarian tumor weighing fifty pounds. We could hardly have transported this woman with a tumor weighing one hundred and ten pounds. Again I have in six instances operated while a hæmorrhagic flow was going on from the uterus, because the catamenia had come on so irregularly that after waiting and postponing the operation it seemed that no calculation could be made. All these patients recovered.

Instruments required. A scalpel, a probe-pointed bistoury, a director, dissecting forceps, Nélaton's cyst forceps (at least six pairs), two Dawson's clamps, strong compressing forceps, with short and long blades for holding bleeding points, or bands of adhesions, of these about a dozen pairs, a large trocar with rubber tube attached for emptying the cyst, retractors, needles, a needle holder, carbolized silk and catgut, a steel sound, a catheter, Dieffenbach's hæmostatic forceps, Paquelin's thermo-cautery, and an aspirator (all the metallic instruments except the knives should be nickel-plated), three dozen towels, about forty clean soft sponges of various sizes, which have been soaking for several weeks in a five per cent. solution of carbolic acid. I have three barrels filled with solutions of carbolic acid, and these barrels are kept full of sponges. Each barrel is used alternately. Some of my sponges have been soaking for ten years. I formerly used sponges but once, but now I use them over and over after they have been cleaned; hot water bottles to put about the patient; several large clean tin pails, brandy, an enema syringe, plenty of hot water to wash the sponges if the operation should be bloody or protracted, several clean rubber aprons for myself and my assistants, that I may not soil my clothes, nor be thinking about it, a strap to buckle over the patient's knees and under the table, and wristlets to confine her hands.

Spray. I always use the spray and need a steam atomizer. I do not believe that the spray is absolutely essential, but I have had very good success with it, and have never known that it has done any harm.

There are other instruments that I carry with me, but those mentioned above I consider *necessary*, because although you will often need only a scalpel, a director, a pair of dissecting forceps, sponges, ligatures and sutures, yet you may need *all* your other instruments when you least expect to. *Never economize* when preparing for ovariotomy. Besides these things you will need the dressings for the wound, carbolized gauze and cotton-wadding, to fill up the void made by the removal of the tumor. You will also need a broad strip of sticking-plaster and a flannel binder to put around the patient over the dressings. I always wash my hands and forearms thoroughly with a nail-brush in carbolized water before beginning an operation and require my assistants to do the same.

Operating Table. A narrow operating table is necessary in order that your patient may be easily within reach from either side, eighteen or twenty inches being about the right width. In a private house I usually put two or more small tables or stands together, or lay a narrow ironing board from one table to another.

Etherization. The patient is not etherized in the operating room unless her respiration is very labored, in which case you may wish to shorten the period of etherization as much as possible. The dress having been tucked up, and the lower extremities covered with a blanket, the patient should be securely fastened to the table. For this purpose a broad strap is buckled around the table over the patient's knees, and her wrists are secured in soft padded leather wristlets connected by straps beneath the table. The abdomen is then uncovered and the carbolic acid spray (three per cent.) turned on. The abdomen is next wiped with a clean carbolized sponge, and two minute incisions, or marks, are made about two and a half inches apart between the umbilicus and pubes in the linea alba, as a guide after the rubber sheet is in place. The spray is then shut off, and the skin of the abdomen dried with a clean towel. A rubber sheet about a yard and a quarter square, having a hole eight by four inches in the centre, through which the operation is performed, and the edges of which hole have been spread with adhesive plaster, is then applied to the abdomen, this sheet covering the patient to the neck and below the knees.

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[1] Loaned by Dr. Whittemore, Superintendent of the Massachusetts General Hospital.

Positions and Duties of the Seven Assistants. I like to have seven, but I can get along with a less number. No. 1 etherizes. No. 2 stands opposite me on the patient's left hand, and helps to put compressing forceps on the bleeding points before the peritoneal cavity is opened. He then compresses the abdominal parietes, and after the cyst is removed ties vessels or keeps the intestines within the abdominal cavity if they tend to escape. No. 3 arranges and gives me the instruments. No. 4 stands on my right hand, sponges the wound, and catches any cyst-fluid that might run back into the abdomen. No. 5 stands on my left hand and draws up the peritonæum at the upper part of the wound, so that I may tap the cyst as high up towards the sternum as the incision will allow. He also gets the Paquelin's cautery ready when I am about to divide the pedicle. No. 6 supplies No. 4 with sponges, and me with towels, which he has kept clean and warm. In keeping the sponges ready for me he has much the most active duty among the assistants in a long and difficult operation. Finally, assistant No. 7 oversees the spray, and keeps a tally upon paper of the number of sponges placed in the abdomen and taken out. This duty is a responsible one. This plan is simpler than counting the sponges beforehand, as it sometimes happens that a sponge is torn in two, and as the important point is not to sew up a sponge within the abdomen I think it safer to count those that go in and come out rather than all the sponges before and after the operation scattered about the room.

Perfect silence should be kept by all the assistants and spectators.

The steps of the operation are these: (1.) Make the incision down to the rectus muscle. (2.) Stop all bleeding in the abdominal walls. (3.) Open the abdomen and explore for adhesions. (4.) Tap the cyst as high as possible. (5.) Detach the adhesions. (6.) Draw out the cyst and clamp the pedicle with Dawson's clamp, burn it off with the cautery, tie it, and remove the clamp. (7.) Examine the other ovary, and remove it if necessary. (8.) Thoroughly sponge out the abdominal cavity. (9.) Close the wound. (10.) Apply the dressings, and put the patient in bed.

(1.) The incision should be made in the median line rather nearer the pubes than the umbilicus, and at first less than three inches long, to be extended upwards if necessary, but always to the left, because the umbilical vein runs upwards to the liver on the right. This incision generally suffices, and one beyond five inches is rarely necessary. (2.) All bleeding must be stopped before the peritonæum is opened. I use compressing forceps, and prefer the little instruments called Dieffenbach's forceps. To each one I tie a piece of small fishing line about twenty inches long, and put a little weight of lead at the other end. When I see a bleeding point I pick it up with the little forceps and throw the weight and line over the patient's side. I attach this line in order that none of the forceps may fall into the abdomen if I knock them off. It is much easier to work through an opening surrounded by these little instruments than through one bristling with forceps, each one of which is five or six inches long. (3.) Explore with your hand or with a nickel-plated steel sound for adhesions, unless the cyst obviously slides down and up with the breathing of the patient. If the tumor is surrounded by ascitic fluid a certain amount runs out, and is conveyed by the rubber sheet into a pail on the floor. If there are adhesions to the walls you may separate them more or less before disturbing the cyst, although you must be careful not to rupture it. But adhesions to the omentum and intestines are better left till you have emptied the cyst by tapping. (4.) Tap the cyst with the large trocar, and be sure that the end of the rubber tube is in the tub under the table, or else the fluid will run over the floor. As the fluid escapes the cyst becomes flaccid, and can be drawn out. After some of the fluid has escaped I draw up the wall of the cyst on the trocar, and fasten it by the lateral toothed clamps, which hold it tightly. The canula thus fastened becomes an excellent handle, and with it the cyst is drawn out. If in tapping I happen to strike a small cavity and do not lessen the size of the tumor much, I seize the cyst wall with two or more of Nélaton's cyst forceps and hold it outside the wound while I withdraw the trocar and pass my hand into the tumor to break down the septa, if they are not too vascular and solid. If I think it unsafe to break down the interior of the cyst on account of probable hæmorrhage within the cyst, I withdraw my hand, wipe it carefully on a carbolized towel, and enlarge the incision. I now lift the tumor out of the abdomen, and secure the pedicle in Dawson's clamp. If there are serious and extensive adhesions to deal with, I sometimes secure and divide the pedicle. Then I have the tumor more movable, as it has been freed from its attachments to the uterus and broad ligament. I also know that no hæmorrhage can be going on within the cyst. All this time the assistant opposite me and the one on my right hand are carefully preventing any cyst fluid from running back into the abdomen. (5.) Separate the adhesions. While the tumor is being withdrawn, adhesions to the parietes, to the omentum, or intestines will show themselves. If they do not seem vascular they can be separated by the fingers. If vascular they may be divided by the cautery, or tied with catgut or silk in two places, and divided between the ligatures.

If a portion of the cyst wall is very adherent to the bowel it is best to cut out the adherent part and leave it. I then peel off its inner secreting surface if I can without doing violence. Great delicacy must be used in handling adhesions to the bowels or liver. I now examine the separated omentum for bleeding points, or leave it till the cyst has been removed and then do so. It is best examined by spreading it out on a warm carbolized towel. If bleeding vessels are found they must be tied, and the ligatures cut short. (6.) I clamp the pedicle with Dawson's clamp, because this squeezes the pedicle tighter than I can do it with a ligature, and then pass a small needle, threaded with a loop on which hangs a long silk ligature, through the pedicle close to the sulcus made by the compressing clamp, then I divide the loop and remove it. Next, after surrounding the pedicle and protecting the intestines by a warm carbolized towel, I burn through the pedicle with

Paquelin's cautery. I pass my ligature before dividing the pedicle, lest the latter should happen to slip out of the clamp and escape me while I am burning it off. After the pedicle is divided the tumor (which has been supported by an assistant that it may not drag on nor tear the pedicle) is removed, and the pedicle, still held in the clamp, is tied with Tait's knot, which I have described to you, and which you will find figured in his book. I now remove the clamp, and if there is no bleeding I cut the ligature close to the stump and let it drop back into the pelvis. I used to leave the ends of the ligature long until I was ready to close the abdomen, and then pull the stump up and cut them off, but one may possibly forget all about the ligatures, and leave several feet of silk unnecessarily within the abdomen, or the search for them may be tedious, as they may wind themselves around the folds of intestine and mesentery, and tear them when being withdrawn. The use of Dawson's clamp and the cautery are not absolutely necessary, but I feel safer when I use them. (7.) Examine the other ovary, and remove it if it contains cysts of the size of a filbert or is otherwise diseased. (8.) Thoroughly sponge out the abdominal cavity with sponges prepared as I have told you. I am particular in mopping up the spaces between the uterus and rectum and the uterus and bladder. I use soft sponges about two and a half inches in diameter, held in Nélaton's cyst forceps. When my sponges come out dry and clean I leave one in its holder behind the uterus, and do not remove it till I have passed all my stitches through the abdominal parietes, then if it comes out wet I resume my sponging before closing the incision. (9.) I put a soft, flat sponge over the bowels beneath the wound, and proceed to put in my sutures. These include the peritonæum and all the different layers of the parietes, and are best passed by having a needle at each end of the suture, and passing each from within outward with a needle holder. As the sutures are passed the opposite assistant ties the ends loosely together, and the assistant on the right hand wipes off any blood that may ooze from the needle holes externally, while the flat sponge within catches any that may run down from the holes made by the needles in the peritonæum. I now remove the little compressing forceps or "snappers," as I call them, and generally find no bleeding going on. I withdraw my sponge from Douglas's space, take out the flat sponge, and tie the sutures. Then I put in any superficial sutures that seem necessary. I use carbolized silk of various sizes, but for the deep sutures through the abdominal walls I use small needles and as large silk as will pass through the eyes. (10.) Apply the dressings, and put the patient in bed. I put on dry carbolized gauze and enough new and clean cotton-wadding to fill up the hole left by the removal of the tumor. Next I pass a broad piece of adhesive plaster tightly round the abdomen over the dressings; this should be wide enough to extend from just above the trochanters to the sternum. Over this I pin a soft flannel swathe. The patient is then carried to her bed on the operating board, and gently slid off the board into the bed. If there has been any shock hot water bottles are placed around the patient, care being exercised that they shall not burn her.

Treatment after Ovariotomy. The patient should be left alone with her nurse, and should be allowed to sleep as long as she will. Sometimes there is vomiting, and sometimes not, but nothing need be done for it. As a general rule the temperature is not much affected; it rarely rises above 100° F. during the whole convalescence. An opiate is generally required during the first twelve hours after the operation, and sometimes never again. I generally give one sixth grain of morphia or its equivalent in solution by means of Bigelow's opiate enema syringe, which holds a drachm of fluid, and was figured in the Boston Medical and Surgical Journal, vol. xcvi. (1877), p. 360. The cardinal principle in taking care of a patient after ovariotomy is to give all opiates and stimulants *by the rectum* until flatus passes the bowels or until all symptoms of nausea or vomiting have been absent for many hours.

Original Articles.

CASES OF RUPTURE OF THE LIVER.[1]

BY F. W. DRAPER, M. D.

The following notes are offered in illustration of the gravest form of injury to which the liver is subject, as the result of external violence: —

I. The patient in this case was a boy, Robert S., four years old, amiable in disposition, and sound in health. He lived with his mother and step-father, the latter being the janitor of an apartment hotel, in the basement of which the family of three occupied rooms.

The incidents of the boy's last hours of life can be presented best in their chronological order. Between three and four o'clock in the afternoon of a day early in November he was playing with two of his mates of his own age. The three lads had found, in a vacant lot, a low tank or pan, made of quarter-inch boiler-iron, an appliance which masons had used for drying sand. It measured five feet in length, two feet in width, and its sides were eight inches high at the highest. In one end of it was a collection of cobble-stones and brickbats, occupying less than half the space. The iron had become warped by use, and this, with some irregularities in the surface of the ground on which it rested, made it possible for the boys to tilt or rock the pan a little, as they would a boat. In the course of their play the children fell from their improvised boat, striking on the soft ground. Robert in his turn fell out; one of his mates said that he seemed to be hurt a little and that he cried, but that he presently resumed his play and seemed none the worse for his slight mishap.

At a quarter past four he was seen "playing horse" with one of his fellows, running about in the square in front of his home as if he were entirely well.

At five o'clock a lady saw him playing "hop-skip" with her little boy, and both the children were as active as usual.

He was next seen crossing the square going towards his home, a distance of about two hundred feet from the spot where he was playing last. A young girl of his acquaintance spoke to him here, and he replied, to use her own words, "in a sort of way as if he was sick;" although he was not crying, nor did he tell her, in answer to her question, that anything had happened to him. This little girl, evidently truthful and having no motive to be otherwise, was the only one of all who saw him who noticed anything unusual about him.

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[1] Read before the Boston Society for Medical Improvement, March 24, 1884.

The statement of the step-father, D., is in order at this point in the narrative. He said that at five o'clock, as he was standing at the front door of the hotel looking out upon the street, he saw Robert run across the square as fast and as smart as he ever saw him run; then he saw him pass down along the side of the building toward the rear entrance to the basement where he lived. In about seven minutes he (the step-father) went down stairs to the basement and found the boy kneeling in front of a squirrel cage which was on the cemented floor; his head was resting against the wires of the cage front. He complained that he was sick, that his "belly ached." D. took the boy into an adjacent room and began to undress him; in the course of this proceeding the lad's head dropped forward and his body swayed. Upon being asked how he got hurt, the child replied feebly, "Velocipede!" and spoke the name of a neighbor's boy, one of the two with whom he had been playing during the afternoon. D., who up to this time had been alone with the boy, now called his wife, Robert's mother, from an upper room in the hotel where she was at work. Presently the child had a convulsion. When he had recovered from this and was raised from the lounge on which he was lying, he screamed with pain. To his step-father's further questions as to the manner of his injury, his only reply was that he was sick.

Between half-past five and six o'clock a lady occupying rooms immediately over the basement went down stairs to the janitor's rooms to get a key which he had promised her. She knocked at his door, and after some delay, during which she heard a whispered conference between him and his wife, she was admitted. Entering she saw the child lying on the lounge in great distress, turning from side to side, pale, moaning, and apparently dying. She besought the man to go out for a physician. He went with reluctance, and soon returned with word that his search was unsuccessful. The boy had another convulsion, and the women urged D. to go again for medical aid. He responded to their appeals after some delay, and reappeared presently with a physician, whose relation to the case proved brief and simple. The child was moribund on his arrival, and death occurred in about ten minutes, at twenty-five minutes past six o'clock. The doctor's examination of the patient, before death and immediately after, led him to conclude that fatal internal hæmorrhage had taken place; while certain marks upon the body not present, according to the mother, when the child was dressed in the morning, aroused his suspicion still further, and suggested to him the propriety of summoning a medical examiner, upon the supposition that the boy had died by some form of violence. It was thus that the case came to the writer's notice for investigation.

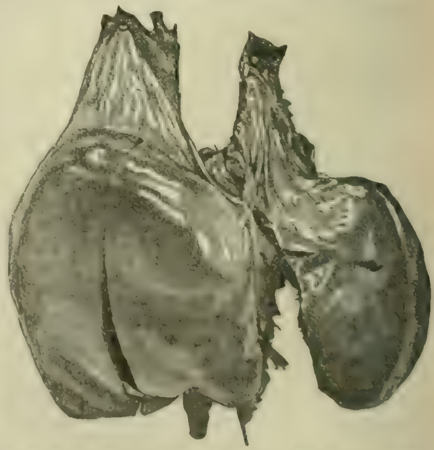
An autopsy was made eighteen hours after the death. The surface of the body was strikingly pale; the lips were fully blanched, and there was scarcely any post-mortem staining of the dependent parts. There were recent ecchymoses of small size on the forehead, the right cheek, the chin, the inner side of the right knee, just above the crest of the ilium, the back of the right hand, and the back of the right thigh. Besides these, there was a faint red discoloration, of the size of a silver dime, two inches below the left nipple and a little to the left of the middle line. This was the only mark on the skin of the chest and abdomen.

An ecchymosis, or line of ecchymoses, three eighths of an inch wide, extended obliquely across the back of the left hand. Upon the front of the left thigh were two parallel, dusky blue marks, corresponding in oblique course, in width and in color with that on the hand. These parallel linear ecchymoses were two inches apart. On the front of the right thigh and in direction continuous with the upper one of the two just mentioned was a narrow discoloration apparently made at the same time and by the same means as these. In other words, by placing the left hand with its palm posterior and its thumb against the outer side of the extended left thigh, one could readily believe that the ecchymoses upon the back of this hand and upon the front of the two thighs were to be associated in the matter of their cause.

In the peritoneal cavity there was a pint of liquid blood; a single, small, imperfectly formed clot lay against the under surface of the liver. The heart was pale but without other abnormality. The lungs were anæmic. The right lung at its posterior inferior border showed three small extravasations extending to the depth of half an inch. At the lower part of the posterior mediastinum, especially on the right side of the vertebral column, the tissues were infiltrated with effused blood.

The spleen and kidneys were exsanguine. The stomach and intestines were normal, and contained the partially digested remains of the last meal. The peritonæum behind the stomach displayed a ragged rent through which two fingers passed easily. The subperitoneal connective tissue behind the liver and duodenum, and overlying the right kidney, was extensively infiltrated with blood, and there was a similar alteration in the appearance of the parts in the left inguinal region and over the left side of the bladder behind and above the symphysis pubis.

The liver was ruptured through its entire thickness, the right lobe being freely opened from its anterior edge, just to the right of the gall-bladder, in a direction almost exactly at right angles to the transverse plane of the body, and to such a depth that only about a finger's breadth of hepatic and peritoneal tissue remained at the posterior surface of the organ as a bond of union. The surfaces of this principal rent were



ragged, granular, pale, and slightly blood-stained. This extensive lesion was revealed plainly when the abdominal cavity was first opened.

Besides this extensive fracture other secondary injuries appeared on the surface of the liver. The lobus quadratus was ruptured superficially, presenting a fissure three quarters of an inch deep and an inch long. On the upper surface of the organ, to the right of the chief rupture, there was a linear and superficial rent about two and a half inches long, in general direction parallel with the principal opening, and in depth extending scarcely beneath the capsule. The outer edge of the right lobe showed limited areas of extravasation beneath the surface. Section of these revealed many deeply-seated, irregular rents in the substance of the organ. There was marked anæmia of the viscus, but in other regards there was nothing abnormal in its structure. The gall-bladder was torn from its attachments, and retained its connection only by its right border and by its duct.

Examination of the head discovered a small but distinct and recent ecchymosis under the scalp, just above the occipital protuberance. The skull was uninjured. The brain, instead of being anæmic as were the other organs and tissues, was moderately injected.

The manner in which this child received his fatal injuries has never been satisfactorily established. Diligent investigation by skillful detectives failed to solve the mystery. An inquest was held which resulted in a judicial report rehearsing the few facts determined in evidence, and indicating probabilities with sufficient clearness. It declared that "the death of Robert S. was caused by a rupture of the liver and consequent shock and hæmorrhage, which rupture of the liver was caused by a heavy pressure or violent blows upon the body of said Robert S. by some person or persons. There was evidence before the court of inquest tending to show that the step-father of said Robert S. had at various times abused and severely and unreasonably punished said Robert by blows and otherwise, and also that the said step-father was alone with said Robert just before said Robert died, and while so alone with the said Robert he, the said step-father, had time and could have inflicted the fatal wound upon the liver, and also other severe and fresh wounds, internal and external, that were found upon the body of said Robert S."

The step-father, D., was indicted for manslaughter, but has never been tried, the evidence being deemed insufficient to warrant a presentation of the case to a jury.

In the absence, then, of positive knowledge of the manner of the death, we are allowed to indulge in speculation upon the limited data in our possession. These data permit three hypotheses only: —

The first supposition is that the boy was thrown down and injured by means of a velocipede. But this is based on the step-father's statement that the child told him so, and on this alone. It is quickly disposed of by the fact that the velocipede alluded to was within doors during the entire afternoon.

The second theory is the one which, at the judicial examination of the accused, was strongly hinted at as that upon which he would base his defense, and it had the support of a well-known medical expert, who stated in private his belief in its value for that purpose. This view associates the fatal lesion of the liver with the slight fall from the iron pan on the hill-side more than three hours before the boy's death. It assumes that there is no irreconcilable incongruity in the following chain of circumstances: that a boy of four years, weighing fifty pounds or less, should fall on his left side over a thin, upright barrier eight inches high; that he should thus produce the double marks on the left thigh, and at the same time rupture the right lobe of the healthy liver not only nearly through its entire thickness antero-posteriorly, but in various other directions; that after this, though crying a little at the first after his hurt, he should go on with his play as if nothing had happened, and within an hour, regardless of the hæmorrhage then inevitably progressing in his abdomen, and undisturbed by the serious injuries to organs on both sides of his diaphragm, should run and jump after his usual manner; that at the end of all his sport returning to his home, without any accident on the way, he should "run as fast and smart as ever," to use his step-father's words; that seven minutes later he should be found faint, weak, and sick, unable to walk or stand; that upon this, the first intimation of serious trouble, the usual train of symptoms of fatal internal hæmorrhage should rapidly supervene; and that in a little more than an hour after the onset of grave indications, preceded by nearly two hours of apparently complete immunity from any sign of disability consequent on the injury, death should terminate the case.

A third view may be formulated thus: A child to whom, during the year since his mother's second marriage, his step-father has shown great dislike, manifested in repeated and cruel punishment for trivial or fancied offenses, returns to his home after an afternoon of play with his customary companions. No accident has happened to him to interrupt, except for a moment, his active exercise. The step-father, who has found recent occasion to reprimand the boy for staying out too late in the afternoon, sees him running home, and determines to administer still further discipline. Going presently to the basement where the child is alone, the mother being engaged in a distant room, the man proceeds to execute his purpose in his usual harsh and impetuous manner. The boy struggles. Two blows with a rod or similar instrument leave their marks on his thighs and left hand. For the purpose of restraining him in his attempts to free himself, or in order to subdue him by measures more persuasive than flagellation, or, perhaps, by accident only, the man brings his knee with force against the right hypochondrium and right infra-mammary region of the boy while he lies on his back on the floor. Observing that a startling change in the child has followed this act of violence its author desists, but before calling the mother to the scene he invents what he believes to be a reasonable explanation of the emergency, and puts into the injured lad's mouth words about his playmate's velocipede which he never uttered.

This theory of the case, though mainly evolved from the imagination, has in its favor its entire consistency with the undisputed facts.

II. Mary M., a married woman, aged twenty-eight, was found lying dead upon the floor of her bedroom at three o'clock in the afternoon of a Sunday in December, 1883. Two hours previously she had been speaking, at her own door, to one of her neighbors, nothing in her face, clothing, or demeanor betokening any departure from her usual condition of health. At this time her little boy, five years old, was the only one in the house with her, but during the morning her husband had been at home, and had been heard engaged in a quarrel with her about domestic matters, and addressing her in words more emphatic than elegant or tender. Both husband and wife were noisy, especially when, as was not unusual with them, they were intoxicated.

What occurred between one o'clock, when one of the woman's neighbors saw her in her usual health, and three o'clock, when another neighbor found her dead upon the floor, is not known definitely, but the child, when he opened the door to admit the latter caller, said that his father had given his mother "a dirty licking." The husband was not in the house, but on his return, two hours later, he said to the officer who arrested him that while out for a walk he had been told that his wife was dead; that before he went out he had struck her, but with his open hand only; that in so doing he knocked her down, and she vomited afterward. Further details of the affair are not available.

Very little was discovered upon the body or about its surroundings at the preliminary inspection to aid in determining the manner of the woman's death. She was lying on one side at full length in the middle of the floor. Her face showed a fresh ecchymosis of both lids of the right eye, a contusion of the cheek, of the upper lip, and of the chin, with dried and clotted blood in the nostrils and about the mouth. There were also bruises on the left arm, over the left hip, on the left shin, and on the right hand.

Of some consequence in connection with the lesions found upon dissection were two very faint, scarcely visible, discolorations on the abdomen; one of these, an inch in diameter, was an inch and a half above the navel (just where the waistband of the dress-skirt passed around the body), and a little to the right of the median line; the other was immediately beneath the left border of the ribs in the mammary line. These were the only marks visible on the thoracic and abdominal walls.

The autopsy was made nineteen hours after the discovery of the body. The surface of the cadaver was pale, and the mucous membrane of the lips and mouth was notably exsanguine. There was a very slight degree of cadaveric staining of the dependent parts.

In the peritoneal cavity were forty-five and a half fluid ounces of liquid blood. This large effusion had proceeded from an extensive rupture of the liver which, beginning at the notch in the anterior edge, passed backward, involving the entire thickness of the organ nearly to the posterior surface, leaving as a hinge at the back a band of hepatic tissue and peritonæum less than an inch thick. The rent followed the direction of the broad ligament, and its surfaces were irregular, granular, and slightly reddened by blood.

Other fissures, superficial in situation and character, appeared at the base of the lobus quadratus and on the lobus spigelii adjacent to the main fracture. On the upper surface of the right lobe, near the anterior margin, and about two inches distant from the deep rupture, there was a superficial bruise of the liver two and a half inches in diameter. The liver was anæmic, but otherwise was of healthy appearance; it weighed three and a half pounds. The gall-bladder was uninjured.

The other organs of the body presented nothing abnormal beyond the pallor due to anæmia.

As in the previous case, so in this, accurate information concerning the manner of the death is wanting; but it is probable that in the course of the "dirty licking" which this amiable husband thought it to be his duty to bestow upon his wife his knee or foot came down with masculine force upon the parietes overlying the liver and split that organ from front to back.

A brief mention of some of the questions naturally suggested by cases like the foregoing will form a fitting conclusion to this paper. Allusion will be made in this connection to injuries of the severer kind only, to deep fractures of the liver, and not to superficial lacerations of the organ, from which, to borrow the words of Mr. Pollock, "the patient may recover without much suffering and without any particularly marked indication of the existence of the injury."[1]

And, first, it may be asked, what kind and what degree of force are required to produce the severe injuries described? Casper says,[2] "Healthy organs never rupture spontaneously, . . . and even healthy organs are never ruptured but by the employment of considerable violence. Therefore, rupture of the liver, lungs, etc., may uniformly be taken as conclusive evidence of the previous application of great violence." That this statement, by high authority, expresses the rule, is scarcely open to doubt. Although the liver is, of all the abdominal viscera, the most frequently ruptured, its large size, exposed situation, and friable structure counting against its immunity, yet if the organ be not softened or enlarged by structural changes, if it be of normal size and sheltered in its proper position with the overhanging grating of ribs in front and at the side, and with the vertebral column and thick spinal group of muscles behind, it would seem to be well favored by nature to escape casualty, and Casper's allusion to "great violence" does not appear to be too strong. The recorded cases of serious rupture of the liver are generally illustrations of the severer forms of accident. The victim has jumped or fallen from a height of many feet, striking on a pavement or other unyielding surface; or the wheels of a loaded wagon have passed over his body; or a heavy object has fallen upon him; or he has been caught between the buffers of cars; or he has received a blow from a windlass bar; or he has been thrown with great force by machinery against a wall; or he has been kicked by a horse; or a locomotive has struck him; or in the course of an altercation he has fallen under his assailant, who thereupon, half rising, has pressed his knee with great vigor into the right side of his prostrate antagonist, — these are the usual stories of the manner in which the injury was received. But are there no exceptions? Must one, as Casper states it, "uniformly" predicate great violence upon deep ruptures? We are concerned rather to establish whether such lesions do not sometimes follow comparatively slight accidents or a moderate exhibition of force. Diligent search may be rewarded by the discovery of a very few exceptions to prove the rule, but can hardly bring to light enough to show more than a rare chance that deep lacerations of the liver may follow trivial falls or blows.

Well-authenticated cases of spontaneous rupture must be reckoned among the curiosities of surgical literature. Beck[3] alludes, in a foot note, to such a case "which proved suddenly fatal during labor," but qualifies the value of the report somewhat by the statement that the patient had probably been "injured by violence on the part several months previous."

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[1] Holmes's System of Surgery, ii., page [illegible]

[2] Handbook of Forensic Medicine, i., page 132.

[3] Elements of Medical Jurisprudence, ii., page 377.

Taylor states[1] that the liver "may be ruptured merely by a sudden action of the abdominal muscles; an accident of this kind happened to a person who was endeavoring to avoid a fall from his horse."

The symptoms of a deep rupture of the liver are commonly those of collapse. There is coldness of the entire surface of the body, with marked pallor; the features are pinched, anxious, and exsanguine. The pulse is feeble, the respiration is sighing. There is extreme restlessness, though the mind remains clear. The sense of faintness and distress is prominent. The abdomen is distended and tympanitic. There is pain, referred chiefly to the injured region. Some of these symptoms are due directly to the violent solution of continuity in the parts involved, to the stretching and tearing of the peritonæum, and, in less measure, to the laceration of the liver itself. But most of the striking indications of profound collapse arise from the inevitable hæmorrhage, which is rapid and profuse, according to the depth and situation of the lesion and the size of the hepatic vessels which are rent asunder. It is easy to understand that any considerable laceration of this large organ must result in serious loss of blood, for its three distinct sets of vessels endow it with special vascularity, while the conditions under which the blood escapes are such as to promote rather than to restrain the effusion. The natural aids to spontaneous hæmostasis in external wounds are absent; the exposure to the air and to cold, the retraction of the divided vessels within their sheath, and their compression by the contraction of the tissues around them, — all these are wanting. "A laceration of the liver is in much the same condition as an external wound with a warm sponge upon it; the flow of blood is favored by the high temperature of the interior of the body. And the hepatic veins, not being contractile or surrounded by any loose tissue, cannot close or even collapse."[2]

Under such circumstances, favoring profuse and rapid bleeding, immediate and profound shock would be the natural and usual consequence of the grave injuries under discussion. But this is not a rule without exception. Cases have been recorded in which extreme damage to the liver has been borne with extraordinary immunity from bad symptoms. Dr. Fergus has reported such an instance.[3] A boy of seventeen fell from the shaft of a cart, the wheel of which passed over the abdomen just below the false ribs. The boy complained of pain in the abdomen, but not of a severe character, and not materially increased by pressure; the amount of shock was trifling. "He seemed to suffer very little." The case ended fatally, however, and the autopsy revealed a deep laceration of the liver and a rupture of the gall-bladder. In another case, mentioned by Taylor,[4] a man applied at a hospital for treatment for an injury to his abdomen, but as there were no urgent symptoms present to confirm his story he was sent away. A few hours afterward he was found dead. On inspection the liver was discovered to be lacerated nearly through its diameter, and a basinful of blood was in the abdominal cavity.

A question of considerable medico-legal interest is involved in these cases, and is naturally suggested by this statement of the usual symptoms. To what degree does a deep rupture of the liver disable the patient and render him incapable of exertion or of resistance if injured by an antagonist in an affray? The first answer that occurs is that such an injury would immediately and fully overcome its victim, and that a man would be so prostrated by the sudden shock as to be unable to make further effort save with great pain and difficulty. Many reported cases, indeed, afford ground for such an answer, if precedents were required. In a case within the writer's personal knowledge, in which a young and muscular man threw an elderly opponent upon his back on the ground, and there knelt upon him with great force, rupturing the liver externally and breaking up its substance to a considerable extent internally, the immediate effect upon the pugnacity of the older of the two wrestlers was very marked; he was fully deprived of his power to resist, and had to be carried home. In another instance a policeman was endeavoring to take a prisoner to the station-house; the latter attempted to escape, and the officer knocked him down and fell upon him, his abdomen receiving a blow from the officer's knee. The prisoner suffered great pain when he was lifted up, but he was able to walk to the station with assistance; he soon became insensible, and died in twenty minutes. The liver was found ruptured in three places, and upwards of three pints of blood were effused in the abdomen.

In very rare cases, indeed, the consequences are less serious. The injury may be borne with such comparative freedom from shock, and the hæmorrhage may be so slow in its progress, that the patient can walk without assistance and perform other acts that seem extraordinary. But the books do not record any instance in which a child has continued at his active play with evident enjoyment after receiving injuries to the liver like those described in Case I. Taylor formulates the rule clearly; "although," he writes,[5] "in cases of severe wounds we may allow that persons may perform various acts of volition and locomotion, yet the presence of a mortal wound, especially when of a nature to be accompanied by great loss of blood, must prevent all *struggling* or violent exertion on the part of the wounded person; such exertion we must consider to be quite incompatible with his condition."

With regard to the gravity of these injuries to the liver as affecting the life of the patient there can be but little difference of opinion. Most surgeons would agree with Hennen that a deep wound of this organ is as fatal as if the heart itself was engaged.[6] But it would be an error to insist that all cases, even of the severer type, terminate as speedily as the two reported at the beginning of this paper. While it is true that in nearly all the instances of deep rupture of the liver death quickly removes the sufferer, the interval after the injury being longer or shorter, varying from a few minutes to thirty-six hours, according to the amount of hæmorrhage, in some notable exceptions life is prolonged for several days. In these unusual cases the fatal issue is due commonly to peritonitis, the patient's system having had time to react from the primary shock and to develop secondary inflammation of the torn peritonæum. A case is related,[7] however, in which, the liver having been ruptured through its entire thickness by a fall from a third-story window, the patient survived ten days, and died at the end of that interval by hæmorrhage. In the case reported by Fergus, already referred to, where the primary symptoms were insignificant, peritonitis developed on the second day; on the fourth day the patient was pronounced convalescent, but on the sixth day he was suddenly seized with severe pain, and a second onset of peritonitis declared itself. Death ensued on the ninth day, and at the autopsy the liver was found ruptured quite through its substance to the depth of two and a half inches from its anterior border. The gall-bladder also was broken.

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[1] Principles and Practice of Medical Jurisprudence, i., page 667.

[2] Holmes's System of Surgery, i., page 447.

[3] Medico-Chirurgical Transactions, xxxi. (1847).

[4] Principles and Practice of Medical Jurisprudence, i., page 668.

[5] Principles and Practice of Medical Jurisprudence, i., page 634.

[6] Military Surgery, page 439.

[7] American Journal of the Medical Sciences, 1870, page 415.

Not only may death be delayed in these cases, but also, under peculiarly fortunate conditions, considerable progress toward the repair of the injured tissues may be made. A man was admitted into Guy's Hospital in a state of collapse, exsanguine, and complaining of intense pain in the abdomen. The pain gradually subsided, and the patient appeared to be doing well, when he died quite suddenly, three days after the accident, while attempting to raise himself in bed. The peritoneal cavity contained a large quantity of blood. There was an extensive fracture of the liver. The torn parts were well adapted to each other, and pretty firmly united by the fibrine of the extravasated blood.[1] In another case, under treatment at St. George's Hospital, a man had fallen, striking on his back, fracturing the seventh cervical vertebra and injuring the spinal cord. Death occurred three weeks after the accident. "An extensive rupture was found on the upper surface of the right lobe of the liver. This rupture, which measured five inches in length, was perfectly united with the exception of some few points where the peritoneal coat still remained broken. The rupture did not extend very deeply into the organ."[2]

These indications of what nature may do in the direction of mending a badly injured tissue serve to show on the part of the liver an extraordinary indifference to violent treatment, and to confirm what has already been suggested, that the hæmorrhage is the main factor in the fatal result. In fact one of the lessons taught by the records of injury to this organ is its patient tolerance of abuse. Not only does it bear with resignation the standing and libelous reproach of incontinently getting "out of order," and rendering its unhappy owner "bilious," but it suffers more violent treatment without serious rebellion. Three cases may illustrate this.[3] By the accidental discharge of a pistol a man drove a ramrod through the abdominal wall into his liver, and laceration of that organ to a depth not ascertained was felt through the external wound. He had an abscess at the spot, but was discharged well in forty-three days. A boy, seven years old, was shot in the right hypochondrium, and a part of the anterior wall of the abdomen was carried away. The liver protruded through the opening. The patient had no proper attention for four days; at that time the exposed part of the organ was gangrenous. The sloughing portion, equal in amount to half of the right lobe, was cut away, and the boy recovered. A Hindoo, between sixty and seventy years old, was wounded with a spear. The liver escaped injury, but pushed through the abdominal wound. The extruded part, weighing an ounce and a quarter, was excised. The patient was well in three weeks.

But although the liver will endure an astonishing amount of violence of the kind described, where much hæmorrhage is not the result, and, as Harley has pointed out,[4] may tolerate, "with complete immunity from danger, repeated puncturing by exploring needles and trocars," its deep rupture, attended inevitably with hæmorrhage, is, as we have seen, a far more serious matter, and usually gives early opportunity to study its post-mortem appearances.

The external evidences of the cause of death are generally summarized in the pallor and marked anæmia of the surface of the body betokening the effusion of blood within the abdomen. If one looks for large and deeply discolored ecchymoses upon the thorax and abdomen to correspond with the extensive lesions beneath he will commonly be disappointed in his search. Such outward proof of violence is rarely observed. One of the earliest lessons which the examiner in medico-legal cases learns is that there may be the most wholesale destruction of thoracic and abdominal viscera without any external sign of the force which produced it. Of this the cases under our present study are illustrations.

The interest of the internal examination attaches chiefly to the appearances presented by the injured liver. The rent, if it be deep, will generally be found in the large right lobe or at the boundary line between the two lobes, following the direction of the broad ligament above and of the longitudinal fissure below. There is good reason for this latter location; the notch in the anterior edge, indicating the partition between the two lobes, is sufficiently deep and exposed to make it a good point of departure for any force acting like a wedge, while the corresponding gap at the posterior border rests upon the unyielding vertebral column, and is thus afforded a support which favors the forcible separation of the two lobes from the front backward. If there are other secondary, superficial fissures they are seen mostly on the convex surface, near the front, and in general direction parallel with the main fracture; rarely they take a transverse or very oblique course. The edges of the lacerations are irregular in outline, and are but slightly parted. The torn surfaces of the organ present a rough, granular appearance, moderately stained with blood, with some partly detached masses of hepatic substance hanging loosely upon them. The blood which has escaped from the broken vessels is found collected in the deeper parts of the abdomen and pelvis rather than in close relation to the liver, and is singularly free from coagula.

REASONS FOR THE EARLY REMOVAL OF OVARIAN TUMORS.

BY J. C. IRISH, M. D., LOWELL.

WHILE the discussion of this subject may present very little that will not have already been carefully considered by ovariotomists, still it may be of interest to those members of the profession who are occasionally confronted with this very grave question: to decide for their patient when in its progress an ovarian tumor should be removed. Some, too, may be led to consider whether the quite prevalent opinion that a patient should not be exposed to the dangers of ovariotomy before her health is enfeebled or her life imperiled may not be erroneous and unfortunate.

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[1] Holmes's System of Surgery, i., page 897.

[2] Ibid., page 897.

[3] From Lee's Surgical Cases, pages 319 and 320.

[4] Diseases of the Liver, page 652.

In reference to the time when ovariotomy should be advised, Professor Peaslee, in his Treatise upon Ovarian Tumors and Ovariotomy, laid down the following rule: "When the general health has become somewhat impaired, and not till then, the time for ovariotomy has arrived."

This precept of Dr. Peaslee, given in 1872, has since been, in the main, accepted by American writers upon ovariotomy. Drs. Thomas and Emmet, however, in their late publications, give this rule with much less emphasis than did Dr. Peaslee, and with some very important exceptions.

While this teaching has produced a very general impression among the profession at large that ovariotomy should not be undertaken until the patient's health is considerably deteriorated, yet among ovariotomists at the present time a different sentiment is fast gaining ground, many of them advising the operation while the patient is still in robust health. The wisdom of this course of action is already apparent in the rapidly increasing per cent. of success.

Spencer Wells in the edition of his work published in 1872 gave essentially the same rule in regard to the best time for ovariotomy as that just quoted from Dr. Peaslee. But in 1882 he says: "I have become more and more disposed to advise the removal of an ovarian tumor as soon as its nature and connections can be clearly ascertained and it is beginning in any way mentally or physically to do harm." Yet a glance at the last hundred cases in Mr. Wells's published table would persuade the reader that he really in practice followed the first clause of his rule rather than the second, for among this hundred there appear seventeen cases in which the tumor weighed ten pounds or less, one of them weighing only four pounds. Now it is very improbable that ovarian tumors of this size could be doing any appreciable harm, either mental or physical. It is more probable, rather, that they were removed as soon as their character could be clearly ascertained.

One great argument in favor of delay is, that after the tumor has become sufficiently large to distend and press for a time upon the peritonæum, it so changes the character of that membrane as to render it less liable to a severe grade of inflammation, and that the patient, therefore, is in less danger of death from peritonitis.

Referring again to Mr. Wells's last hundred reported ovariotomies, we find that not one of the hundred died of peritonitis, though there were eleven deaths, and in seventeen cases the weight of the tumor was only ten pounds or less.

In his series of one hundred cases from January 1, 1869, to January, 1871, there were ten deaths from peritonitis. The average weight of the tumors in these fatal cases of peritoneal inflammation was twenty-two and one third pounds, while the average weight in the whole series was twenty-one and one third pounds.

Of about forty cases of ovariotomy that have come under my observation, but two died of peritonitis, and in both instances the tumors were large and had exerted considerable pressure upon the peritonæum.

So far as these histories teach anything, they show that the size of the tumor is not an important factor in determining a fatal result from peritonitis. They also indicate the recent rapid decrease in the frequency of this formidable sequel to ovariotomy, the series of fourteen years ago embracing ten deaths from this cause, while the later contains not one.

The experience of other ovariotomists in this regard, as I learn by inquiry and from their written statistics, coincides with that of Mr. Wells.

Peritonitis, therefore, has well nigh ceased to be a prominent cause of death after ovariotomy, although the operation as a rule is performed much earlier than ten years ago. There are several causes, I think, that have contributed to this favorable result. Important among them is the improved method of treating the pedicle, namely, by short ligatures and replacement within the abdominal cavity, a mode of treatment that has very generally been substituted for the clamp and long ligatures brought out at the lower angle of the wound. Another is the great care now exercised in preventing the entrance of any extraneous matter into the abdominal cavity, or if this has been unavoidable, its thorough removal, together with the great pains taken to render the condition of the peritonæum an aseptic one.

Another reason given for deferring the operation until the patient is debilitated by the disease is that thus a certain amount of comfortable life is secured to her which would have been lost in the event of a fatal issue. At a time when about one third of the whole number who submitted to the operation died this argument was a cogent one. But now, when not one in ten, excluding the delayed and tapped cases, die, and when, in the near future, not one in twenty will die from the operation, this plea for delay loses its great force.

The dangers, too, that constantly increase and always menace a patient with an ovarian cystoma, are so great as to far outweigh all the advantage that any postponement of the operation can bring.

Although adhesions of the cyst wall to surrounding structures may form at any time during the growth of an ovarian tumor, yet in the majority of cases they do not occur before the cyst has become large enough to entirely fill the abdominal cavity, and are most common in those cases where the tumor has reached an age of two or more years. They are, therefore, complications that an early operation would generally avoid. While adhesions, however extensive they may be or however closely they may attach the cyst to the abdominal parietes, omentum, intestines, or brim of the pelvis, are not a contra-indication to ovariotomy, still they convert an operation that in itself is really a very simple one to one of great difficulty and hazard. I have seen three cases in which an attempted ovariotomy could not be completed on account of immediate adhesions to important viscera. In two of the three the disease had existed about three years, without much impairment of health, and without giving very great inconvenience. For this reason, in accordance with the rule we are discussing, they were advised to defer an operation until some more urgent necessity for it arose. The consequence was that they each, for three years, carried about with them an ugly, mortifying deformity, and then died of an affection of which they might have been cured three years before.

In passing from this well-worn topic of adhesions to the discussion of degenerative changes that take place, the following case is presented as an illustration of the former, and especially as an example of the insidious general poisoning that may follow degenerations of even the interior structure of an ovarian cystoma: —

Miss C. N., Rockville, Conn., aged nineteen; operation September 19, 1879. The tumor was noticed one year before. Her general health had apparently been unimpaired until three months ago, when she began to lose flesh and strength. Latterly her failure in health had been rapid.

September 18th we found her with a pulse 110, a rapid respiration, and a hectic flush upon each cheek. No abnormality of the patient's lungs could be found, and her attending physician, Dr. Kisley, as well as myself, was at a loss to account for her condition of hectic. All was explained, however, when the contents of the tumor were withdrawn. The liquid had the physical appearance of pus of considerable consistency, and in amount was about nine quarts. The tumor had evidently been a multilocular cyst whose division walls had become degenerated and broken down. Hence the blood-poisoning that would undoubtedly have ended the patient's life very soon had not removal been effected. The cyst was adherent to the parietal walls anteriorly and at each side. The pelvic and intestinal adhesions were also extensive. Many of them were firm fibrous bands, with blood-vessels of considerable size, while in several places the cyst was agglutinated to the intestinal surface. The separation of these adhesions was attended with many difficulties and occupied two and one half hours. The patient finally recovered after a very tedious convalescence, and is now in good health.

Tracing the natural history of an ovarian tumor through its entire course, it will be found to have caused death in one of two ways: either by its size interfering with the normal functions of the abdominal and thoracic organs or by degenerative changes that have occurred in its structure. But cases of the former class are rare, and especially so, because the great size is usually relieved by tapping when the tumor becomes oppressively large. Such a tumor that would have become fatal at last on account of its size alone now becomes so, if it has been tapped, by reason of degenerative change. Practically, therefore, an ovarian cystoma, subjected to no surgical interference except tapping, produces death by structural degeneration of its tissues.

These parasitic growths, as Mr. Wells terms them, differ in their histological character from the normal tissues in which they take their origin, and the deviation becomes more and more marked as their development progresses. Like most other adventitious growths, their vitality is feeble and their tenure of life, as a rule, is short.

In any given case we cannot predict when this process of degeneration will begin, and oftentimes when it has advanced very far towards the decay and death of some tissue of the cystoma it gives no sign by which it can be recognized, and we then have a dead tissue in the living body, diffusing a subtle and deadly poison through the whole organism. In many instances the progress of this septicæmia towards a fatal result is rapid, in others slow, as in the case just described.

Again, our first warning of cystic degeneration may come from some accident; a not uncommon one being rupture of the cyst walls, and the escape of its contents into the abdominal cavity, producing a very fatal form of peritonitis.

The following case is an illustration of an accident more rare than cyst rupture, and due to degenerative change affecting the pedicle: —

Mrs. S, Lowell, age forty-five; operation June 19, 1881. She had always been in good health until October, 1880, when after a cessation of the menses for three months she noticed an enlargement of the abdomen. The patient regarded herself as pregnant, in which opinion she was confirmed by medical advice until June 12th, when a careful examination revealed unmistakably the presence of an ovarian tumor. It was at this time that the operation should have been performed, yet as her general health was seemingly unimpaired, the removal of the tumor was delayed. Two days after Mrs. S. had a severe attack of pain localized in the right lumbar region.

The pain speedily subsided, but similar attacks followed at intervals of a day or two, and when they occurred the patient became pale and the extremities cold. Meanwhile the tumor very sensibly increased in size, and at the same time the patient's strength rapidly failed. The tumor was removed one week from the time of the first examination. When the cyst was tapped with a "Wells' trocar," a large quantity of clotted blood passed through the tube. Very soon when the withdrawal of liquid had removed all tension from the cyst walls, and as I was drawing the sac out through the incision, there appeared a stream of fresh blood through the tube. The clamp was at once applied to the pedicle and further hæmorrhage stopped. Its application required only a few seconds, still a large quantity of blood must have been lost.

The cause of the attacks of pain and the accompanying pallor, with coldness of the hands and feet, was now apparent. The internal portion of the pedicle had become broken down by degenerative changes, and one or more of the large blood-vessels had been opened, thus pouring blood into the sac from time to time as much as the distensibility of its walls would allow. It was from this cause that the tumor had increased so rapidly in size and the final great hæmorrhage, added to those preceding, had so exsanguinated the patient as to prove fatal just as the operation was being completed.

In June, 1881, at the request of her attending physician, I saw Mrs. ——, of Milford, Mass. She had an ovarian cystoma of recent development that extended two or three inches above the umbilicus, but not distending markedly the abdominal walls. Her general health had, seemingly, been unaffected by the growth of the tumor. Therefore, in deference to the generally accepted rule of practice that ovariotomy should not be resorted to while the patient is in vigorous health, the removal of the tumor was deferred. Some three months after the sac ruptured, and Mrs. —— died in seventy-two hours of peritonitis.

All the perils of ruptured cysts, bleeding pedicles, and septicæmias from broken-down and dying tissues of the tumor can be averted by an early operation.

And does not the avoidance of all these dangers far exceed in the welfare of the patient every possible advantage, if there be any, that can come to her by delay? In short, is not an early interference, while the tumor is both small and recent, the wisest and most prudent course?

Mr. Lawson Tait, in his work upon Diseases of the Ovaries,[1] presents a very strong argument in favor of the early removal of ovarian tumors, based upon their pathological character and manifest malignant tendency. After describing the great variety of epithelial cells found in cyst cavities, their mode of development, and their varied departures from the normal epithelial cell, he concludes that most ovarian tumors have, at least, an element of malignancy, and that their prompt

[1] Page 144 et seq.

removal is urgently demanded as a protection against the systemic infection of the patient with cancer.

These conclusions of Mr. Tait are corroborated by the after-history of Mr. Wells's one thousand cases. A large proportion of the whole number were living at the time of the report, yet of those who had died thirty-three had died of cancer, and if a complete history of all these cases could have been obtained this number would probably have been largely augmented. The fact that so many patients at one time in their life develop an ovarian tumor, at another cancer, or, as quite often occurs, a uterine fibroma, seems to indicate that these growths are simply different manifestations of one and the same abnormality of the general system.

In this connection the case of Mrs. J., of Connecticut, from whom an ovarian tumor was removed June 12, 1879, is interesting. Age forty-five. No children. When she reached the age of thirty-nine her menstrual periods gradually became more frequent and the flow more profuse, until for the past six months there has been an almost continuous sanguineous discharge from the vagina. Last July, that is, eleven months before the operation, she noticed a tumor in the right iliac region, which was painless, but had steadily enlarged. June 5th I made the first examination. Her general health was not greatly impaired, and that mainly by the menorrhagia and metrorrhagia of the past year or two. The tumor of the ovary did not greatly distend the abdominal walls. Fluctuation was distinct over the upper portion, and its boundaries could be distinctly traced. In the supra-pubic region a hard ovoid body could be felt, which was the fibroid uterus, uniformly enlarged to about six times its normal size. The ovarian tumor was of the dermoid variety, weighed about fifteen pounds, and was free from adhesions. The patient made a rapid recovery. The menorrhagia ceased, and the fibroid afterwards did not increase in size.

Mrs. J. remained in good health for about two years, but subsequently died of cancer of the uterus. So in this case we had the simultaneous existence of an ovarian tumor and a uterine fibroma, and subsequently a cancer.

Summarizing my own experience, there have been eight cases in which I operated before the general health had been visibly impaired, and when the tumors had not reached an advanced stage of development. Of these all but one recovered, and the death of the that one was due to an accident. This patient's general condition had not apparently been affected. A small cystoma, without adhesions or other complications, was removed. After the operation she complained very bitterly of a terrible prickling sensation throughout the abdominal cavity, which could hardly be controlled by large doses of morphine. Ten hours later bloody serum, the blood tinge being slight, began to exude in large quantities from the wound. This continued for about twenty-four hours. She died of exhaustion on the third day. I am certain that, by some mistake, a solution of carbolic acid many times too strong was used in sponging the abdominal cavity. The severe prickling sensation was characteristic of carbolic irritation. Also the pouring out of a large amount of serum would indicate that the peritonæum had been exposed to an irritant of some kind, and this probably was the carbolic acid. Certainly nothing in the previous condition of the patient, or in the operation itself, could account for the speedily fatal result.

Of the other cases I will give briefly the history of one, one entirely devoid of interest, except as illustrating the usual absence of any difficulties in the way of ovariotomy when the operation is performed early; and also as an example of the safe and rapid recovery that, with few exceptions, follows when an ovarian cystoma has been removed at an early stage of its growth: —

January 24, 1883. Mrs. H., White River, Vt., age twenty-four. Two children. After the birth of the youngest, two years ago, noticed a small tumor in the left iliac region, which had grown slowly but steadily, until it now extended several inches above the umbilicus. Before coming to me she had consulted several surgeons, who had told her that she had an ovarian tumor, but advised against an operation at that time because her general health was not affected, and because she was not suffering any great inconvenience. A few days later I saw the patient, and urged an immediate operation, because the tumor was not large, and was probably non-adherent, and because her general health had not been harmed by it.

She consented, and I removed an oligocystic tumor weighing about fifteen pounds. There were no adhesions, and the operation was attended with no difficulty. I wish especially to call attention to some of the unfavorable circumstances surrounding this case.

She came from her home in the country to the city, and occupied a small room in a crowded tenement house. Added to this was considerable mental disturbance lest she had been unwise in consenting to an operation, contrary to the medical advice she had received. Great anxiety, also, on account of her straitened circumstances contributed to produce a mental depression very unfavorable for ovariotomy. In a word, both her surroundings and her mental condition were as unfortunate as could well be conceived, but her physical condition for the operation was perfect. Without enumerating the tedious details of temperature and pulse from day to day, it is sufficient to say that the highest temperature reached was 101° F. upon the fourth day, and that this steadily declined, and became normal upon the tenth day, at which time she had practically recovered from the operation.

The ovariotomist, unfortunately, cannot elect his own time for the operation in a majority of cases, for many of them do not come under his care before the disease has reached an advanced stage, and before complications have occurred from adhesions, degenerative changes, or septic infection of the system, so grave as to render ovariotomy formidable and often unsuccessful. I have presented these reasons for early removal, however, believing, as I do, that ovariotomy will take a long stride in advance of its former success when it shall become the general and settled rule of practice to remove ovarian tumors as soon as their diagnosis can be clearly determined.

— A table prepared by the New Jersey State Board of Health shows the rate of mortality to be 16.32 per 1000 persons at Plainfield, and 26.98 at the town of Union. The population of the latter place, however, is only 5094. These are the extremes of sixteen towns. The death-rate for Jersey City, with 120,732 inhabitants, is given at 24.27, and for Newark, with 136,508 inhabitants, at 23.52.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

March 24, 1884. The President, Dr. Charles D. Homans, in the chair.

ROUND-CELLED SARCOMA OF THE MEATUS AUDITORIUS.

Dr. J. Orne Green exhibited a photograph from a patient twenty-three years old with the following history: There had been otorrhœa since scarlet fever six years before, and when first seen by Dr. Green the meatus was filled with a growth like a polypus, fungous granulations covered the seat of an abscess which had burst over the mastoid, which as well as the petrous bone proved to be carious, and the patient was weak. After four or five days of supporting treatment there were a chill and fever. In consequence, he was etherized, an incision made into the bone, freeing grumous pus, and a drainage tube inserted, the growth being also removed. The septic symptoms now disappeared, but the progress of the growth was rapid, nodules appearing below and in front of the ear. Later, brain symptoms developed with œdema of the eyelid and cheek, and lastly coma that existed for three weeks previous to death, which occurred six months after first coming under observation. No autopsy was allowed, but the piece removed at the beginning was examined by Dr. Gannett and found to be round-celled sarcoma.

PECULIAR CASE OF VALVULAR DISEASE OF THE HEART.

Dr. W. P. Bolles presented the specimen, the history of which had been one of valvular disease with enlargement, dyspnœa, jaundice, and death. The cardiac sounds were those of mitral insufficiency, a loud and distinct murmur accompanying the systole, while there was no direct murmur. On autopsy, however, there was found to be not only insufficiency, but also a high degree of stenosis, only the tip of the finger being admitted. A large old ante-mortem clot was worn smooth toward the centre of the auricle, and was adherent at all other places. Remains of emboli existed in the lungs and a suppurating cavity in the right lung corresponded with a history of pneumonia ten weeks before. It was interesting that the patient had never had rheumatism, and that while there were no cardiac symptoms until within one or two years, yet that she had been told, thirty years ago, by the late Dr. Reynolds, Sr., that she had a very bad heart.

Dr. F. C. Shattuck remarked that this case is an illustration of the fact recognized by all recent writers on heart disease, that valvular disease — and especially mitral stenosis — may be unattended by murmur. The presystolic murmur, when present, is very characteristic, but it is not infrequently absent and sometimes comes and goes. In the advanced stages of cardiac failure the auricular contractions are often so feeble that they cannot throw the valve into vibrations sufficiently forcible to give rise to any audible murmur.

Dr. H. I. Bowditch thought that such histories should make us chary of needlessly giving a diagnosis and thus causing useless alarm.

Dr. Francis Minot remarked that possibly the knowledge may have prolonged her life.

Dr. O. W. Doe showed a

COLLECTION OF THREE GALL-STONES

passed by a lady, fifty-five years of age, at intervals of a week. The smallest measured one and two tenths centimetres in its broadest diameter; the largest, one and four tenths. Each attack lasted about two hours, the pain being chiefly referred to the right hypochondriac region, and was followed by jaundice, which disappeared in from two to three days. The patient had been leading an unusually sedentary life for two years past.

The treatment was by ether, morphia subcutaneously, and hot applications to the epigastric and hypochondriac regions.

Dr. Charles W. Williams reported a

CASE OF FOREIGN BODY IN ORBIT.

T. W., seven years old, while playing with some boys was hit over the left eye with a stick. There was a cut through the skin about one quarter of an inch long; it was a little to the inner side of the eye, and a quarter of an inch below the eyebrow. The nurse reported that it bled freely, but nothing more than water dressings were applied, as it was supposed to be only a black eye. When seen, five days after the accident, the eye was closed, the upper lid swelled even with the eyebrow. The cut in the skin was still open, and discharging a small amount of pus. A probe could be passed backward about half an inch, but no foreign body could be detected with certainty. There was neither redness nor extravasation of blood under the ocular or palpebral conjunctiva, and the vision was nearly normal, $\frac{8}{10}$, and corresponded with that in the other eye. Poultices were applied for two days. On a second examination with a probe a suspicion of grittiness was detected. The child was etherized, and first some small splinters of wood, then a roundish piece, about half an inch long by quarter of an inch thick, was removed from the bottom of a pocket, extending about half an inch directly backward from the cut to a point between the orbital roof and the sclera, and just to the inner side of the superior rectus muscle. On questioning the boys more carefully it seemed that the stick which hit the eye had been used as a trellis for plants, and the sharp end which was buried in the ground had penetrated the lid. This partly decayed wood, absorbing the blood and moisture from the orbital tissue, had become so soft that a probe failed to detect its presence with certainty until it grated against a bit of sand which was attached to the wood. After the removal of the wood the wound was poulticed for two days; the discharge had then ceased, and the swelling of the lid was nearly gone; vision as before, $\frac{8}{10}$. At no time did the child complain of any pain in or about the eye. He ate and slept well, and enjoyed his play.

Dr. H. L. Burrell showed a

TUMOR OF THE UTERUS.

The patient was fifty-nine years old, and had not menstruated for twelve years. Four years after the cessation a small lump appeared in the right inguinal region. In a year there were three or four smart uterine hæmorrhages. There was dyspnœa, probably from bronchitis, but no pain. Dr. Burrell had made an exploratory incision after death to see if an operation would have been feasible, and found that it must have been very difficult. A cyst on the right side was bound to the right iliac vessels. Both the round ligaments were very tense, and held the uterus fixed as if bound to the rectum or spine. There proved to be no such adhesions. An examination with the probe two months ago had given the uterus an apparent depth of two inches. This was accounted for by the obliteration of the internal os, beyond which was a cavity four inches deep. The cervix was obliterated, and it was hard to say where the vagina ended and the uterus began, thus increasing the danger of wounding the ureters had removal taken place during life. There was no peritonitis, the cause of death being bronchitis.

Dr. Minot inquired if it is not rare for uterine fibroids to develop after cessation of the catamenia.

Dr. C. D. Homans mentioned some cases of large fibroids that stopped growing before that time.

Dr. R. H. Fitz said that the uterine fibroid commonly becomes calcified in advanced life.

AMPUTATION IN SENILE GANGRENE.

Dr. J. C. Warren presented a specimen. A short time ago Mr. Jonathan Hutchinson had read a paper before the Medico-Chirurgical Society advocating amputation above the *expected* line of demarkation in cases of senile gangrene of the toe, that is, he would amputate above the knee-joint, that being about where the disease would probably stop if let alone. Other papers have been called out by this of Mr. Hutchinson's. Dr. Warren's patient had the typical foot and the senile appearance, but claimed to be only fifty-one years old, and there was an indefinite history of injury. Dr. Warren had amputated at the point of election two days ago, and there is as yet no return of the disease. The skin was good to the malleoli, and the skin flap was taken from a convenient height. The anterior tibial artery was found to be plugged, but the posterior tibial was sound. The results of waiting have been so poor that it is interesting to see what success will follow a change of treatment.

Dr. Gannett asked Dr. Warren whether there had been any injury to the foot previous to the appearance of the gangrene, and further called attention to the fact that the condition of the vessels was favorable to the development of gangrene, provided an inflammatory process were set up by any injury or other cause.

Dr. Warren said that there was a vague history of inflammation, of freezing, and of being stepped on by a horse.

Dr. F. W. Draper then read the regular paper on

RUPTURE OF THE LIVER.[1]

Dr. Fitz said that two possibilities, in addition to those suggested by the reader, occurred to him in explanation of the origin of the ruptured liver in the case first reported. On the one hand it was conceivable that the child had been crushed between the tilting tank and the ground, supposing there was sufficient space between the two for the admission of the body; on the other, that his playmates had fallen upon him while stretched across the edge of the tank.

Either of these alternatives might account for certain of the external wounds as well as the internal injuries. Even if the first were impossible in consequence of the relation of the tank to the ground the latter was still tenable, and could hardly be refuted, even if denied by the children. The youth of the witnesses would, of necessity, materially qualify their evidence on this point.

The main argument against this theory, based upon the length of time and occupation of the boy in the interval between the play and the occurrence of serious symptoms would be controlled by the history of a case reported before this Society by the late Dr. J. B. S. Jackson, and recorded by him in his Catalogue of the Cabinet of the Society somewhat as follows: —

A girl, between four and five years of age, was run over by a baker's cart on Monday morning. Though feeling faint during the forenoon, and kept upon the bed, she was down stairs in the afternoon, on the floor with her playthings. On Tuesday she was out doors, in front of the house, and on the following day she went to the Common, at some distance from her home, and played about and rolled upon the grass. While returning distress at the stomach was complained of, which continued through the night, and was at times urgent; nausea and vomiting with cold perspiration were also present. On Thursday she was much relieved, but was confined to her bed, where she remained till her death, on Saturday, four days after the accident. The prominent symptoms during the last two days were frequent faint turns and progressive loss of strength.

A rupture of the liver was found extending nearly through the substance of the right lobe, and causing the separation of a mass equal to two inches and a half in diameter or more. The peritonæum was separated from almost the whole anterior surface of the right lobe by a thick layer of clotted and liquid blood. The peritoneal cavity contained about half a pint of blood, and blood was found in the pleural cavity with some ecchymosis.

Dr. Draper said that there was not enough space for the child to have been crushed between the tank and the ground.

CHRONIC RETENTION OF URINE.

Dr. Bowditch reported the case, which he had sent to an expert, from whom he had received a letter which was of interest. The patient had been getting up at night two or three times for two or three years. Several specimens of his urine contained from one and a half to two inches of pus in a six-ounce glass. This was two months ago, while now he can go to bed at eight and stay there until morning, and the urine is clear when passed, although it becomes cloudy at the bottom of the glass on standing. From the history it was evident that the bladder had not been perfectly emptied for two or three years. It rose above the pubes, and could be felt by the finger in the rectum. As the patient lived out of town he came into the city to a hotel, and there was astonished by the surgeon passing a catheter immediately after micturition and getting over two pints more urine without emptying the bladder. Aside from the use of the catheter the treatment has been dilute hydrochloric acid as a tonic.

Dr. Samuel Cabot said that surgeons not uncommonly have ample evidence that a bladder has not been emptied for years.

SUFFOLK DISTRICT MEDICAL SOCIETY.[2]

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

THE MILK SUPPLY OF LARGE CITIES — *concluded.*

The leading principle with too many of the men engaged in the sale of milk in the city is to get trade, by any means possible, and build up a route to sell out.

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[1] See page 339 of this number of the Journal.

[2] Concluded from page 325.

Such dealers have no pride in learning thoroughly the proper way to carry on the business; they do not care much what they sell or whether or not they make a legitimate profit if in the end they can sell out and come out even or a little ahead. The class of men who have the better portion of the trade, who have had experience in business, and money with which to carry it on, who want to sell a good article and make a fair profit, and who, if there were no ruinous competition, would not, from principle, take advantage of their customers, but would give every attention to their wants, only asking a fair return, are constantly harassed and annoyed and, as they term it, robbed by these so-called "pick ups."

Another trouble is found in the competition from stores. At the present price, forty cents per can at the car, a milkman pays 4.71 cents per quart for his milk. It is conceded that a milk-wagon cannot be run for less than two cents per quart by all having any knowledge at all of the business, and many close observers say two and one half. If we take the lowest figure the milk costs 6.71 cents at the consumer's door, or 7.21 cents if we take the higher. It is easy to imagine the feelings with which he would regard a card in a window, "pure milk, four cents per quart," when he may have one or more customers in the same block from whom he must get seven, and, if possible, eight cents per quart or not pay his bills.

That it would be an advantage to the business if the Board of Health would drive all storekeepers out of the business who are not willing to sell pure milk and sustain the price is clear. Whether the poor people who buy would be benefited by the advance in quality more than they would feel the advance in price is not so clear. At all events it is a fact beyond dispute that any man may, by a little inquiry, find out the character of the man from whom he proposes to buy, and need fear being cheated no more than he would in buying any other class of goods.

In reply to a question the same gentleman stated that the effect of feeding cows on ensilage was to produce a peculiar sweetish taste in the milk, which is not at all agreeable, and is also contained in the butter made from such milk.

In regard to the statement that a certain milk-producer is putting up milk at his farm in glass jars for delivery in Boston, the facts are as follows: I know the gentleman, and know the source of his milk. It is transported to Boston by rail, and always comes in ordinary tin milk cans. If he delivers it in Boston in glass jars it is put into jars after it reaches the city. It comes to Boston like all the rest of the milk.

Dr. J. Ayer asked the speaker, "Ought the citizens of Boston to receive milk as good as the farmers produce it, thirty miles in the country; or does the carriage, by cars or otherwise, injure its properties?" to which the reply was given that there is no reason why the milk when delivered at the door of the consumer should not be in every way equally as good as when it left the farm on which it was produced. The main source from which damage might be apprehended would be from too early collection before the temperature of the milk had been sufficiently lowered by cooling in water, or too high a temperature in transit in summer, or freezing in winter. These accidents are obviated by the cans being surrounded by ice as soon as they are placed in the car, or otherwise kept at the right temperature, which should, if possible, be maintained at 50° F.

Dr. Ayer also asked, "Is the milk injured by churning, or motion, in transportation? My impression has been that the carriage and disturbance were injurious."

The gentleman replied that the printed rules of the Milk Association, posted in the barn or on the premises of the farmer, requires every milk can to be full up to the stopper, so as to prevent all churning. It is also required that the cow's bag shall be washed or brushed before milking. The milk should be cooled in another building from that in which the milking is done, and should be kept in the stable no longer than absolutely necessary after being drawn from the cow. The cars used for the transportation of milk are placed on regular passenger trucks and ride as easy as passenger cars. The motion of the car does not affect the milk at all. The wagons used for delivering the milk after it arrives in Boston are made for that especial purpose, and are set on two springs, and have a peculiar rolling motion which does not shake the milk. With all the care which can be exercised the milk is injured far more in being carried about for distribution in the milk wagons after it arrives in Boston than in being carried thirty or even forty miles by rail. Even if delivered in the best possible condition, careless treatment after it is in the consumer's house will spoil it in half an hour. Often it is placed where the temperature is raised to 60° F. or 70° F., when it at once sours, and the consumer blames the milkman.

Dr. Barnes asked if it is possible to preserve milk in good condition for seventy-two hours; to which it was replied that this is perfectly possible. A certain lot of milk was on one occasion missent, and for nearly a week was lost. When recovered the milk was in perfectly good condition in every way. The firm which the speaker represents, not milk contractors but milk dealers, supplies the line of steamships plying between Boston and Norfolk, Va. These steamers always take milk here for the round trip, as no supply can be depended upon in Norfolk. On their arrival in Boston after the trip to Norfolk the milk which is left over is always found fresh and sweet.

Dr. Buckingham stated that the quality of milk is often materially affected by circumstances entirely independent of the age of the milk or its transportation. As a matter of fact the inside of milk cans is sometimes foul, and the corks sour. One way of preventing this would be the use of glass, as proposed by Dr. Morris. By this system, however, one would get the milk of only one cow in a glass, which would be objectionable. The expense of this course, which might be important, is a matter of which he knew nothing.

Condensed milk having been brought into the discussion, he thought that the Swiss condensed milk, the only one of which he has knowledge, contains a great deal too much sugar to be a fit food for babies or invalids.

In answer to a question about the opinion of the Society as to the value of one cow's milk for babies, Dr. Buckingham said that the theory in giving one cow's milk is to avoid variation in the quality of the food. Milk from one cow does, however, vary somewhat from day to day, and it is probable that the mixture of the milk of several cows will vary less than that of any one of them. This he knew to be the opinion of several members of the Society. It is also the view that is gaining ground in Germany.

Dr. Harlow asked how many of the farmers probably adulterate milk to any extent or in any way before sending it to the city.

In reply it was stated that such a thing was very rarely done. Probably not over two per cent. of the farmers attempt to tamper with milk in any way. It would be fatal to their interests to do so, as the milk from such dairies would not be accepted by the contractor nor allowed to go out. The principal adulterators are a set of dealers who supply milk for a minimum price, and in this way build up a large trade in order to sell out. A well established milk route has a considerable commercial value. Unscrupulous men often build up a business in this way, and then sell the route to other parties.

Dr. E. T. Eastman stated that housekeepers often accuse the milkman unjustly. In a case known to him the servant was in the habit of taking off a portion from the top of the can, and supplying the deficiency with water, and the housekeeper complained that the milkman was delivering adulterated milk. This source of deterioration in the milk supplied to families is often forgotten, and the milkman is charged with adulteration.

In reply to the question how the supply of *cream* is obtained which is sold for table use at an advanced price, it was stated that the surplus of each day's milk was passed through a machine called the "separator," which removes the cream and leaves a pure skimmed milk which is sold to bakers, to families for domestic use, and for feeding to pigs. Another method of obtaining cream is also regularly followed. Each day cans of milk fresh from the dairy are poured into large receivers which are surrounded with ice, and are left undisturbed for twenty-two hours. At the end of this time it is skimmed with a conical skimmer, and about ten per cent. of cream obtained, which is the average amount of good milk.

Dr. Edes asked how the milkmen are sure of the quality of milk which they supply to their customers.

The reply was made that the quality of the milk is examined each day, and sometimes a favorite dairy will be found unfit for use, and will be rejected, and a supply from some other source obtained in its place. Suspicion was recently aroused in respect to a dairy, and on "setting" the milk it was found to yield only six per cent. of cream. The milk from a neighboring dairy was also "set," and yielded fifteen per cent. of cream. Consumers would hardly have been satisfied if this milk had been delivered to them in glass jars sealed in the country, though they could not then accuse the milkman of tampering with it. Often the milk from a reliable dairy will be found sour, and, of course, must be rejected, and used for butter. The quality of the milk also depends on the food of the cow. Brewers' grains are not considered an unhealthy nutriment for cows, but the milk is thin and white.

In reply to a question by Dr. White as to how many cows are represented in one can of milk, it was stated that rarely would one can contain the milk of more than two cows. The farmer milks the cows in succession, and as soon as each cow is milked the milk is strained into the cans, which are successively filled and at once placed in water to cool. After arriving in the city the milk is mixed, and is then drawn into the service cans for distribution.

Dr. Bundy said that he had witnessed the operation of "mixing," and had seen water added in considerable quantities previous to filling the service cans for families.

Dr. Davenport asked if the milkmen consider the required standard too high? The reply was made that the milkmen in general know nothing about the standard, and but little about milk regulations or milk laws, but studiously endeavor to avoid the penalties.

The statement has been made that the cream sold by milkmen was obtained from creameries, as it was impossible to obtain good cream from the tops of their cans. Mr. Abbott stated that in his earlier experience as a milkman he found no difficulty in getting a large share of the cream, the motion of the cars was so slight and the sudden cooling with ice caused the cream to rise so that most of the cans have a heavy cream on them when reaching the city. Those that did not could be iced and kept over, as nearly every milkman carries a surplus.

Dr. Barnes stated that the Milk Inspector, in speaking of the arduous duties of his office, said that if the city would furnish him with a team, he could accomplish much more. Mr. Abbott produced the Milk Inspector's report for the year ending March 21, 1883, showing that the number of visits made and samples inspected was 1153, or, allowing three hundred working days, would be less than four per day, which Mr. Abbott thought, with our system of horse cars and good sidewalks, would not be a very laborious work for an able-bodied man. Our Milk Inspector receives $1800 per year, and has a clerk at $500, making $2300; divide this by 1153 and it will be seen that it costs the city of Boston nearly two dollars apiece for every sample of milk inspected. To this must be added $140 for analysis in fourteen cases, as a result of which thirteen persons were prosecuted and twelve convicted. In looking further we find that at that date eight hundred and sixty storekeepers or retail dealers have been licensed; is it possible that only that number of storekeepers in Boston have heard that there is a milk law! Such being the case, it is not to be wondered that the milk dealers speak with contempt of the Milk Inspector and his office.

Dr. Marcy remarked that we should not forget that in the plan for furnishing milk as described and practiced by Dr. Morris all chances of contamination of the milk from dirty vessels, all manipulation by middlemen, and all abstraction by servants after the milk has been delivered, is prevented. The most of the objections urged against milk as now supplied would at once be removed. There seems to be no good reason why a plan which can be carried on in Philadelphia to the satisfaction of the consumer and at a fair profit to the projector might not work equally well in Boston.

Dr. Blodgett remarked that a part of the responsibility for adulterated milk undoubtedly rests upon the people consuming it. Very few people in the city know how pure milk looks, and expect a rich yellow milk at all times of the year and under all circumstances. Cows' milk is not all yellow, nor is it always yellow. The farmers endeavor to secure cows which will yield large amounts of milk, but the color is often very pale. The farmer gets three and a quarter cents a quart for milk, and he tries to get the largest possible amount from the cows. A farmer cannot furnish Jersey milk for three and a quarter cents per quart. If people demand a quality in milk which does not belong to it there are no doubt many milkmen who are willing to furnish it of any desired color; and thus the consumer unconsciously encourages adulteration.

Dr. Blodgett further stated that he had made some attempts to ascertain the methods employed in the handling of milk, and that he had seen and heard much which was new and interesting to him, and was particularly struck by the courtesy and freedom with which he had invariably been allowed to make any investigations or pursue any inquiries he thought desirable. He thought that the members of the Section would be favorably impressed with the care and scrupulous attention to cleanliness which are observed in all the operations to which milk is subjected in transit and until it is delivered to the milkmen for distribution. Of course all this does not in any way prevent these persons from adulterating it before they deliver it. But there seems to be no systematic adulteration, as we have too often been led to suppose. A visit to the large milk depots is calculated to inspire a greater degree of confidence in the quality of the milk supply than exists at present in the minds of the majority of consumers.

DR. BOWDITCH presented the following resolution:

Resolved, That the chairman be requested to appoint a committee of five, whose duty shall be to report upon the whole subject of the providing of milk for Boston, and suggest the means for obtaining it pure for the citizens.

The resolution was unanimously passed, and in accordance with its requirements the following committee was appointed: Dr. H. O. Marcy, chairman, Dr. A. N. Blodgett, Dr. E. W. Cushing, Dr. H. J. Barnes, Mr. L. F. Abbott.

On motion of Dr. Blodgett the thanks of the Section were tendered to the members of the Milk Producers Association for the important information which they have placed at the disposal of the Section in regard to the source, treatment, and adulterations of the milk supplied to the citizens of Boston.

THE SPAYING OF COWS.[1]

The second paper of the evening was entitled The Milk Supply of Boston, and the Benefit to be Derived from the Spaying of Cows, by **MR. LLOYD F. ABBOTT**, a former milk producer and dealer.

The paper was read by **DR. G. E. MECUEN**, who described the process as follows:—

As regards the spaying of cows there is little danger if properly done, and the mortality should not exceed one per cent.

Operation. An incision is made in the flank of the cow, left side preferred, as being handier for the operator, about four inches long, through the skin, then the muscles and fascia are cut, and the peritonæum divided, using the finger as a director. The hand is then introduced and carried upwards and backwards until the uterus is reached, when, by following the horn outwards, we find the ovary, and remove it with the thumb-nail or écraseur; this can be held by the two last fingers of the hand, and search made for the other ovary, and when found removed in the same manner: when the arm and hand are withdrawn and the wound stitched by the interrupted suture passing through all the tissues except the peritonæum. During the whole operation a twenty per cent. solution of carbolic acid is used with the steam atomizer, the hands and side of the animal being thoroughly washed in the same solution. The hair should be clipped from the flank before incision. The pain from the operation is slight, the cow struggling only during the cutting of the skin, which does not take more than two or three seconds, and again during the sewing at the end of the operation. The latter is the most difficult part of the whole operation, as cow-hide in its undressed condition is very tough. While the arm and hand are within the belly of the cow the animal really seems to enjoy it, acting as a dog does when one rubs his head.

The advantages from this operation are set forth in Mr. Abbott's paper, and I will merely call special attention to a few of the most important. First, the quantity at a milking is increased, and a great increase takes place in the yearly yield of a cow. As to the milk itself, its quality is improved, the fat and sugar are increased, and although I did not keep a record of the examination of specimens of milk from these spayed cows before and after the operations (examining only for my own information, not expecting to have occasion to refer to figures again), I think that, judging from the large number of milk analyses that have been made, I would be supported in claiming that where fat and sugar are increased casein is decreased. Now this milk will be of the same quality day after day, unless the cow has some acute disease, provided she is properly fed and attended to. If over-fed she is apt to fatten, and fall off in the quantity of milk, as a spayed cow, like any animal deprived of the reproductive organs, is quite easy to fatten, thus adding to her value as beef. By this operation all the danger of abortion, post-partum hæmorrhage, accidents during heat, while with the bull, and calving are eliminated. The bad breeding and small cows may be made good milk-producers, and easily fattened for market. But I suppose the greatest advantage of all is the escape of the periodical change occurring in the milk of the unspayed cow every three or four weeks, and lasting a day or two.

Cows are extensively spayed in Texas when young, simply for the purpose of making good beef cattle, the butchers at Brighton abattoir being well aware of this fact. Before operating I visited the abattoir several times for the purpose of becoming acquainted with the anatomy of the cow, and on inquiry at the various slaughter-houses "if they were going to kill a cow" would receive the answer "yes." On the cow being opened I would find only a rudimentary uterus and no ovaries. After examining several I asked the butcher "where the ovaries were." He informed me that they had been removed when the animal was young, and showed me the scar in the hide. The way he had of finding it was that the tissues were all fused together, it requiring care to separate the hide, and the use of the knife, while only his hand was necessary in other parts. It seems to me that this is proof that the operation is a safe one, for the stock-raiser would not run the risk of losing young cattle just for the sake of increasing the weight of a few.

There are two facts which are of interest to us as physicians, namely, first, for two or three days after the operation the flow of milk is reduced to almost nothing. I suppose this is due to the congestion of the broad ligament and tubes. Second, in one case operated on, miscarriage followed ten days after the operation, the calf being macerated so that the hair and skin readily peeled off.

I was present at the spaying of five cows by a veterinary surgeon in which the operation was done through an incision in the posterior and lateral side of the vagina, the surgeon using a speculum to fix the uterus and distend the vagina, then cutting and introducing the hand with an écraseur, and having engaged the ovary removing it and the other through the same opening, the result being left to nature. From the slight observation I have had as yet I would favor the flank operation.

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[1] See Medical and Surgical Journal, No. 14, page 317.

Dr. James R. Chadwick said: I was called upon by Mr. Abbott to operate for him in one of his early cases. I did not find that my previous experience with the human species was of any material aid in the operation upon cows. I can testify that the operation appeared to give the cow but little pain, and only during the incision through the integument and its subsequent suture. The cow seemed to be chiefly affected by alarm at having her head and legs securely bound with ropes, but this no more than equaled our fear lest she should break loose during the operation and strike out. I was surprised on making the incision through the flank to find all further progress apparently barred by one of the stomachs; the hand was, however, easily passed between this and the abdominal wall into the pelvis where the two ovaries were successively seized and torn off by the thumb-nail. But slight hæmorrhage resulted. The only real difficulty of the operation was in perforating the hide with a needle to close the integumental incision. This is readily appreciated by considering the difficulty that would be experienced in trying to sew up a rent in a cowhide boot. Colonel Waring assured me last year that the effect of spaying cows had been of great benefit in promoting lactation, and that the mortality was no greater than five or six deaths in a thousand operations.

Dr. Gilbert, of Dorchester, who has also witnessed the operation, said that the cow seemed to suffer no great pain excepting when the outside skin was being cut and when the stitches were inserted at the close of the operation. The risk and discomfort of ether are much greater than the pain of the operation.

Dr. Mecuen stated that one cow from which the ovaries were removed has produced milk continuously for eleven years, and in this entire period has fallen off only three pints. Dr. Brush claims that the amount of milk will remain the same during the life of the animal. The carbolic spray was employed in all cases except the first one. On opening the peritonæum the air rushes into the abdominal cavity, but seems to produce no injurious effects. Both ovaries are removed at once. No dressing other than some substance to protect from flies, etc., is necessary, and the wound is entirely healed by first intention in about a week. The animal should be kept on low diet for a day or two, but in three or four days is allowed to run in the pasture as usual. In one case the cow was five months pregnant. The operation produced a miscarriage at the end of ten days. The fruit was macerated. After spaying, the only condition which will cause the quantity or quality of the milk to undergo variation is sickness of the animal.

Dr. E. W. Cushing stated that there is always an infant in his house. He has used the milk from a spayed cow for more than a year and finds it to be a good product and of uniform quality. New milk (after calving) is not good for children, and the milk during menstruation is not wholesome for an infant. Cows and women are much alike in this respect. The milk taken from a pregnant cow is unwholesome for a delicate person, and no mother thinks of nursing her child after she has again become with child. Milk as we obtain it is often neither natural nor healthy, for no animal in a natural condition gives milk while she is carrying her young.

On motion of **Dr. Marcy** a vote of thanks was tendered Mr. Abbott for his description of a safe operation whereby the quality of milk supply may be materially improved and its quantity rendered constant for many years.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

At a stated meeting of the Society, held March 24th, **Dr. H. Knapp** read a paper entitled Blindness from Thrombosis of the Retinal Blood-vessels in Facial Erysipelas, with Illustrations, which was discussed by **Drs. Loring, Holcombe**, and **Pooley**.

THE INCORPORATION OF THE SCHOOL OF MIDWIFERY AND THE LICENSING OF GRADUATES IN MIDWIFERY DISAPPROVED.

Dr. W. M. Chamberlain, chairman of the committee appointed at the last meeting to examine and report on the act to incorporate a college of midwifery and the act to regulate the practice of midwifery, presented the following majority report: —

To the Medical Society of the County of New York: Your committee, having carefully considered a draft of An Act to Incorporate a College of Midwifery, also a draft of An Act to Regulate the Practice of Midwifery, and having heard the arguments of the promoters of these acts, are of the opinion that it is not expedient for this Society to indorse or support the said acts.

The question of the conditions under which others than registered physicians shall practice midwifery seems to be an important and difficult one, and in our opinion might properly be referred to a special committee, or to the Comitia Minora, for examination and report. (Signed)

W. M. Chamberlain, M. D.,
Edward L. Partridge, M. D.,
Arthur M. Jacobus, M. D.,
Charles Carroll Lee, M. D.

A minority report, as follows, was presented by **Dr. A. W. Warden**.

Medical Society of the County of New York, S. O. Vander Poel, M. D., President, W. M. Carpenter, M. D., Secretary: —

The undersigned, a part of your committee appointed to investigate and report to the Medical Society of the County of New York concerning two acts proposed for State legislation, presented to the Medical Society of the County of New York for approval by the promoters of the proposed New York Maternity and School of Midwifery, reports as follows: —

First, In regard to the proposed New York Maternity and School of Midwifery, your committee recommend that the Medical Society of the County of New York *do not indorse* or commend the incorporation of such an institution, because it is not conducive to the elevation of the medical profession and the good of the community.

Secondly, In regard to the proposed act in relation to the practice of midwifery in the State of New York, your committee find such proposed law to be not advisable, and counsel the Medical Society of the County of New York, in the interest of maintaining a high standard of qualification for the practice of midwifery and all branches of the profession of medicine, and in the interests of the people of the State of New York, that it *do not approve* any State legislation giving the right to practice midwifery, or any branch of the profession of medicine, to persons other than qualified and registered (male or female) physicians.

(Signed.) A. W. WARDEN, M. D.

After considerable discussion the minority report, on motion of **DR. E. C. HARWOOD**, was adopted.

COLLECTIVE INVESTIGATION OF DISEASE.

On motion of **DR. DAVID WEBSTER**, chairman of the committee on collective investigation of disease, who reported that the histories of about fifty cases of intestinal obstruction had been sent in, and that their consideration would require more time than could be given to the matter on this occasion, a special meeting for this purpose was appointed for April 7th.

Medical and Surgical Journal.

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INSANITY AND THE LAW.

THE recent sentence to death, in England, of two evidently insane murderers, William Gouldstone and James Coles, for clearly irresponsible acts, and the repeated escape on the ground of insanity, in this country, of sane and responsible men, on trial for cold-blooded murder, of which Nutt is the last conspicuous case, have turned thoughts anew to the question of the responsibility of criminals and the definitions of insanity. Gouldstone and Coles were reprieved and sent to a criminal lunatic asylum, but Nutt is still at large, a free man, and an example to others of the ease with which murder may be committed and the laws defied. It has long been the opinion of leading medical authorities, of Krafft-Ebing, Bucknill, and Gray particularly, that the mental disease of the physician does not necessarily constitute irresponsibility under the law. Lord Bramwell, too, has ruled that insanity is strong but not conclusive evidence of innocence, and Lord Blackburn has stated that the jury must decide in each case whether the disease of the mind or the criminal will was the cause of the crime. In a recent lecture, published in the *British Medical Journal* of March 15th and March 22d, Dr. Bucknill's medico-legal definition of insanity is *incapacitating weakness or derangement of mind caused by disease*, meaning, in criminal cases, inability of abstaining from the criminal act, which would be expressed by Lord Bramwell's criterion, *Could he help it!* Dr. Bucknill suggests, as an amendment to the law of England, that *no act is a crime if the person who does it is at the time incapable of not doing it by reason of idiocy or of disease affecting his mind.*

Of course no ordinary jury is competent to pass upon such a question. Dr. Bucknill quotes Colonel Corkhill's opinion, given soon after the Guiteau trial, "that when a prisoner proposes to defend his crime on the ground of insanity a jury specially selected for their fitness should be chosen to try the special plea, and if the prisoner be found insane then he should be confined in an insane prison for a time commensurate with the character of the crime, and if the verdict of the jury be in favor of his sanity then the plea should not be allowed upon the trial."

With such definitions of insanity and irresponsibility, and such a procedure before the trial, it is probable that many of the differences between the doctors and the lawyers would be met, and that a medico-legal definition of insanity would be found broad enough to cover all cases, and flexible enough to admit of ready application to every one committing an act in violation of the laws. We should avoid, too, such disagreeable complications as occurred during the Guiteau trial, and make it harder for judges and juries to acquit of murder, on the ground of insanity, responsible men who do their killing under circumstances appealing to the sympathies of their community. In our country there is less danger of convicting an insane man than in England, but the danger is greater of allowing sane criminals to escape the penalty of their deeds by a false claim of irresponsibility. Throughout the world criminal jurisprudence follows slowly after the discoveries and advances in medical pathology, and the great advantage of Dr. Bucknill's position is that the law of the land may be administered without being changed every few years to adapt itself to more recent views regarding the nature and limitations of mental disease.

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MODERN AND ANCIENT LEPROSY IN SYRIA.

THE intrinsic and historic interest connected with leprosy is such as to make it a fascinating field for research. The recent case at Salem, Mass., is fresh in the minds of our readers, in which the disease was imported from the Sandwich Islands. Descriptions of the leprous community on one of those islands have been frequently given us by travelers. Recently an interesting account has been published by Professor Lortet, dean of the Faculty of Medicine at Lyons, of the disease as observed by him in Syria. These papers may be found in the first few numbers of *Lyon Médical* for the current year. The picture presented is a most revolting one, but inasmuch as it shows the disease as it occurs among a people crowded together and entirely devoid of even that palliative treatment which medical knowledge is able to afford, it may perhaps be taken as a fair representation of that type of the disease which in the Middle Ages followed back the returning Crusaders and spread terror over so much of Europe.

It seems that in Syria leprosy is closely limited to the southern parts bordering on the Egyptian confine, Neapolis on the north, and Joppa, Jerusalem, and Hebron on the south representing its topographical range. The nomadic Arabs on the shores of the Dead Sea are exempt. The total number of lepers in Syria is given as about two hundred. They are confined to certain cities, where they beg alms during the day and retire at night to their quarters and contribute their gains to a common fund. Until recently they had their "quarter" in Jerusalem, where they occupied a collection of huts made of reeds and mud, so low that it was necessary to crawl into them, and filled with all sorts of filth. Now they are removed outside the wall to a big one-story structure built on a spot partly cut out of the rock above the valley of the Kedron, where hygienically they are about as badly off as before. The several compartments all have their entrances looking against the face of the rock. These rooms are each thirteen feet by twenty-two, and serve each for shelter to a group of lepers, or a family if they are married. The only furniture in these rooms consists of two boxes, one for containing the poor food on which they subsist, the other the rotten rags with which they cover their putrefying sores. The floor is of bare earth with perhaps a few bits of old clothing that they have begged to sleep on. There is no fireplace, but two or three stones are put together when there is wood to burn, and the smoke, with the exception of what is deposited on the walls and roof, escapes through the door and window.

Of the aspects of the disease in its worst forms we have not space to speak in detail, nor would the description be especially novel to our readers. The reddish-purple tubercles on the face, shoulders, and extremities, particularly the posterior surface of the forearm, the inside of the thigh, and the front of the leg; the large yellowish spots which in milder cases replace the tubercles and have a similar distribution; the breaking down into ulcers of these first formations; the extensive areas of superficial anæsthesia; the contraction of the flexor muscles so that the hands cannot be opened, and the toes are drawn down upon the plantar surface of the foot; the ulceration and sloughing of the phalanges one by one, till the metatarsal and metacarpal bones are exposed, protruding from a bleeding, horribly fetid wound; finally, the gangrene attacking the face, the cornea, the ears, and the scalp, and eating its way into the bones of the nose and cranium, — these are among the salient features of the portrait drawn by M. Lortet as well as by other observers of the worst forms of the neglected leprosy of to-day. For the more complete details we refer the reader to the article cited.

The community on the banks of the Kedron is, we learn, governed by a sheik, himself a leper, for whom his subjects show the utmost submission and respect. Lepers can marry only among themselves. Women, being less frequently the victims of the disease than men, are at a premium in the matrimonial market, and command a substantial pecuniary price. The desire for marriage among the men seems to be chiefly based on the hope of securing a nurse against a time when they can no longer do anything for themselves. Either from the frequency of an implication of the organs of generation or from the constitutional depression these marriages are almost always sterile. The disease is eminently hereditary. Out of twenty-six cases which are described in detail by the writer no less than twenty-one were of leprous parentage. While a child of a leprous father may in rare cases escape the malady, there is no authentic instance, according to this author, of a leprous mother failing to transmit the disease, which appears in the child at from eight to ten years, never earlier.

Little is known regarding the cause of leprosy, but M. Lortet points out the interesting fact that all the lepers in Syria are fellahs, that is, mussulman or Christian farmers, whose diet is notably poor, consisting of innutritious vegetables like lentils, with never any meat. The Israelites, and in general the inhabitants of the towns, however insalubrious the surroundings of the latter, are exempt from leprosy. Ichthyophagy, as a cause of the disease, is rejected by M. Lortet, his Syrian fellahs having for the most part no fish to eat. The largely maritime distribution of leprosy, with other facts which have given credit to the theory that ascribes it to a fish diet, are reconcilable with M. Lortet's observations if we suppose leprosy to be in part at least a vice of nutrition, and caused alike whether bad fish or any other innutritious food is made the only diet to the exclusion of adequate alimentation.

M. Lortet believes leprosy to be contagious through the channel of the cutaneous lesions, the lungs, and the digestive tract. He also confirms the view of its parasitic nature, held by many recent observers. He found in sections from non-ulcerated leprous tubercles that the derm was infiltrated with large, irregular cells, multipolar, and filled with long, very slender bacteria, which possessed a very active movement.

The description of leprosy as it exists to-day in the Holy Land suggests, very naturally, the inquiry how far it is identical with the disease called by that name in the Bible. In the thirteenth chapter of Leviticus are to be found the Mosaic rules for diagnosis of leprosy. From these it seems probable that the law-giver included under that title a number of contagious diseases, among them favus and tinea barbæ (verses 29, 30). While some authorities have denied that the leprosy of Moses included at all the *elephantiasis Græcorum*, others have recognized this as one of the types which he described. In the *Popular Science Monthly* for April Dr. George H. Fox discusses this question. He shows that the expression "white as snow," so frequently applied to the appearance of the disease, does not seem applicable to modern leprosy of either the macular or of the tuberculous type. The direction for the patient to be examined by the priest after seven days for evidence of change in his condition seems to contemplate some disease less chronic in its development than leprosy. It may well be supposed that the practical purpose of Moses' instruction being preventive treatment, the law-giver may have included all contagious skin diseases with which he was acquainted under one term without specifying or even knowing their diagnostic differentiation.

Regarding the "leprosy" of the New Testament, Dr. Fox points out its probable identity with psoriasis. The Septuagint translators rendered the Hebrew *tsaraath* by the word *lepra*, which was the name of a disease characterized by white scaly patches (psoriasis), and familiar to the Greeks, who, on the other hand, knew nothing of leprosy. Afterwards the true leprosy, the "Phœnician disease," was introduced into Greece, and was called elephantiasis. The word used by the evangelists, Matthew and Mark, in describing the miracle of the Saviour is lepra and not elephantiasis. The translators of the English Bible rendered this word "leprosy," which was also the translation of the Hebrew *tsaraath*, because the Septuagint translators had rendered the latter word by lepra. The inference is clear that the leprosy of the New Testament was psoriasis, and it is not improbable that it was this disease which made some of its subjects among the ancient Hebrews "as white as snow."

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LEGISLATION IN NEW YORK FOR THE PROTECTION OF FOOD PRODUCTS.

The Committee on Public Health have made their report to the New York Legislature in regard to imitation butter, and recommended, as the result of their investigations, that its manufacture should be totally prohibited by law. In the course of it they say: "While not averring that oleomargarine is necessarily always unwholesome, the committee believe that it is likely to be so, and to a large extent would necessarily be injurious if used by children or persons in delicate health, and that it is not in any sense, or can be, a wholesome substitute for pure and natural butter."

In consequence of this report Judge Low's bill "to prevent deception in sales of dairy products," which met with very little opposition, was ordered to a third reading on the 28th of March. This goes to the root of the evil, and prohibits the manufacture or sale of any of these adulterations in the State of New York. All previous legislation on the subject has merely sought to regulate the sale of imitation butter so as to enable purchasers to know what they were buying, but though no less than seven bills for the protection of the people against deception and imposition have been passed by the Legislature during the last five years, all attempts to do this have hitherto proved a complete failure, as was shown by the experience of the Senate Committee on Public Health, which, during its recent sessions in New York, found that the analysis of thirty samples of butter purchased from different grocers in New York and Brooklyn showed that twenty of them were imitations, although they were all represented by the venders to be "pure butter." The bill, as introduced, constituted the State Dairymen's Association a commission charged with the enforcement of its various provisions, and appropriated $50,000 to defray expenses, but it was afterwards amended by substituting for the Dairymen's Association a "dairy commissioner," who should be appointed by the Governor, and receive a salary of $3000 and his necessary expenses. It is stated that such a prohibitory law has worked well in Missouri, and that in consequence of its rigid enforcement a large quantity of imitation butter, manufactured in Chicago, which used to be supplied to that State, is now sent on to New York.

During the week ending March 22d 33,405 pounds of diseased meat and "bob" veal were seized by the inspectors of the Health Department in New York. and Health Commissioner Raymond, of Brooklyn, has made the following order: "In order to prevent the admission of meats of an unwholesome quality into the markets of the city on and after March 26, 1884, no cows or bulls shall be slaughtered in any slaughtering house in the city of Brooklyn except in the presence of an inspector of the Health Department, the owners of said slaughtering establishments to receive notice of the time when said inspectors will be present."

Massachusetts seems to be the only State at present which evinces any marked disposition to progress backwards in these legislative questions for the protection of the public against adulterations of foods and drugs.

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MEDICAL NOTES.

— Dr. Fordyce Barker and Surgeon J. S. Billings sailed from New York last week to receive the degree of LL. D. at the approaching tercentenary of the University of Edinburgh. We understand the same honor was offered to other gentlemen connected with the medical profession, but that the necessity for personal presence prevented its acceptance.

— At the annual meeting of the New York Neurological Society held April 1st, William J. Morton, M. D., was elected President, and E. C. Wendt, M. D., Secretary.

— Dr. Wood, editor of the *North Carolina Medical Journal*, is engaged upon an inquiry as to the effects of tobacco upon the human system, with a view to publication, and is glad to receive reports from any reliable medical source.

— The conclusions of an article in review of the treatment of uterine fibromata, in the *Revue Médicale* (9 February, 1884), may perhaps, be taken as reflecting the French sentiment, in this respect. They are as follows: Expectation, too much neglected by the Germans, better respected in England, ought to play an important rôle in the therapeutics of uterine fibromata. Surgical interference ought to be made only in cases which are serious either from pains or hæmorrhages which they produce. In order that the operation be justified the pains must be such as to render life insupportable to the patient, and the hæmorrhages so severe as to expose her to mortal danger. When, finally, the operation is resolved upon, castration is the measure to which recourse should be had in cases where the tumor is not bulky, and ablation, on the other hand, where the volume of the tumor is considerable.

— An International Prison Congress will meet at Rome next October.

— The Kansas Legislature has been considering a bill for the protection of domestic animals, and also one for establishing an office of State Veterinarian, whose duties shall be to investigate all infectious or contagious diseases, under direction of the Live Stock Sanitary Commission, visiting at once any locality where such disease may be located, establish quarantine, and take other necessary measures. He shall keep posted in all diseases of live stock, and make reports and perform such other service as may be required by law or directed by the Sanitary Commission. A salary of $2500, with traveling expenses, is proposed.

— From the edition of Messrs. George P. Rowell & Co.'s American Newspaper Directory, now in press, it appears that the newspapers and periodicals of all kinds at present issued in the United States and Canada reach a grand total of 13,402. This is a net gain of precisely 1600 during the last twelve months, and exhibits an increase of 5618 over the total number published just ten years since. The increase in 1874 over the total for 1873 was 493. During the past year the dailies have increased from 1138 to 1254; the weeklies from 9062 to 10,028; and the monthlies from 1091 to 1499. The greatest increase is in the Western States. Illinois, for instance, now shows 1009 papers in place of last year's total of 904, while Missouri issues 604 instead of the 523 reported in 1883. Other leading Western States also exhibit a great percentage of increase. The total number of papers in New York State is 1523 against 1399 in 1883. Canada has shared in the general increase.

— We learn from our foreign exchanges that the French Court of Cassation has quashed a judgment obtained some time ago by the proprietress of a hotel near the Sorbonne, awarding damages for disturbance to her trade caused by the howlings of dogs undergoing vivisection at that institution. The court holds that the physiological experiments in question constitute a branch of instruction given by the State, and that M. Paul Bert, against whom the judgment was obtained, and other professors of every rank, accomplish by such experiments a public service.

NEW YORK.

— A communication was received by the New York Board of Health, on March 25th, from the Department of State forwarding a request from the Duke of Buckingham that the Health Department of the city should be represented at the International Health Exhibition in London in May next, and also at the International Sanitary Congress in the same city in June. The Board designated Dr. Woolsey Johnson, Health Commissioner, and Prof. Charles F. Chandler, late president of the Board, as its representatives, and also resolved to call the attention of the Chamber of Commerce and the Board of Education to the matter in order that these bodies might send representatives to the exhibition and congress, and that public interest might be aroused in regard to the same.

PHILADELPHIA.

— The Philadelphia County Medical Society held a stated quarterly meeting for the election of new members April 2d. Among the candidates to be balloted for was the name of a graduate of the Women's Medical College, but who was personally and professionally qualified for membership, and was so reported by the Board of Censors. It was found, however, that the opposition to woman physicians was both strong and active, and she failed to be elected. At this meeting an amendment to the Constitution was voted upon, making women ineligible as candidates for membership, by the introduction of the word "male" before the word "physician," so that Article I. of the Constitution should read "This Society shall consist of regular, *male* physicians, residents of the County of Philadelphia," etc. Out of 127 votes 78 were in favor and 49 against the amendment, which failed of being adopted, as it did not receive a two-thirds vote. The discussion of the question revealed a radical and irreconcilable difference of opinion concerning the functions of a county medical society, one side holding that it was an independent organization, with the right to refuse admission to membership on other than professional grounds, the other maintaining that as a representative body it belonged to the members of the profession in Philadelphia County, whom it claimed to represent; all of whom were therefore entitled to membership. The fact that other counties in Pennsylvania have acknowledged the truth of this principle, and that the New York County Medical Society has adopted it, shows that there are no insuperable objections to its adoption in Philadelphia.

The County Medical Society holds three conversational meetings each month, which are well attended, one or two papers being read at each meeting. The discussion on tuberculosis, inaugurated by Dr. Formad's paper, Is Consumption Contagious, was well sustained and very interesting.

— The State Medical Society will meet in Philadelphia next month (May 14th, 15th, and 16th). Among its members are several woman physicians, one of whom, Dr. Alice Bennett, of Norristown, will deliver the Address on Mental Disorders. Dr. John B. Roberts will read the Address on Surgery; Dr. Jacob Price, of Westchester, that on Obstetrics; Dr. Benjamin Lee, in Hygiene; Dr. W. H. Daly, of Pittsburg, in Medicine, and Dr. William S. Little on Ophthalmology.

— The Jefferson Medical College held its fifty-ninth annual commencement on March 29th, when a class of 215 was graduated, many of whom were third-course students. The matriculates this session were 554, nearly as many as last session. The degree of LL. D. was conferred upon J. M. DaCosta of Philadelphia, and Prof. Benjamin Silliman of New Haven, and that of D. D. upon Rev. J. F. Dripps of Philadelphia.

— The University of Pennsylvania will hold its one hundred and nineteenth annual commencement

May 1st, when about 100 will receive the degree of M. D. The first-year class numbers 140, which is considerably larger than last year.

— The thirty-second annual commencement of the Women's Medical College was held March 13th, when the degree of M. D. was conferred upon twenty-six graduates.

— The Medico-Chirurgical College graduated four at its commencement held April 3d. This college has recently lost its President, Dr. G. P. Oliver, who died suddenly with apoplexy about two months ago, and also Prof. F. O. Nagle, who died February 1st with typhoid fever. It is probable that the school will be reorganized during the summer, and enter upon a larger and more important work under the guidance of a few young, able, and energetic members of the profession.

— A new organization, the Medical Jurisprudence Society, for the cultivation of medico-legal science, has been started, with Prof. Emeritus S. D. Gross, M. D., LL. D., D. C. L., as president. It meets on the second Tuesday of each month (save July and August) at the hall of the College of Physicians. A Clinical Society has also been formed out of the old Northern Medical Association.

— Prof. H. G. Landis, of Columbus, Ohio, who was the orator of the Alumni Association, was the recipient of marked attention while here, and was complimented by a dinner at the St. George Hotel given by the Association.

Miscellany.

AN EPIDEMIC OF TRICHINOSIS.

One of the most extensive and fatal outbreaks of trichinosis in recent years has recently occurred in the district of Magdeburg, an account of which may be found in the December number of the *Centralblatt für allg. Gesundheitspflege*, and also in the *Practitioner* for February, 1884.

"It appears that the flesh of an undoubtedly trichinous pig which had been slaughtered on the 15th of September last at the little town of Emersleben was disposed of on that and the following day in Emersleben and neighboring villages. According to universal custom in Saxony nearly the whole of the flesh was eaten in a raw state as minced meat.

"The earliest cases of illness showed themselves in Emersleben on the 18th of September, and by the 28th of the month the disease was prevalent throughout the place.

"The first symptoms noticeable in the cases were violent diarrhœa and marked loss of strength. The persons first attacked were the family of the butcher who killed the pig, no member of which escaped. The disease was at once recognized to be trichinosis, and upon further inquiry it was ascertained that in every instance pork obtained from the same source had been partaken of in a raw or green smoked state previous to illness.

"The epidemic continued to augment in numbers until the beginning of October, when also the first fatal case occurred. On examining the muscles of the body numerous trichinæ were discovered, and enormous numbers were present in the contents of the intestine, every preparation of the intestinal mucus disclosing from ten to fifteen trichinæ within a field of the magnitude of a small lentil.

"In subsequent deaths microscopic examination revealed similar results, the numbers of trichinæ in the muscles being less remarkable, however, than the swarms which, including adult forms, were always present in the intestine.

"Up to November 11th there had occurred in Emersleben (a place of 900 inhabitants), 240; in Deesdorf (with 400 inhabitants), 40; in Nieuhagen, 70; and in the remaining localities affected, 11; in all 361 cases of trichinosis, and of these 57 had proved fatal, including 45 deaths in Emersleben and 10 in Deesdorf."

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ADULTERATED DRUGS.

The following remonstrance, addressed to the Senate and House of Representatives of Massachusetts, was drawn up by Dr. Henry W. Williams, and, as will be observed, is signed by the President and all the living ex-presidents of the Massachusetts Medical Society: —

The undersigned, physicians of Massachusetts, respectly represent that, in our opinion, the United States Pharmacopœia should be the *only* standard for the preparation and sale of drugs and medicines, and we earnestly remonstrate against any alteration of the present law relating to the adulteration of medicines or of articles of food, believing, as we do, that this law is an important safeguard to the public.

Alfred Hosmer, President of the Massachusetts Medical Society,
George C. Shattuck, Ex-President.
George H. Lyman, Ex-President.
Benjamin E. Cotting, Ex-President.
Henry W. Williams, Ex-President.

The discussion of this subject in the House of Representatives was assigned for Wednesday, April 9th.

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FOOT-BALL: THE KILLED AND WOUNDED.

The result, on one day recently, of four foot-ball fights — it is a gross misuse of language to call them "games" — was that two young men lost their lives, and two sustained fractures of the leg, in one instance apparently a severe compound fracture; one of the deaths was said to have been due to heart-disease, the other was clearly caused by fracture of the spine in the neck. It is a great pity that what might be a manly and health-giving game should have been allowed to degenerate into a kind of organized faction fight. The human skull, unlike that of the goat and bull, is not adapted for use as a battering ram; the death of a young man who perishes in the attempt to emulate the tactics of a goat or a bull may perhaps not be any great loss to the community, but what we complain of is that such conduct should be held up before the eyes of a number of young men and lads as an example to be followed. The constituted authorities of foot-ball ought to be able to make regulations sufficiently stringent to prevent the, at present, high percentage of killed and wounded.

If they want a precedent they have only to turn to the action of the cricket legislature, which is to meet at Lord's next month. in order to pass laws intended to put a stop to certain dangerous abuses which have crept into the noble game. — *British Medical Journal,* March 22d.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 29, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	648	229	16.50	16.80	3.30	4.50	1.65
Philadelphia	927,995	412	119	14.16	17.17	—	5.76	3.12
Brooklyn	644,526	224	80	14.40	16.20	5.85	5.85	1.80
Chicago	632,100	206	101	15.68	9.31	2.45	5.88	1.96
Boston	423,800	152	55	9.24	21.78	2.64	1.98	1.32
Baltimore	408,520	159	81	25.20	10.08	2.52	2.52	1.89
St. Louis	400,000	138	43	10.95	10.22	—	4.38	2.92
Cincinnati	272,400	93	26	14.07	21.60	2.16	—	1.08
New Orleans	234,000	148	51	24.84	8.84	2.72	1.36	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	97	31	17.51	13.39	1.03	1.03	8.24
Pittsburg	180,000	83	64	8.47	15.73	3.63	—	1.21
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	28	11	17.85	3.57	—	3.57	10.71
Nashville	54,400	20	10	10.00	5.00	—	—	5.00
Charleston	52,286	30	13	10.00	3.33	—	—	—
Lowell	71,447	37	10	5.40	16.20	—	—	—
Worcester	69,442	22	10	18.20	9.10	—	4.55	—
Fall River	62,674	34	13	14.82	5.88	—	—	—
Cambridge	60,995	24	4	4.16	33.28	—	—	—
Lawrence	45,516	17	8	11.76	17.64	—	—	—
Lynn	44,895	14	4	7.14	14.28	—	—	—
Springfield	38,090	16	4	25.00	—	—	18.75	—
Somerville	31,350	10	3	10.00	20.00	—	10.00	—
Holyoke	30,515	10	3	10.00	20.00	10.00	—	—
New Bedford	30,144	15	2	6.66	20.00	6.66	—	—
Salem	29,503	9	1	—	33.33	—	—	—
Chelsea	24,347	9	5	—	11.11	—	—	—
Taunton	22,693	7	1	—	28.56	—	—	—
Gloucester	21,400	6	1	—	33.33	—	—	—
Haverhill	20,905	8	2	25.00	12.50	12.50	—	—
Newton	19,421	8	3	—	12.50	—	—	—
Brockton	18,323	10	4	20.00	—	—	—	—
Malden	15,273	2	1	—	—	—	—	—
Newburyport	13,947	3	0	—	—	—	—	—
Fitchburg	13,433	3	1	33.33	—	—	—	—
Seventy-seven Massachusetts towns.	182,911	87	17	11.90	23.80	—	4.76	2.38

Deaths reported 2789 (no reports from Buffalo, Milwaukee, and Providence): under five years of age, 1011: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 419, consumption 418, lung diseases 411, diphtheria and croup 105, scarlet fever 56, diarrhœal diseases 51, measles 43, typhoid fever 34, cerebro-spinal meningitis 25, erysipelas 22, whooping-cough 23, puerperal fever 21, small-pox 18, malarial fever 18, typhus fever three. From *measles,* Baltimore 19, New York 11, New Orleans six, Philadelphia, Brooklyn, and District of Columbia two each, Charleston one. From *typhoid fever,* Philadelphia 15, Baltimore five, New York and Pittsburg three each, Brooklyn, Cincinnati, New Orleans, Nashville, Worcester, Lawrence, and Fairhaven one each. From *cerebro-spinal meningitis,* New York eight, Fall River three, Philadelphia, Cincinnati, and Worcester two each, Chicago, Baltimore, Charleston, Lawrence, Lynn, Haverhill, Brockton, and Fitchburg one each. From *erysipelas* New York seven, Chicago four, Brooklyn and Boston two each, Philadelphia, Baltimore, New Orleans, Charleston, Brockton, Hingham, and West Brookfield one each. From *whooping-cough,* New York six, New Orleans four, Brooklyn, District of Columbia, and Boston three each, Philadelphia, Chicago, Baltimore, and Cincinnati one each. From *puerperal fever,* Chicago five, New York three, St. Louis, Cincinnati, and Lowell two each, Philadelphia, Brooklyn, New Orleans, District of Columbia, Cambridge, Springfield, and Stoneham one each. From *small-pox,* New Orleans 15, Cincinnati three. From *malarial fevers,* New York six, Brooklyn and St. Louis three each, Baltimore and New Orleans two each, Cincinnati and New Haven one each. From *typhus fever,* New York three.

Seven cases of small-pox were reported in St. Louis, Cincinnati two; scarlet fever 43, diphtheria 16, typhoid fever eight, and measles one, in Boston.

In 97 cities and towns of Massachusetts, with an estimated population of 1,149,642 (estimated population of the State 1,955,104), the total death-rate for the week was 22.61 against 18.21 and 17.07 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending March 15th, the death-rate was 22.6. Deaths reported 3796: acute diseases of the respiratory organs (London) 370, whooping-cough 160, measles 146, scarlet fever 81, fever 40, diarrhœa 38, diphtheria 20, small-pox (London 11, Liverpool and Sunderland two each, Sheffield and Newcastle one each) 17. The death-rates ranged from 15.2 in Plymouth to 30.5 in Manchester; Bradford 19.2; Sheffield 19.4; Birmingham 21.1; London 21.6; Leicester 21.6; Nottingham 21.9; Liverpool 22.8; Sunderland 23.7; Leeds 29.8; Birkenhead 29.9. In Edinburgh 21.6; Glasgow 23.3; Dublin 27.4.

For the week ending March 15th, in the Swiss towns, there were 35 deaths from consumption, lung diseases 33, diarrhœal diseases 19, typhoid fever 16, whooping-cough 13, diphtheria and croup 10, measles four, scarlet fever two. The death-rates were, at Geneva 29.6; Zurich 19.7; Basle 20.9; Berne 23.3.

The meteorological record for the week ending March 29th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 23	30.172	45	58	37	77	67	100	81	SE	SW	S	4	13	6	C	O	R	—	—
Mon., 24	29.736	51	60	43	96	58	75	76	W	NW	NW	8	8	12	O	O	O	—	—
Tues., 25	29.964	48	59	38	74	52	83	70	W	NW	SW	7	7	4	F	C	C	—	—
Wed., 26	29.711	43	48	37	89	97	100	95	SE	E	NW	10	16	3	O	R	O	—	—
Thurs., 27	29.539	42	49	37	95	83	80	86	NW	NW	NW	11	16	10	O	R	A	—	—
Fri., 28	29.600	44	53	38	80	54	71	68	W	NW	NW	11	17	12	O	F	C	—	—
Sat., 29	29.520	42	49	36	80	60	75	72	N	NW	NW	7	11	6	O	O	F	—	—
Mean, the Week.	29.748	45	60	36				78										28.50	1.18

[1] O., cloudy; C., clear; F., fair; G., fog; H., sleet; S., snow; R., rain; T., threatening; A., clearing up.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S MARINE HOSPITAL SERVICE, JANUARY 1, 1884. TO MARCH 31, 1884.

Fessenden, C. S. D., surgeon. To proceed to Cairo, Illinois, and Memphis, Tennessee, as inspector. March 5, 1884.

Purviance, George, surgeon. Granted leave of absence for thirty days. February 16, 1884.

Smith, Henry, surgeon. To rejoin his station at Norfolk, Virginia. March 7, 1884.

Irwin, Fairfax, passed assistant surgeon. Relieved from duty at Norfolk, Virginia; to assume charge of Cape Charles Quarantine Station. March 7, 1884.

Carmichael, D. A., assistant surgeon. To report to Surgeon Purviance for examination for promotion. March 5, 1884.

Armstrong, S. T., assistant surgeon. To report to Surgeon Fessenden for examination for promotion. March 5, 1884.

Bennett, P. H., assistant surgeon. Leave of absence extended ten days. January 18, 1884.

Ames, R. P. M., assistant surgeon. Detailed for temporary duty on relief boat, — Ohio River flood sufferers. February 16 and March 1, 1884.

Devan, S. C., assistant surgeon. Upon expiration of leave of absence to proceed to St. Louis, Missouri, for temporary duty. February 6, 1884.

Kalloch, P. C., assistant surgeon. To proceed to Charleston, South Carolina, for temporary duty. February 1, 1884.

Bevan, A. D., assistant surgeon. Granted leave of absence for seven days. March 13, 1884.

Wasdin, Eugene, assistant surgeon. Granted leave of absence for fifteen days. March 4, 1884.

Battle, K. P., assistant surgeon. To proceed to New York, N. Y., for temporary duty. February 4, 1884.

RESIGNATION.

Cooke, H. P., passed assistant surgeon. Resignation accepted by the Secretary of the Treasury, to take effect February 5, 1884. January 31, 1884.

APPOINTMENT.

Battle, Kemp P., M. D., of North Carolina, having passed the examination required by the regulations, was appointed an assistant surgeon by the Secretary of the Treasury, February 2, 1884.

PROMOTIONS.

Carmichael, D. A., passed assistant surgeon. Promoted and appointed passed assistant surgeon, by the Secretary of the Treasury, from March 1, 1884. March 18, 1884.

Armstrong, S. T., passed assistant surgeon. Promoted and appointed passed assistant surgeon, by the Secretary of the Treasury, from April 1, 1884. March 28, 1884.

A CORRECTION

Mr. Editor, — Through an error in copying the statement is made in the article on Tracheotomy in the last number of the Journal, that [illegible] patients recovered. The facts are as follows: Number of operations, twenty-one; number of recoveries, *ten*. Very truly yours, Geo. W. Gay, M. D.

Boston, *April* 5, 1884.

The Association of American Medical Editors. Annual Meeting, Washington, D. C., May 5, 1884. — The annual meeting of the Association of American Medical Editors will be held in Washington, May 5th, at eight P. M., in Medical Hall, southeast corner of Sixth and F Streets. The Annual Address will be delivered by President Leartus Connor, M. D., on The American Medical Journal of the Future, as indicated by the History of American Medical Journals in the Past. Dr. N. S. Davis will open the discussion on How far can Legislation Aid in Elevating the Standard of Medical Education in this Country? in which Dr. A. B. Palmer, Dr. H. O. Marcy, Dr. L. S. McMurtry, Dr. C. H. Hughes, Dr. Frank Woodbury, Dr. William Brodie, Dr. A. N. Bell, Dr. William B. Atkinson, Dr. W. C. Wile, Dr. W. R. D. Blackwood, Dr. Henry Leffmann, and Dr. Deering J. Roberts will take part. All members of the profession, especially journalists and authors, are invited to be present and take part in the meeting.

John V. Shoemaker, M. D., *Secretary*.

Philadelphia, 1031 Walnut Street.

Middlesex South District Medical Society. — The annual meeting will be held at Porter's Hotel, North Cambridge, on Wednesday, April 16, 1884, at twelve o'clock. The Annual Address will be delivered at one o'clock P. M. by Dr. H. M. Field, of Newton. A special dinner will be served at two o'clock P. M. The Censors of the Society will meet at the same place, at 11.30 A. M. of the same day, to consider applications for admission to the Massachusetts Medical Society. The annual assessment should be paid to Dr. J. W. Willis, Treasurer, before the meeting of the State Society. Members may order telephone messages to be sent to No. 7081, and they will be delivered at the Hotel.

Walter Ela, *Secretary*.

Cambridge, *April* 9, 1884.

Illinois State Board of Health. — The regular quarterly meeting of the Illinois State Board of Health will be held at the Grand Pacific Hotel, in Chicago, beginning Thursday, April 17th. At this session candidates for certificates will be examined, both non-graduates, who must undergo an examination upon their preliminary education, as well as in the usual branches of medical study, and also graduates of colleges which have not fully complied with the schedule of minimum requirements adopted by the Board in 1880, and in force from and after the session of 1882-83.

Books and Pamphlets Received. — Fourteenth Annual Report of the Massachusetts Homœopathic Hospital and of the Ladies' Aid Association for the Year ending December 31, 1883. Boston. 1884.

1884. Annual Report of the Presbyterian Eye, Ear, and Throat Charity Hospital, No. 77 East Baltimore Street, Baltimore, Md. 1884.

Original Articles.

ENTERIC FEVER IN NEW HAVEN.[1]

BY GUSTAVUS ELIOT, A. M., M. D.,
Attending Physician to the New Haven Dispensary.

I have chosen to use the name enteric fever to designate the disease commonly known as typhoid fever, in preference to the latter term, for the following reasons: First, the adjective typhoid has been used to such an extent, in connection with various diseases accompanied by serious symptoms, that its use at the present time is frequently misleading both to the public and to the profession. Second, the name enteric fever is used instead of typhoid fever in the Provisional Nomenclature of the Royal College of Physicians, London, which was adopted in 1873 by the United States Marine Hospital Bureau as the nosological system to be observed by medical officers of the service in their reports and communications. Third, the same name is now frequently employed by medical authors and teachers.

Few diseases which prevail in this vicinity are more terrible than the one under consideration. Selecting as its victims those in the full vigor of early adult life, insidious in its onset, increasing daily in severity, protracted in its course, steadily destructive to the most vital tissues and organs of the body, attended by a liability to the most serious complications, it frequently proves fatal, and even when life is spared it is too often followed by disagreeable sequelæ and protracted convalescence. And yet all this is avoidable if we may believe a recent writer[2] on this subject, who tells us that "enteric fever destroys more lives that could be saved than any other acute disease." If there is any ground for such an assertion, the conditions which govern the occurrence of the disease are of incalculable practical importance. I have therefore ventured to introduce the subject at this time with the hope that the members of the Society may from their personal experience contribute some facts toward the solution of the obscure problem, — *what is the origin of the cases of enteric fever which occur in this city?*

During the later months of the year just ended there were an unusual number of deaths from this disease. In October the newspapers attempted to excite something of a sensation on account of the cases which had been reported up to that time. The Health Officer was interviewed, and proved by statistics that the disease was not especially prevalent, that, in fact, it was rather less prevalent than usual. An eminent surgeon was reported to have reiterated the views of the Health Officer. Numerous other physicians expressed the opinion that there neither had been nor was then an unusual number of cases of the disease. But in spite of mathematical proofs and favorable prophecies the mortality report for November indicated that there had been nine deaths from "typhoid fever," — a larger number than had been reported in any one month for ten years.

The existence of conflicting opinions, and of a divergence between opinions and facts, would seem to indicate the desirability of an inquiry into the comparative prevalence of the disease in this and preceding years. With the aid of the Statements of Mortality, published monthly since July, 1874, by order of the Board of Health, I have prepared the following tables: —

I. NUMBER OF DEATHS FROM "TYPHOID FEVER" FOR EACH MONTH SINCE JULY, 1874.

	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	Total.
January……	-	3	2	3	1	-	-	1	2	3	15
February……	-	4	-	2	1	-	-	1	2	2	12
March……	-	1	3	1	-	-	1	2	-	-	8
April……	-	6	1	-	1	4	3	2	2	-	19
May……	-	2	1	-	-	2	4	-	-	1	10
June……	-	1	1	-	-	1	2	1	-	-	6
July……	7	-	3	-	1	1	1	3	-	2	18
August……	5	8	6	1	2	1	2	1	5	6	32
September……	5	6	3	-	3	-	2	1	4	3	27
October……	7	2	1	8	-	-	-	4	1	4	22
November……	5	5	1	1	-	-	-	4	4	9	29
December……	-	3	-	2	4	1	1	7	3	2	23
Total……	29	36	22	13	13	10	16	27	23	32	221

This table indicates that the greatest mortality from enteric fever in New Haven, during the last ten years, occurred in 1874–1875; that the fewest deaths occurred in 1877, 1878, 1879 — fewest of all in 1879; and the mortality during the last six months of 1883 was greater than during any other period of six months since 1874.

Since June, 1877, a considerable number of deaths from typho-malarial fever have been noted in the monthly statements. They are included in the next table: —

II. NUMBER OF DEATHS FROM "TYPHO-MALARIAL FEVER" FOR EACH MONTH SINCE JUNE, 1877.

	1877	1878	1879	1880	1881	1882	1883	Total.
January……	-	-	1	-	-	1	-	2
February……	-	1	-	-	1	-	2	4
March……	-	1	-	1	-	3	-	5
April……	-	-	-	1	1	-	-	2
May……	-	-	1	3	1	-	-	5
June……	4	-	-	5	1	-	1	11
July……	1	1	2	4	2	1	1	12
August……	·	1	3	3	1	2	1	11
September……	-	1	1	3	5	6	1	17
October……	-	1	5	3	-	1	1	11
November……	6	1	-	4	1	3	1	16
December……	1	-	-	2	-	-	2	5
Total……	12	7	13	29	13	17	10	101

If we may judge from the opinions expressed in public and private by some of the practitioners of this city, the term typho-malarial fever is used by them in a somewhat different sense from that generally understood by the profession. Some apply the name to febrile affections of purely malarial origin which present a certain train of symptoms. Others make use of the term to designate a specific disease distinct from enteric fever on the one hand and from fevers of purely malarial origin on the other. Either of these views is equally untenable when examined by the light of recent literature. The name typho-malarial fever was proposed in the summer of 1862 by Dr. J. J. Woodward, Surgeon United States Army, "to a Board of Medical Officers who were directed to revise the form of sick report in use in the army," to designate the "hybrid forms" of fever "resulting from the combined influence of malarial poisoning and of the causes of typhoid fever" which then prevailed in the Army of the Potomac. In September, 1863, Dr. Woodward, in a circular of the Surgeon-General's office, made a statement of the meaning he designed to attach to the term; and in November of the same year he presented his views upon the subject at some length in the Outlines of the Chief Camp Diseases of the United States Armies." In 1876 he professed to hold "substantially the same views," although at that time he frankly confessed that during his earlier studies he had fallen into "some errors of details (particularly with regard to the pathological anatomy of the intestines in these forms) which were incorporated in the account presented in the book on Camp Diseases." "During my earlier studies," says Dr. Woodward, "I believed that I had observed certain peculiarities in the character of the ulcers in these cases, by which they might be distinguished from the lesions of simple typhoid. A larger experience, especially the examination of a large number of specimens received by the Medical Section of the Army Medical Museum, has convinced me that this opinion was premature. I renounce it as erroneous. There is really nothing in the lesions of Peyer's glands, in these cases, to distinguish them from ordinary cases of typhoid fever." Such an unequivocal and impartial statement leaves little doubt as to where Dr. Woodward stands on this question. These views he expressed at the International Medical Congress in Philadelphia, 1876. To show that he does not stand alone in adherence to these opinions it is only necessary to quote a resolution adopted by the Section of Medicine of that Congress, as expressing the opinion of the Section, to this effect: "Typho-malarial fever is not a specific or distinct type of disease, but the term may be conveniently applied to the compound forms of fever which result from the combined influence of the causes of the malarious fevers and of typhoid fever." All recent writers are, so far as I know, of the same opinion. I need only quote Flint, than whom no author in this country is more extensively read or more implicitly trusted, who says: "Typho-malarial fever is caused by the combined action of malaria and the special cause of typhoid fever."[1]

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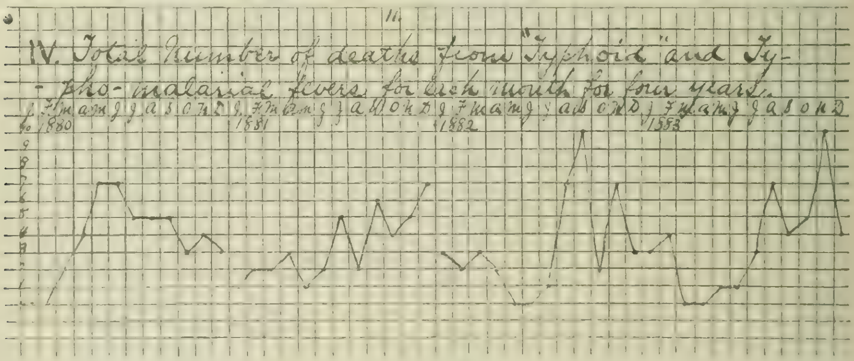
[1] Read before the New Haven Medical Association, January 21, 1884.

[2] Wilson, A Treatise on the Continued Fevers, page 221.



Much of the present confusion in regard to the nomenclature of prevalent febrile affections is due, I believe, to the description of typhoid fever as given by Liebermeister and followed by many later writers. These descriptions led students to expect to find the febrile movement advance with almost mechanical regularity. When in practice they found a disease which manifested all the other symptoms of typhoid fever as they had learned them, but in which the range of temperature did not correspond very closely to what they had learned, they at once set to work to find some cause for what seemed not to belong to the disease. Here, as in numerous other instances, malaria was made the scapegoat, and was forced to bear this along with many other equally undeserved burdens. I do not deny that occasionally the two poisons may exist in the body together and produce, each its characteristic effects simultaneously. But, on the other hand, I am strongly of the opinion that in the majority of doubtful cases, even where the disease is ushered in by a single or repeated chills and by a rapid rise of temperature, it is more reasonable to believe that the peculiar symtomatology of any particular case is due to a normal though perhaps an unusual manifestation of the typhoid poison than to assume that it is due to the existence within the body of the patient of a poison whose presence it is impossible to prove.

In view of these circumstances, and to more accurately indicate the mortality due to the typhoid poison, I have constructed a third table based upon the total number of deaths from the two diseases for each month of the last six years. (See Table on page 363.)

The same facts so far as they relate to the last four years I have also represented by the graphic method given in the above diagram.

These tables — assuming that the causes of death are always correctly reported — do not indicate such an unusual prevalence of enteric fever during the past

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[1] Flint, Principles and Practice of Medicine, 5th edition, 1881.

III. TOTAL NUMBER OF DEATHS FROM "TYPHOID" AND "TYPHO-MALARIAL" FEVERS SINCE 1877.

	1878	1879	1880	1881	1882	1883	Total.
January....	1	1	–	1	3	3	9
February....	2	–	–	2	2	4	10
March.....	1	–	2	2	3	–	8
April.......	1	4	4	3	2	–	14
May.........	–	3	7	1	–	1	12
June.......	–	1	7	2	–	1	11
July........	2	3	5	5	1	3	19
August......	3	4	5	2	7	7	28
September..	4	1	5	6	10	4	30
October.....	1	5	3	4	2	5	20
November...	1	–	4	5	7	10	27
December...	4	1	3	7	3	4	22
Total........	20	23	45	40	40	42	210

year as one would have been led to expect from the number of cases which have been reported in the daily press. Perhaps one reason why the disease has recently attracted especial attention on the part of the public is on account of the social importance of its victims. Another reason why at the present time it unquestionably should command the attention of the profession is the fact that cases of the disease have been reported in nearly all of the neighboring towns, whence are derived the water and milk supplies of the city. It will be instructive to observe during the coming year whether the occurrence of the disease can in any case be traced to infection from either of these sources.

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ST. MARY'S LYING-IN HOSPITAL.[1]

BY BENJAMIN CUSHING, M. D.

The St. Mary's Infant Asylum and Lying-In Hospital, Bowdoin Street, Dorchester, in care of the Sisters of Charity, was opened in September, 1874. To this date, January 8, 1884, during nine years and four months, there have been in the lying-in room 550 patients, a yearly average of about fifty-eight. Married women, twenty. Single, 530. Of the married, one was delivered of her eighth child, one of her fifth, three of their third, and one single woman (colored) of her second. As to ages, two were fourteen years, one thirteen years six months, and the others of ages from fifteen to thirty-eight years. Presentations other than of the head were one of the hand, and several, I do not know exactly how many, of the breech and of the cord. One case of twins. One case of convulsions. In the case of hand presentation the child was turned. Forceps have occasionally been used. One woman (married) was in consumption when she came to the house. A week after delivery, by her own wish, she was taken to her home, where she soon died. One young woman (single) on the tenth day after delivery, was taken away by her friends, and died under circumstances unexplained. The patient who had convulsions was a young woman who had received an education above her social position. She had been led astray and deserted. She came to the hospital with the impression strongly fixed on her mind that she should die. I saw her in the early stage of labor, and as it seemed that there would be some hours to spare I left her for a time to visit other patients. When I returned I found that she had had convulsions, and been delivered with forceps by a physician who had been called in my absence. She had no convulsion after my return, but profuse hæmorrhage. This was stopped, but the next day she had peritonitis, with great tenderness of the abdomen. She died within the week. No post-mortem. Cause of peritonitis, therefore, not known. After her death the room was cleared and cleaned, and the walls were whitewashed. All bedding was either burned or disinfected by boiling or exposure to fumes of burning sulphur. The persons and clothing of all attendants were disinfected. No case of labor was allowed in the house for three weeks. There was no second case of puerperal fever.

There has been no other death among the lying-in women since the hospital was opened. A very good record, I think. I regret that notes of all the cases in detail have not been kept, but as, for various reasons, this has not been done, I give only such facts as may be relied on as correct. Statistics carefully gathered from well-kept notes are doubtless the most valuable contribution to our general knowledge, but impressions, the result of experience, are, I think, not without their value.

It will be interesting to note some of the circumstances under which these 550 labors have occurred.

The house is an old one, built of wood, before furnaces were in use, and, therefore, with open fire-places. It is L-shaped, having two stories, with a French roof, superadded by the Sisters, which makes it really three stories.

In this third story is the children's dormitory, and a room for infants, also one small room used when it is desirable to isolate a patient.

The hall, with stairway, is in the wing of the building. The lying-in room, in which are four beds, is also in the wing, on the second floor. It is a room eighteen feet by sixteen feet, with bath-room attached. The lying-in room and a small room adjoining are warmed by open fires. There are two windows on the south side, and one on the north. Kitchen in the basement. Wash-room adjoining. Sewage into cess-pools. The whole house covers an area of not over 1500 square feet.

Number of occupants: Sisters, six; hired women, two; children, thirty to fifty; infants, twenty to thirty; women waiting, in the beds, and convalescent, twenty-five, more or less. There have sometimes been as many as one hundred persons in the house, including all ages; seldom or never less than eighty. I should add that the nearest building is not less than one hundred feet from the house.

We have had children in the house, from time to time, sick with diphtheria, scarlet fever, measles, and the usual diseases of summer.

One of the Sisters superintends the lying-in room. The nurse or midwife has herself been a patient. The Sister, by the rules of her order, is not allowed to put her own hand to the special work of the nurse.

From September, 1874, to March following I attended all the patients myself as I would in private practice. Since that time several of the Dorchester physicians have been in attendance when called on. I say when called on, for most of the women have not been attended in labor by any physician, the nurse and Sister managing this themselves unless there is especial need of help. Should the labor be tedious, the presentation not understood, should there be hæmorrhage, retained placenta, or any complication calling for help, the physician is sent for.

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[1] Paper read at a meeting of the Dorchester Medical Club, and communicated, by request, to the Obstetric Society of Boston, January 10, 1884.

The usual course pursued is this: At the proper time the nurse examines the patient, and if she feels the head distinctly she infers that all is right. She waits until the child is born, and, after tying the cord and removing the child, lays her hand on the fundus, and follows the uterus as the placenta is expelled. She never introduces the hand to take it. If this is necessary she sends for the physician, but it is very rarely needed. The perinæum is not supported. Ether is not used unless especially indicated, and then only by the physician. Persulphate of iron, ergot, brandy, ether, and a hypodermic syringe are always at hand. The Sister understands their use. After the child is born and the placenta expelled the mother is left undisturbed for an hour, sometimes longer. Not until she is rested is the bed cleared and the binder applied. The after-treatment is simple. For the last few years vaginal injections of Labarraque's solution, largely diluted, have been used for a week, more or less, according to circumstances. The bowels are generally moved on the third day by castor-oil. Of course cleanliness is enforced. Cold water to drink *ad libitum.* Simple diet. All may be summed up in two words, non-meddlesome midwifery.

Thinking of these facts I am confirmed in the impressions which more than thirty years' experience has fixed on my mind, namely, that labor, *as a rule*, is a natural, healthy process, not to be interfered with or helped, only waited on, although I well know that there are many exceptional cases which tax all the resources of the best instructed; that the duty of the physician is to stand ready for emergencies; that we, all of us, are too ready to interfere where interference is worse than useless.

I have lately read, in a New York journal, an article written by a teacher of high authority, in which he gives a formidable list of what the accoucheur should take to the lying-in room. I have not the journal at hand, but recollect that the writer says we should go as to a "capital operation." I at first, by mistake, read it "capital punishment," and I must believe, if thus equipped, this would be the truer word.

AN EPIDEMIC OF TYPHOID FEVER AT A SUMMER HOTEL.

BY I. F. WOODWARD, M. D., WORCESTER, MASS.

The Black Mountain House, which was destroyed by fire February 17, 1884, was situated in Camptonville, twelve miles north of Plymouth, N. H. It contained accommodations for one hundred and twenty-five guests, and was crowded throughout the whole of July and August.

There had been no sickness until the latter part of July, when a little girl was brought to the hotel with what proved to be a mild case of typhoid fever, hardly severe enough to keep her in bed. She recovered perfectly, and returned home August 30th. No precautions were taken to disinfect the stools, and the other guests were not informed of the nature of the disease. August 30th some of the guests had been complaining for several days of headache and malaise. During the next few days ten of them came down with symptoms of typhoid fever. The hotel was immediately closed, and all that were able to travel were sent home. Four of the guests, however, were too sick to be moved. One of these developed cerebro-spinal meningitis, and died after an illness of eight days. Two of the others, a brother and sister, remained in Campton until the end of the second week, when they were removed to their home in Haverhill, upon beds, without any serious consequences following. The last of the four remained in Campton until she recovered.

The rest of the guests separated in all directions. One party *en route* for Savannah only reached New York, where two of their number went to the Roosevelt Hospital, one with typhoid fever, the other with cerebro-spinal meningitis.

Another lady, living in New York, could only reach Worcester, and was obliged to remain there for several weeks with typhoid fever.

One Boston family had three out of five members sick.

A Newport family had four out of five ill. Of the two Taunton families one had three out of four, the other four out of five, members down with the same complaint.

A Providence family of four had three members sick. One young lady died of typhoid fever in Boston, and four others were sick with the same disease in different cities. Four of the servants of the Black Mountain House were also sick.

In all there were thirty cases of typhoid fever, with one death, and two cases of cerebro-spinal meningitis, with one death.

As far as I could learn, the district had been free from epidemics of typhoid fever for several years, and there had been no case of this disease in town during the summer. The record of deaths in the village shows only one death from this cause in fifteen years.

A careful examination was made of the hotel, water supply, milk, and vaults. The water used came from a spring situated on a hill, one half mile from the hotel, and one quarter of a mile from the nearest dwelling. The spring is on higher land than any of the houses in the village, and the water was carried to the hotel through wooden pipes, with a fall of about one hundred feet.

Occasionally a small quantity of water was used from a neighbor's well, about one hundred and fifty yards from the hotel, and within fifty feet of a dwelling. The milk was either furnished by cows kept in the hotel stable or from a farm in the neighborhood where there had been no sickness.

The hotel itself was built on a sandy soil, and was situated in a high valley. The privy contained no vault, the discharges being allowed to fall upon the surface of the ground. Loam was thrown in upon them twice a day. The liquids soaked into the soil. The solids were shoveled out as often as necessary. There was no drain or cess-pool, and all liquids from the house drainage were also allowed to soak into the ground in the immediate neighborhood of the hotel. Still, although the house was crowded to its utmost capacity, there was no sickness until a case of typhoid fever was imported. No care was taken to disinfect the discharges of this patient, and they were thrown into the common vault. The result was, that in about four weeks thirty cases of the disease occurred among the guests of the hotel.

The conditions for a typhoid epidemic being so well fulfilled, it would be exceedingly interesting if we could find the vehicle by which the contagion was conveyed. But here we can only exclude the most common, namely, water.

Dr. L. P. Kinnicutt, of the Worcester Free Institute, made analyses of the spring and well waters, and found both pure and free from contamination with fæcal matter. The result of his analysis is as follows: —

Chlorine 2.3 mg. in litre, or 0.2 parts in 100,000.
Free ammonia, .003 mg. in litre, or 0.03 parts in 100,000.
Albuminous ammonia under 1 mg. in litre, or .1 part in 100,000.

Series of cases like the above are interesting in showing how, under favorable circumstances, the neglect to disinfect the discharges of a single patient may give rise to an epidemic.

The sick guests separated in all directions and carried the disease into twelve different cities and towns. Whether they in their turn spread it still further I have been unable to learn.

RECENT PROGRESS IN DISEASES OF CHILDREN.

BY T. M. ROTCH, M. D.

PAVOR NOCTURNUS.[1]

Dr. Oscar Silbermann, after carefully reviewing the opinions of those authors who have written about the "night terrors" of children, finds the greatest diversity of views expressed concerning the ætiology of the disease, some contending that it is an irritation of the cerebral substance, and others a disturbance of digestion, which produces a certain group of symptoms, best represented, however, according to the investigations of Silbermann, by the general term "pavor nocturnus" provided that we recognize two forms of the disease, namely, an idiopathic and a symptomatic pavor nocturnus. By idiopathic pavor we understand a disease *sui generis*, originating primarily in the brain, and running its course in the central organ of imagination (cortical substance). The symptomatic pavor is a reflex neurosis characterized by dyspnœa and anxious crying, and especially caused by irritation of the vagus. The former is the most frequent, and attacks children between the ages of two and six who are delicate and easily excited, but mentally bright. The symptoms are somewhat as follows: After the child has eaten its supper with a good appetite, has gone to bed, and has slept for two or three hours, it awakes with a cry, sits up in bed with wide-opened eyes, and wrings its hands or wards something off with them; its face is often very red and covered with perspiration; the respirations and pulse are somewhat accelerated; the temperature is normal. The child is unconscious, and does not heed the soothing words of those who are around it. After ten or twenty minutes it becomes quiet, begins to cry, recognizes its friends, asks for a light, and then usually goes quietly to sleep, and in the morning has no recollection of what has occurred. No organic cause can be found for this group of symptoms, and it is rather to be sought for in the impressions made on the child's mind during the day. Anæmia, rachitis, and other constitutional anomalies are doubtless predisposing causes, but often fail to be found, the conspicuous feature of the disease always being an expression of fright. Dread may be objective or subjective, and there seems to be no doubt but that in the idiopathic form of this disease it is objective. The symptomatic pavor is usually found among children who are strong and are free from constitutional disease, and from a nervous temperament, some indiscretion of diet appearing to be the cause of a group of symptoms described as follows: The child eats its supper and goes to sleep as usual, but is soon noticed to be very restless, cries out, grinds its teeth, sucks its mouth, its eyes are half closed, and at times it breathes long and deeply. After this uneasy sleep has lasted for an hour or two it wakes up with an anxious cry, suffers from dyspnœa, and utters short interjections as ah! ah! instead of the words representing the object of its imaginative fear as in the idiopathic pavor. The attack does not last so long as in the other form. The pulse is irregular while the dyspnœa lasts, and then the child goes to sleep again, but is usually restless for the rest of the night, and the attack may recur several times in the same night. These children are also very apt to complain in the night of pain in the epigastrium, and on the next day to be found with a coated tongue, some fetor of the breath, and, perhaps, an attack of vomiting or diarrhœa. As in the other form there is no recollection of the attack on the following day.

An analysis of this second form of attack shows that it comes on slowly, gives premonitory signs of its approach, and lasts a shorter time, two to six minutes, the idiopathic form being sudden in its onset, and lasting from ten to forty minutes. The fear in the symptomatic form is evidently caused by the dyspnœa, and the dyspnœa and irregular pulse by irritation of the vagus. Silbermann then reports eleven cases: of these two were three years old, three four years, two five years, two six years, one seven, and one eight. As a summary of his article he presents the following conclusions: (1.) There is a well-marked distinction between the idiopathic and symptomatic forms of pavor nocturnus. (2.) While fear is common to both it is in the idiopathic form objective, and in the symptomatic subjective. (3.) The idiopathic pavor is a disease *sui generis*, characterized by a transitory hallucination expressing objective fear, caused by abnormal irritation of the brain, and always accompanied by a defect of memory. (4.) The symptomatic pavor is a reflex neurosis from the gastric fibres of the vagus to the pulmonary terminal fibres, thus causing dyspnœa and expressions of subjective fear; we here also have amnesia.

INCUBATORS.

A. Auvard,[2] interne at the Maternité in Paris, has written a paper on this subject, entitled, De la Couveuse pour Enfants, a review of which with illustrative plates is to be found in the March number of the *Edinburgh Medical Journal.* The writer describes the incubator devised by Professor Tarnier and used for two years in the Paris Maternity. It consisted of a chamber for containing the child, fixed over a reservoir of water kept always at a suitable temperature. This was considered too cumbersome for private practice, and Auvard substituted a more simple form, consisting of a wooden box with a shelf in it, on which the child is placed. A sliding door at the bottom of the box allows the introduction of hot water bottles beneath the shelf, and another small sliding door permits fresh air to continually enter the box. A wet sponge keeps the air moist, and the hot air passes out at the top of the box by an aperture which may contain an indicator, and a glass window at the top of the box by opening and shutting is used to prevent the air from getting too hot. Three hot water bottles filled with boiling water are placed beneath the shelf, and in half an hour the temperature will be about 32° C. In two hours a fresh bottle is added, and afterwards, every hour and a half or two hours, the cool bottles are replaced by hot ones. Budin, in La Charité Hospital, uses an incubator heated by gas which has a Regnard's regulator and an electric bell alarm to draw the attendant's attention to any undue change of temperature. Winckel has employed permanent warm baths, and Auvard admits that these are somewhat more effectual than the incubator for cases where there is a decided diminution of the bodily temperature. Full directions are given in the paper for the feeding, clothing, and care of the infants treated in the incubator, which should be referred to by those who wish to employ this method of treatment. As to the results obtained, Dr. Auvard divides the cases, numbering 151, that have been treated, into two classes: first, all children with an initial weight of less than 2000 grammes (roughly four and one half pounds), and, second, children born in a weakly condition from such causes as syphilis, cardiac malformations, œdema, etc. Cases of the first class alone are capable of comparison with children brought up in the ordinary way, and of these a few examples are given. A child of six months and six days intra-uterine life, and weighing 1720 grammes, was kept for forty-six days in the incubator, at the end of which time it was taken out alive and healthy. A child six and one half months, and weighing 1820 grammes, was kept in the incubator five days and was then taken out well. With like result a child of 1630 grammes was kept in eleven days, and a child of 1530 grammes nine days. A seven months' child, weighing 1400 grammes, was taken out in good condition after twelve days in the incubator. In reply to the objection that children of even 1100 grammes have been reared by ordinary means, Dr. Auvard says that such cases are extremely rare and have resulted satisfactorily chiefly from the immense amount of care and trouble that have been bestowed upon them, trouble which is reduced to a minimum by the use of the incubator. He gives the following statistics to prove the value of this method, and the table shows strikingly the value of the incubator for premature children: —

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[1] Jahrb. f. Kinderheilk., xx. Band, 3 Heft.

[2] Archives de Tocologie, 1883.

INFANTS WEIGHING LESS THAN 2000 GRAMMES AT BIRTH.

	Incubated	Without Incubator (Cochin Maternity), 1882	Without Incubator Paris Maternity, for two years previous to its use
Lived	49	10	46
Died	30	20	76
Total	79	30	122
Mortality	38%	66%	62%

INTERRUPTED PSYCHICAL DEVELOPMENT.[1]

The following abstract in the *American Journal of Obstetrics* is taken from the Nineteenth Report of the Hospital at Berne, where Professor Demme prefaces his clinical report with a statement of the normal development of the power of standing, walking, speaking, and thinking. His conclusions are drawn partly from the works of Vierordt, Kussmaul, and Preyer, partially from his own experience. He finds that (*a*) very strongly developed sucklings will balance the head well in the twelfth or fourteenth week; (*b*) children of medium strength in the fourteenth to sixteenth week; and (*c*) weak children in the eighteenth to twenty-second week. That (*a*) can stand, when supported, in the thirty-fifth to thirty-eighth week, and entirely alone in the fortieth to the forty-second; (*b*) not till the forty-fifth or forty-eighth week; and (*c*) in the first part of the second year. Children who have older brothers and sisters learn to walk much earlier than those who have none, earliest at the end of the ninth month, often between the twelfth and eighteenth month. Children begin to speak at the end of the first or beginning of the second year, — boys later than girls, — and to relate what they have seen or done only at about the end of the fourth year. Demme's clinical observations included cases in which a normally advancing development was interrupted suddenly by some acute disease and afterward advanced again rapidly enough to make up for the lost time, and those in which, under the influence of acute disease, there were abnormalities of development.

(1.) A boy of good size, born asphyxiated, developed normally until the end of the fifth month. He then began to sleep a great deal, was apathetic, and up to the end of the year there was an absolute stand-still in mental development. He then became brighter, played, laughed, and cried like a normal child, began to make rapid progress, in the fourteenth month could sit up, in the eighteenth could stand, and in the twenty-seventh could walk well. There had been no pause in the physical growth. He did not speak until the end of the third year and then only in whispers, but from then on the speech rapidly improved. At the end of the fourth year there was again a disturbance of speech and a return of the sleepiness; but this passed off in a few months, and from that time the child made good progress.

(2.) A large boy of healthy parentage, developed normally till the end of the third month. From this time he had tremors of the hands, the feet, and later of the whole body, with slight opisthotonous and stiffness of the neck. No fever. His mental development was at a stand-still, and he had permanent flexure of the upper extremities. In the forty-fifth week the attacks were less frequent, in the forty-seventh they ceased, and then the intelligence seemed again to waken. At the end of five years he was about as far advanced as an ordinary child of three years. Professor Demme states that early in the boy's life the parents had given him a good deal of opium.

(3.) A strong boy of healthy parentage, developed normally to the fifth month; his father then discovered that he could not distinguish sweet, bitter, salt, or sour by the taste, and that the strongest and most offensive odors had no effect on him. His sight, hearing, touch, and physical development were normal. At the end of two years taste and smell were still entirely wanting. The child had a wonderful appetite and would devour large quantities of the most offensive things. In the thirtieth month he had a severe attack of scarlatina which lasted two months. After this the speech was very slow, monotonous, and finally completely aphasic. Hearing was very acute. The aphasia lasted three weeks, and it was several months before the child spoke as well as before the fever. It was then found that taste and smell were normal, and the ravenous appetite had disappeared.

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[1] American Journal of Obstetrics, October, 1883.

(4.) Was a case of club-foot where, from the fifth to the seventh month, there were occasional right-sided convulsions, with loss of consciousness, opisthotonos, etc. After this the intelligence of the child developed very slowly, but at the age of seven years he was about as far advanced as a child a year or two younger.

ALBUMINURIA IN CHILDREN.[1]

M. Leroux, as the result of researches on the urine of 118 girls and 212 boys in the Hospice des Enfants Assistés, has found that in the case of children affected with marked albuminuria the qualitative alteration appeared pretty constant and independent of the time of the examination, while where there was only transitory albuminuria he found that it was in the afternoon between one and three o'clock, that is to say, after a full meal, the reagent at this time producing a more or less marked reaction, whilst equally fresh urine in the morning only gave negative results.

CONGENITAL MALARIA.[2]

Dr. W. T. Taylor reports the following case, which is of interest in connection with the abstract of Dr. Leroux's article which appeared in the *Boston Medical and Surgical Journal*, January 25, 1883. Mrs. A. R. during her second pregnancy was affected with malarial fever, and although she was then residing at the seashore was obliged to take occasional doses of quinine to control it. She returned to her city residence at the end of the season, and continued using quinine from time to time until the end of her gestation, which was completed in November, 1883, when her infant was born. Her labor was natural and easy, and she had no unfavorable symptoms. The infant appeared healthy and was of good color, but was smaller and more feeble than her first-born had been. The baby soon drew the breast vigorously, as there was a plentiful supply of milk. About one week later the nurse called Dr. Taylor's attention to the fact that the infant occasionally had attacks characterized by coldness of the skin, feeble circulation, and prostration, which continued for fifteen or twenty minutes and were followed by a clammy perspiration. The application of heat to the body and giving it a little brandy and water would revive it. These symptoms appeared to have a periodicity occurring every two or three days, and as they were considered malarial quinine and valerianate of iron were given to the mother, which soon caused the symptoms to cease, and the baby became well and fat. The infant also took small doses of the elixir of cinchona for several weeks. Dr. Taylor considered that the disease must have been contracted in utero, for the infant was born in a perfectly healthy locality where it had not been exposed to any external malarial influence. When labor began the quinine was stopped and was not resumed until the condition of the infant required it, when it quickly arrested the symptoms, and the patient is now perfectly well. Dr. R. P. Harris reports a similar case to the above, where the infant was also treated through the mother's milk with quinine.

TRISMUS NASCENTIUM.[3]

Dr. J. F. Hartigan has written an exhaustive article on this subject, based on a series of 229 cases and numerous post-mortem examinations, in which, after stating the views of the many authors who have described the disease, he says that there is a remarkable uniformity in the pathological appearances found at the autopsies, namely, a congestion of the brain or spinal column (more commonly the latter) or both, with extravasation, and there was no other lesion observed internally except engorgement of the lungs. These results were so marked that it seemed to the author as if some violence or mechanical cause was required to produce them, and directed his attention to the theory promulgated by Dr. J. Marion Sims over thirty years ago, and held by him up to the time of his death, that trismus nascentium was caused by undue pressure of the occipital bone on the brain, and it is this theory which Hartigan endeavors to prove to be correct by additional facts which have come under his notice. In his analysis of the different causes for the disease cited by writers on the subject he shows that their theories are most diverse and contradictory, and that the two which are most worthy of mention are irritation from the umbilicus at the time of the separation of the cord and the above-mentioned pressure of the cranial bones. A large amount of evidence is brought forward by its author against the theory of umbilical irritation, such as the absence of any anatomical lesions which point to the umbilicus as the origin of the disease; the occurrence of cases where the umbilicus is in an abnormal condition and yet no trismus appearing — evidence showing that while there may be such a thing as tetanus due to injury of the umbilicus yet this is not trismus nascentium, and that the latter can scarcely ever be traced to disease of the umbilicus. Hartigan agrees with the statement made by Dr. Sims in his second paper on this subject published in 1848, "that trismus nascentium is a disease of centric origin, depending on a mechanical pressure exerted on the medulla oblongata and its nerves; that this pressure is the result, generally, of an inward displacement of the occipital bone, often very perceptible, but sometimes so slight as to be detected with difficulty; that this displaced condition of the occiput is one of the fixed physiological laws of the parturient state; that when it persists for any length of time after birth, it becomes a pathological condition capable of producing all the symptoms characterizing trismus nascentium, which are relieved simply by rectifying this abnormal displacement and thereby removing the pressure from the base of the brain."

He also describes a class of cases called chronic trismus, where the displacement is very slight, and cases where an opposite condition of affairs exists, namely, where by prolonged lateral decubitus, the occiput being exterior to the parietal bones, the latter are pressed inward. Hartigan divides his reported cases into three classes: (1) those that recovered under postural treatment; (2) cases in which post-mortem examinations were made, many of which were seen before death but too late to render any service; (3) those whose history was obtained after death, the majority also having been seen before fatal results ensued but where post mortems were not permitted. The table showing the record of 229 deaths was made up of cases under a month old, and there were 150 post mortems.

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[1] Medical Record, March 15, 1884.

[2] New York Medical Journal, March 15, 1884.

[3] American Journal Medical Sciences, January, 1884.

An analysis of these cases shows that the disease occurs as frequently in the winter as in the summer, that sex had nothing to do with the disease, that the colored element largely predominates, and that no identity exists between this disease and tetanus in the adult. The shortest duration of the disease was one hour, the longest thirty days. The author then proceeds to describe the mechanism of the pressure theory. Before birth the child's head has for its pillow the soft cushion of the liquor amnii. At birth, and for some time subsequently, the cranial bones are not united, are thin, and are without diploë. It is reasonable to suppose that the transition to a different usage will cause them to be easily displaced or the occiput to be depressed, the degree and character depending upon position or management. The child may be retained in the recumbent posture on a hard mattress, or a bunch of clothes, as Dr. Sims says, "wadded up and stuck under the occiput," and interesting cases are cited where removal of these exciting causes occasioned immediate relief from the urgent symptoms. It is not always necessary to the development of the disease that the displacement of the cranial bones should be marked or visible, for from continued decubitus unpleasant symptoms may arise which subside when the child is taken up, and recur again when it is laid down. Dr. Baldwin has claimed that the variations in the post-mortem appearances are not consistent with Dr. Sims's theory, but these are explained by the varying degrees of pressure. In all cases there was congestion of the posterior part of the brain or cord or both. In rapid cases there were coagula in the upper part of the canal in the cavity of the arachnoid, these coagula being sometimes absent in cases so rapid that death was really caused by asphyxia, as shown by congestion of the lungs, etc. In some cases the postural treatment is not sufficient and the depressed bone must be raised. Hartigan believes that many still-births are due to this same occipital pressure. He calculates that 25,000 children die annually in the United States from this disease, and he believes that many cases might be saved by manipulation of the cranial bones so as to relieve the cerebral pressure, though he admits that it is often exceedingly difficult to prevent the bones from slipping back into their original position and thus causing a recurrence of the symptoms.

— At the monthly meeting of the New York Medico-Legal Society, held April 9th, a paper was read by Dr. J. G. Johnson, of Brooklyn, on Poisoning by Canned Fruits and Meats. Representatives of the canned goods manufacturers and editors of several of the trade newspapers were present, and refutations of some of the statements in the paper were made by these.

— A case of sporadic cretinism, with appearance of myxœdema, was reported at a recent meeting of the Medical Society of London.

Reports of Societies.

BOSTON MEDICO-PSYCHOLOGICAL SOCIETY.

WALTER CHANNING, M. D., SECRETARY.

THE Society held its twenty-first regular meeting at the house of Dr. J. H. Denny, February 7, 1884, DR. FISHER occupying the chair.

DR. EDWARD COWLES read the paper of the evening, entitled

A CASE OF HYSTEROID CONVULSIONS,

of which the following is an abstract: —

Mrs. A. B., twenty-seven years of age, admitted to the McLean Asylum in 1881. Has been under the care of Dr. Minot, of Boston, her family physician. Maternal uncle insane. Was of a nervous temperament when young, but fairly healthy. At the age of seventeen had a hysterical attack, followed by unconsciousness, owing to fright. During the following three or four years until her marriage had occasional attacks of unconsciousness which were called *petit mal*. These were apt to occur when her emotions were excited. She could ward off an attack for hours or a whole day when she knew one was impending, but it would usually occur sooner or later, as she yielded to its influence upon lying down at night, and it would be followed by sleep. The attacks were most apt to occur at a menstrual period, when she was nervous or restless; were milder between such periods. There was no struggling or movement in them.

Married in 1876 at the age of twenty-three; has three children. The last born six months before entrance to asylum. During pregnancies had added symptoms of pressure and pain in the head; then excitement sometimes followed the attack, making it necessary to hold her on the bed. The attacks occurred only at night, and only in presence of her husband, being successfully resisted at other times and concealed from other persons. Between pregnancies better than ever, attacks being infrequent and brief.

In third month of last pregnancy (ten months before admission) pressure and pain in head began, and seizures became more frequent, occurring several times daily, and sometimes lasting for an hour. Were more apt to occur if she was irritated or annoyed. These attacks were characterized by occasional rigidity of limbs and body, sudden starting movements and opisthotonos, and could often be arrested by suddenly seizing hold of her, blowing in her face, etc. She took, as she had before in her pregnancies, laudanum and stimulants, and added to them ether, chloroform, and chloral for the relief of pain and nervousness, but not habitually.

After last delivery had many seizures. Two weeks before admission pain in head and nausea. Accidentally fell down a flight of five steps backward, striking on back of head, which caused increased pain and nausea. Sometimes felt a desire to seize and hurt any one who came near her; also irresistibly drawn to throw herself out of a window, to get away from every one. The previous summer felt impelled to get out of window; the rays of the moon reflected from the water seemed to invite her to walk out upon them. The asylum gave her a sense of security and a feeling that she could do nothing harmful. Once had a suicidal desire to use a penknife, fearing she might be pregnant.

The patient is of unusual refinement and intelligence, a good musician, of amiable disposition, and very fond of her children. Has suffered mental strain from various causes.

Menstruating when admitted to the asylum; was quite rational, and not much excited; in fair physical condition. Menstruation continued for seven days; had several brief periods of unconsciousness. Pulse 70, not perceptibly altered. Was given chloral, bromide of potash, elixir valerianate of ammonia. Slept fairly, though restless at night, with pain in head and apparent fright.

After menstruation ceased was better for a while, though nights were still poor. Several times on point of becoming unconscious, but warded it off by effort. At this time she was given nitrite of amyl to inhale, which put her to sleep and overcame the ill feeling or nervousness.

Two weeks after admission a seizure occurred as a result of something unpleasant said to her; appeared unconscious; lay in bed with eyes wide open, fixed, pupils dilated; very slight movement on touching conjunctivæ. Pulse 124. Under influence of nitrite amyl came to herself in an hour, after a series of partial relapses and actions of a purposive character. During the following month a similar condition was produced experimentally by causing her to look fixedly at a piece of paper held before and above her eyes.

During second menstruation attacks frequent and mild. A month later several severer attacks immediately before menstruation. In this and subsequent attacks would sit up in bed; jump off from it; dance about; whisper; laugh hysterically, etc.

After a few months, being somewhat better, went away for a visit, during which seizures returned with melancholia, suicidal propensity, etc., and she nearly threw herself from a fourth-story window, and was returned to the asylum after five months' absence.

During the following six months attacks occurred at frequent intervals, being of about the nature of those described above, a constantly recurring symptom being pain in left iliac region. About a year after first admission to the asylum was better than for two years, even going through menstruation once or twice without an attack; attained a greater weight than ever before. She soon began again, however, to have the attacks, and they became worse than before, and were brought on by lesser causes. In the autumn had lost much flesh and was unable to sit up without vertigo and nausea. She had hallucinations of sight, which continued for some months.

As a summary of the events of three years, in brief it may be said: There was improvement for two months; then development of disease outside of the asylum for five months. Then improvement for nine months followed by nine months of development of more serious symptoms than ever, with complication of painful inflammation of ears, requiring continuous use of morphia, hallucinations, delusions, danger of death by exhaustion, and general and painful cutaneous hyperæsthesia, etc. Again, during nine months to the end of 1883, gradual and remarkable improvement in general health and appearance, but with recurring severe attacks at menstrual periods, accompanied by the continuance of their most violent symptoms. Finally during the first month of the present year sudden relapse with the development of a new and dangerous neurosis of the heart. In one attack death seemed imminent. These attacks recurred in February.

Conclusion. The earlier history of this case led to the diagnosis of *petit mal* with a hysterical element. Later this was necessarily modified. There is a dissimilarity from hystero-epilepsy as described by Charcot, Richet, and others. The attacks do not begin with a convulsive seizure closely resembling true epilepsy. There is not a general severe tonic spasm, though tonic rigidity may occur later. There is no deviation of the head, or clonic spasm succeeded by coma and stertor. In the second stage the semi-purposive acts do not resemble the violent coördinated spasm, bounding movements, etc., and the opisthotonos is mild and accompanied by only mild tonic rigidity. In the third stage, however, there are the mental and emotional disturbances, with manifestation of joy, anger, irritation, the stage of delirium, and finally there are at times the terrifying visions.

Comparing the symptoms of the case with Gower's table of diagnostic characters of epileptic and hysterical fits, the former bear out the diagnosis of hysteroid convulsions. The most important indications are that the attacks are influenced by the patient's psychical condition, — the initial pseudo-epileptic phenomena may occur repeatedly during the progress of the fit, showing that they are actually part of the hysteroid attack, — and the cessation of these recurrences when the fit is cut short by treatment. Charcot's crucial test, compression of the ovaries, was sometimes successful, but usually failed to arrest the attacks, as is common in this country and England. According to Charcot, also, it is significant that in the intervals between and in the midst of the attacks there is no evidence whatever of the mental impairment to be expected from so long and severe a manifestation of epileptic symptoms.

The attacks being regarded as hysteroid, and being so distinctly associated with the menstrual function, the question has arisen of the propriety of removing the ovaries and Fallopian tubes. In view of the increasing seriousness of the patient's condition, and the hope of ameliorating the symptoms attending menstruation, should ovariotomy be performed?

In the discussion which followed the reading of the paper of Dr. Cowles, **Dr. Jelly** said: I am very glad to hear Dr. Cowles's paper, as I saw the patient in consultation with Dr. Minot just before she was committed to the McLean Asylum.

She was in a feeble condition of health, had a child but a few months old, and had had several seizures resembling *petit mal* (from the description given, I did not see her in one). She had had one or more on the morning of the day on which I saw her. Following this she had given them much trouble by attempting to throw herself from the window with suicidal intent.

At the time of the interview she was quiet and ladylike, but a little confused. As she was having the premonitory symptoms of the approach of menstruation, it was decided to wait until it became established before sending her to the asylum, as it was hoped her fear of pregnancy might thereby be relieved. She became more excited in a few days, and the suicidal tendency continuing she was removed to the McLean. I made no positive diagnosis at the time. I have no doubt from Dr. Cowles's careful detail of the history of the case that he has arrived at the correct diagnosis.

It seems to me if the case were one of epilepsy there must have been by this time some weakening of the intellect, and more effect would have been noticed from remedies which generally are given for the relief of epilepsy.

I saw the patient for a moment last fall during the comfortable period which Dr. Cowles described, and she then appeared very calm mentally.

I have no experience from which to give an opinion as to the advisability of ovariotomy.

DR. PAGE remarked that he was very much interested in the paper of Dr. Cowles, as it had a direct bearing in many of its features to a case now under his care at the Adams Nervine Asylum, wherein the symptoms exhibited were remarkable for their unusual combination. Before describing it, however, he would like to ask Dr. Cowles if he understood him to say that his patient had ever had catalepsy.

DR. COWLES replied that on a few of the occasions where the patient was unconscious the arms and hands may have been made to maintain the position in which they were placed, but the symptoms were not regarded as cataleptic.

DR. PAGE said that there could be no doubt of the correctness of Dr. Cowles's diagnosis, and that it was associated with a mental disease quite distinct from the hysteroid condition, and quite independent of it. The progressive character of the mental element did not, it seemed to him, augur well for recovery. While no one, of course, could definitely state what the result might be, with the association of symptoms as presented by Dr. Cowles, the duration of the case, together with the recurrence of the hysteroid attacks, without assignable cause, unless we accept intra-cranial trouble, not necessarily organic, and the progressive mental implication, he could not but feel that the outlook was extremely dubious. At least his own experience in similar cases had taught him not to entertain hopeful views of recovery. As to the propriety of oöphorectomy, his own knowledge of cases of the double operation he had been able to observe and the ill success attending it made him suspicious of the wisdom of the operation in this particular case. In those with whom he has present acquaintance essentially the same condition exists to-day as prior to the operation. One was followed by persistent vomiting and profound disturbance of assimilation for more than a year; two others have the same train of symptoms as before; and another remains unchanged except in the loss of her ovaries.

His own case was that of a young married woman, of fine physique, cultivated and intelligent, recently admitted to his care, who was now passing through a series of severe hystero-epileptic attacks varied with catalepsy and ecstasy, and associated with total bilateral loss of hearing and loss of speech. He had just left her this evening free from convulsive attacks, but, as a result of them, in great emotional distress because she had become *totally blind*, proof of which was seen by the fact that no reflex action of the eyelids could be superinduced by making sudden demonstration before the eyes, as in the act of striking, and only so by placing the finger on the corneæ. Both pupils were widely dilated. She has also complete hemi-anæsthesia of the right side, with anæsthesia of the parts immediately surrounding the left ear and mastoid. The application of the tuning-fork induces vibratory sounds, noticeable only in the left middle ear, not in the right. Her feet have been all day in a state of contracture, and are only temporarily relieved by the faradic current. Accompanying one of the severe tonic spasms, when the hands, tightly closed, were flexed on the fore-arm as much as were possible, and the face intensely congested, was internal strabismus. On relaxation of the spasm, however, the eyes resumed their normal axes. The case is also especially interesting because it is associated with the opium habit. It was stated, on admission, by the attending physician, that the daily consumption was from half a drachm to one drachm of Battley's solution. An attempt was therefore made, as a means for cure, to break up the habit by withdrawing it altogether. It was not then known that the patient had experienced other than a cataleptic attack about one year ago. The result was severe hystero-epilepsy. During an intermission between one of these convulsive attacks it was discovered that the daily consumption was six grains morphia. To control the spasms, and at the same time to avoid danger from too sudden omission of morphia, forty minims of Magéndie's solution were administered, and this is all she has taken within the last twelve hours, with the effect of controlling the convulsive movements; but, as before stated, the patient has become totally blind in addition to the loss of the special senses already mentioned. The case is also novel because of the limited means of communication with her. Before loss of sight it was by writing on a slate, now by means of the finger alphabet. The patient inherits a neurotic tendency from the father, and since marriage has been subjected to severe emotional strain. At no time, however, save when first clearing up from the last convulsive attack, when internal strabismus existed, has she exhibited any intellectual aberration. I would add, further, that this patient was seen by Dr. C. J. Blake last August, and at that time was having an eczematous trouble with both external auditory canals. The hearing was then absent, and instead of being anæsthetic, as at present, the parts about both ears were hyperæsthetic. Speech was then perfect. Dr. Blake found no disease of the middle ear, but a slight thickening of the tympanum of one ear, and a small calcareous deposit in that of the other. I believe he regarded the loss of hearing as purely hysterical. At all events it has now existed one year.

DR. DENNY said the fact that symptoms ascribed to partial epilepsy were exhibited several years ago, which have since periodically recurred, the habitual recourse to narcotics to relieve pain and spasm, and the continuance of maniacal delirium almost uninterruptedly for months during the period occupied by lactation in ordinary puerperal evolution are points related in the history of the case reported which would lead us to anticipate the development of masked forms of mental and nervous phenomena such as have been manifested. The symptoms consequently have some of the characteristics of epilepsy, ovarian neuralgia, hysteria, and insanity in varying degrees. If true epilepsy exists it would be unreasonable, in my opinion, to attempt to cure it by extirpation of the ovaries, which is in effect an operation on the peripheral nervous system, since epilepsy is essentially a disease of the central nervous system.

The following are some of the symptoms which have a strong likeness to epilepsy: —

The patient will endeavor to ward off an attack by various expedients whenever she feels a warning, aura-like, malaise. This resembles the efforts of epileptics to cut short an impending attack by ligation of a limb, for example, between the aura-sensation and the body.

In any form of hysteria the tendency would rather be to exaggerate than to avert a crisis.

The peculiar dreamy expression of the eyes accompanied by occasional waking-up looks are suggestive of epilepsy, as well as the seeking to avoid falling by lying down in a comfortable, safe place previous to attacks. Such expedients are familiar in epilepsia mitior, and in graver forms when there is a warning aura.

Again, the absence of hemianæsthesia on the side of the irritable ovary, or of any *marked* disturbance of *cutaneous* sensation, would counter-indicate the existence of hystero-epilepsy according to Charcot. If, however, it were certain that deep pressure over the irritable ovary would stop an attack, it would go far towards proving the existence of hystero-epilepsy, whatever anomaly there might be.

In event of the symptoms being those of hysteria in any of its hysteroid or hystero-epileptic forms, or of ovarian neuralgia associated with delirium, involving the sympathetic tracts of the ovarian tubes, that is, functional neuralgia, operative interference would be unjustifiable, as would be the extraction of a tooth for a trigeminal neuralgia, as Drs. Landau and Remak conclude[1] after ably commenting upon a case of their own operated on for hystero-epilepsy which was much exacerbated thereby.

They state that "the diagnosis of functional neuralgia excludes surgical interference not only in distinct forms of the same, but for hysteria, ovarial hyperæsthesia, etc., as has been attempted by ovariotomy. Rosenthal and Neftel have detailed only bad results from such operations."

Professor Tauffer, of Heidelberg, relates[2] a case operated on by himself for combined hysterical and mental symptoms which was succeeded by mania and not by recovery, while another case was followed by dementia, although he says "the operation seemed indicated to prevent this termination." Other cases related by him and by Professor Goodell,[3] of Philadelphia, who anticipates the time when both insane men and women will be operated upon by legal requirement, do not seem to me to justify the mutilation yet.

Dr. Fisher remarked that the evening was so far advanced that he would not discuss the paper, merely stating that as he has always regarded confirmed hysterical insanity, *however* originating, as a disorder of the brain and not of the ovaries, he could not advise Battey's operation except as an experiment, or a *dernier ressort* for the possible effect of the shock or moral influence, or the improved nutrition likely to follow it.

Dr. Cowles said that his narrative of the long series of attacks and varying conditions of the patient had evidently given a wrong impression as to the prominence of mental symptoms, the fact being that all through the history of the case there were clear intervals between attacks, and that the patient appeared sane and well mentally much the larger part of the time. The mental symptoms were distinctly associated with the attacks except on two or three occasions, as when there was a period of painful inflammation of the ears and great physical exhaustion. Even when last in the puerperal state, neither before nor after confinement was there a continuance of delirium, except for a few brief periods. It was associated with the attacks, between which were intervals of mental clearness. The recourse to narcotics could not be regarded as at any time amounting to a habit.

As regards the symptoms that simulate epilepsy, the condition that led to efforts to ward off attacks might exist from one to four days, and while it may be termed an aura-like malaise, it differs from that of epilepsy, and such conditions are common to hysteroid attacks. Seeking to avoid falling, by lying down in a comfortable place, is more common to hysteria than to epilepsy; and the dreamy expression of the eyes might recur many times before the attack is fully developed, and also during the attack, which Gowers thinks is diagnostic. It is most significant that the attacks can be warded off, sometimes altogether, and sometimes be long delayed by exertion, excitement, or by an effort of the will.

It should be stated that when the patient feels comfortable and well an attack, usually the precursor of a series, may be determined in two ways: By some emotional disturbance, or by the onset of pain in the left ovarian region, which once beginning from any cause, as during menstruation or from pressure, will continue and establish the initial condition of malaise. For many years the patient has been in the constant habit of making gentle pressure with the hand upon this region while going to sleep at night. The symptom of hemianæsthesia absent in this case as well as the effect of pressure on the ovaries is said by Gowers to be far less common than in France.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

Thursday evening, March 13th. The President, Dr. Tyson, in the chair.

Dr. J. H. Musser presented a series of specimens illustrative of Hepatic Pathology. The accompanying paper will be shortly published in another form.

Dr. C. B. Nancrede presented a penknife blade, with the portion of bone transfixed by it, removed from the cranium of a boy aged nineteen years, where it had remained undiscovered for over six weeks. Owing to later developments the history of this specimen is also, for the present, withheld from publication.

Thursday evening, March 27, 1884. Vice-President E. O. Shakespeare in the chair.

CASE OF EPITHELIOMA OF THE STOMACH AND COLON, PRESENTING SINGULAR DIFFICULTY OF DIAGNOSIS.

Presented by Dr. J. H. Packard.

Dr. Packard stated that this case was placed at his disposal for report by Dr. H. M. Fisher, in whose wards at the Episcopal Hospital the man had been.

Alex. R., aged forty-seven, single, was admitted July 9, 1883. He had for about four months been unable to follow his occupation, that of a wagon driver. No history of syphilis; none of his family are known to have had cancer. His first symptom was discomfort after eating; later he had loss of appetite and pain in the stomach. Two months afterward he felt a hard tender mass in his belly, on the right of the umbilicus.

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[1] Ein Fall von Ovariotomie bei Hysterischen Hemianæsthesie, Dr. D. F. Landau u. Dr. E. Remak, Zeitschr. f. klin. Med., Bd. vi., Theil 5, 1883.

[2] Beiträge zur Lehre der Castration du Frauen, W. Fauffer, Cbl. f. Nvnhlkde, Psychiatrie, etc., No. 16, 1882.

[3] William Goodell, Clinical Notes on the Extirpation of the Ovaries for Insanity, American Journal of Insanity, April, 1882; Cbl. Nvnhlkde, Psych., etc., October, 1882.

On admission the tumor seemed about the size of an orange, and was found to be on the left of the umbilicus. It was not very painful, but annoyed him. He was much emaciated, and in a cachectic state: his bowels were obstinately confined. Under treatment his condition improved, and he gained notably in appetite and strength. Subsequently a change for the worse took place, the tumor became more painful, he lost flesh and strength, and his appetite failed. As the tumor seemed to be entirely movable, it was decided that an attempt should be made to relieve him of it, and he was transferred to the surgical ward, under Dr. Packard.

October 11, 1883, after consultation, an incision was made over the tumor, in a vertical direction, and the tissues carefully divided until the abdominal wall proper was reached, when it became clear that there was firm adhesion between this and the new growth for a space of several inches in every direction. The operation was therefore abandoned, and the wound closed. Healing took place by the first intention, and the man even thought himself to have been benefited, although this was clearly imagination on his part. Emaciation steadily increased, and toward the middle of November the stomach became unable to retain food. From this time the symptoms progressed until death occurred, December 29th.

Upon post-mortem examination, it was found that there was an epithelioma of the pylorus, which had become adherent to the transverse colon, and the disease propagated to that structure, a communication taking place between the two cavities. Subsequently, by a local peritonitis, the affected parts had contracted adhesions to the parietal peritonæum at the point to which they had been displaced. The mechanism of this displacement does not seem to clearly appear.

MALIGNANT DISEASE OF THE PERITONÆUM AND ABDOMINAL VISCERA.

Presented by DR. JOHN B. ROBERTS for DR. V. HORNET, with an abstract of the latter's notes.

The patient, a woman of about fifty-eight years, had, four years previous to death, an attack of what was supposed to be gastro-enteritis of malarial origin. From this she never perfectly rallied, but had four or five intestinal hæmorrhages, at varying intervals. The last one occurred a few weeks before death. Recently she rapidly lost strength and became emaciated. When seen by Dr. Hornet, some time in December, 1883, she had a large tympanitic abdomen, and complained of a sense of tension. Constipation, jaundice, flushed cheeks. Pulse 100 to 110; normal temperature and a tendency to nausea and dyspnœa were the chief symptoms.

Ten days before death the thermometer in the rectum marked 103° F.; but stood, says Dr. Hornet, below normal in the axilla and under the tongue. Small nodules could be felt through the belly wall, which was less tympanitic than formerly. Death occurred suddenly while at stool.

Autopsy showed nothing important in the chest. The omentum and mesentery were studded with multitudes of tumors varying in size from that of a currant to that of a hen's egg. These were of globular form, firm in consistence, and on section showed a central hæmorrhagic clot. The parietal peritonæum was studded with a few small ones, as was the surface of the liver. Dr. Hornet further says that he found in one part of the intestine an ulceration of the mucous membrane corresponding to an internal tumor, and a tumor on each side of the rectum, high up. In one place he found a cyst, with yellowish serous contents, on the surface of a tumor. Most of the nodules were of a pale pink color; one noticed, however, was nearly black. I present a portion of the intestine and mesentery, and a piece of the liver with one of the secondary growths there found.

MALIGNANT DISEASE OF THE TESTICLE TAPPED FOR HYDROCELE.

Presented by JOHN B. ROBERTS, M. D.

This case is clinically interesting because it resembled a hydrocele, and misled me as well as another surgeon who had previously seen it. When the man came to me I found a large, oval swelling of left side of scrotum, which he gave me to understand had existed for two years. The tumor for six or eight inches long in the vertical direction had a sharply defined upper limit, as does hydrocele of the vaginal tunic, and was indistinctly elastic as is a tense hydrocele. The veins on the surface, however, were well marked, and it looked, at the lower part, a little as if the subcutaneous tissue was about to suppurate. It was this which gave rise to the pain that induced him to seek medical advice at this time, for he has previously postponed having another surgeon draw off the yellow water which he had been told was in it. I did not try to transmit light through the supposed hydrocele because it is very often a fallacious test. At least absence of light transmission does not negative the existence of hydrocele. I accordingly thrust a trocar into it, and drew about six fluid ounces of pure coagulable blood through the canula. Reinserting the trocar I pushed it in various directions, but met only solid tissue and no blood except when it was pushed in the direction originally taken. Then blood flowed in a quite free stream. No marked reaction followed, but the pain and tendency to suppuration was removed.

Two weeks later I removed the mass by enucleation, and found the solid tumor here presented, which is the enlarged and infiltrated testicle. The patient now says that fifteen years ago, when about eighteen years old, the testicle or scrotum began to grow larger. He is rapidly convalescing.

RUPTURE OF ONE OF THE AORTIC VALVES DURING SEVERE MUSCULAR STRAIN.

F. L., aged forty, laborer, married, was admitted into the Episcopal Hospital under my care February 21, 1884. His family history was good, and his own health, previous to his present indisposition, excellent. He denied ever having had syphilis or rheumatism.

His work compelled him to handle very heavy casks, and he had the reputation among his fellow-workmen of being a particularly strong man, he being able to lift, unaided, 500 pounds. Three weeks before admission he was subjected to heavy strains in lifting, and although no history of sudden cardiac pain or palpitation could be elicited, he did admit feeling a sense of tightness across his chest and some dyspnœa after his day's work. These symptoms gradually increased, and cough accompanied by bronchitic expectoration soon made its appearance. On admission the patient presented all the appearances of a remarkably well developed and powerful man; he was suffering from great dyspnœa, which was much increased upon exertion. Percussion showed impaired resonance over both lungs posteriorily, which was not altered by change of position, and auscultation revealed numerous moist râles. The apex beat of his heart, although perfectly regular in its rhythm, was extended in its area, and in the nipple line in the fourth left interspace. Auscultation revealed a loud, high-pitched musical murmur, systolic in time, with its point of greatest intensity over the upper part of the sternum; this was also audible over the whole chest. The peculiarity of this murmur was its decidedly vibratory character, like a torn sail flapping in the wind; the patient himself even noticed this.

With the diastole there was a second murmur of much lower pitch and not musical or vibratory in its nature. This had its point of greatest intensity over the aortic cartilage.

There was no apex murmur. Slight œdema of the legs and feet was present. The urine contained no albumen.

The patient was placed in bed, and given digitalis, while counter-irritation and dry cups were applied to his chest posteriorly. Under this treatment he rapidly improved, and was soon considered well enough to be about the ward, the dyspnœa only showing itself after any unusual motion or excitement. The murmurs remained in much the same condition as on admission, although the intensity of the musical murmur had lessened.

On March 20th, in the evening, after a day as well as usual, he was seized with a severe attack of dyspnœa, with congestion of the lungs. He was considerably relieved by the application of dry cups. The next morning it was noticed that the œdema of the legs had increased, the dyspnœa was still present to a slight degree, and the only change perceived in the cardiac signs was a lowering of the pitch of the musical murmur.

On the 22d the dyspnœa had increased again, and for the first time a low, long, apex systolic murmur was detected; this was conveyed plainly into the axillary line. The musical murmur was of still lower pitch than before, and at the aortic cartilage the murmurs were much more plainly of a see-saw character.

Irregularity of the heart's action occurred now for the first time. On the 23d the area of cardiac dullness was as follows: In the horizontal line, at height of nipple, the dullness began in the middle of the sternum, and extended to the left to a point half an inch beyond nipple. In the perpendicular line drawn midway between the sternum and left nipple the cardiac dullness began in the third interspace and extended downward till lost in dullness of left lobe of liver. The area of dullness was not triangular with the base downward. Impaired resonance was now present over the whole chest both anteriorly and posteriorly, and no cardiac sounds could be heard on account of the great stridor and the violent movements of the chest. The apex beat could not be detected for the same reason. After this the patient became more and more cyanotic and short of breath, and died on the same day, namely, March 23, 1884.

Autopsy. Each pleural cavity contained several ounces of serum. The pericardium contained about one and a half ounces of serum in which several shreds of lymph were discovered.

In both ventricles were large clots, partly chicken-fat, extending through the semi-lunar valves.

The weight of heart, after being emptied of clots and blood, was one pound ten ounces.

The walls of the left ventricle were enormously hypertrophied, measuring seven eighths of an inch at thickest part; the cavity appeared slightly distended, as did also the mitral orifice, which would allow the tips of three fingers to pass.

The right anterior leaflet of the aortic valves was torn at its posterior insertion into the aorta, thus leaving a free pointed end about three eighths of an inch long to float in the blood current.

The left anterior leaflet presented two fenestrations, the posterior one the smaller and near the insertion of valve in aorta at its upper margin, the anterior one the larger and situated some distance down from the free border of valve.

The aorta at its origin was atheromatous in places and slightly dilated, a patch existing at the point corresponding to the former insertion of the torn valve. The valves were normal except for slight thickening. The coronary arteries were not atheromatous.

Remarks. In this case the atheroma at the point of insertion of the torn valve must have been the cause of the rupture during a heavy strain; should a fenestration have existed near the point of insertion, as exists in the left anterior leaflet, this would be a further reason for the rupture occurring at this point.

Frequently repeated great bodily exertion was the probable cause of the atheroma, as the man was a moderate drinker and denied rheumatism and syphilis. A point of interest in the case was the peculiar character of the *systolic* aortic murmur, which was, as before mentioned, decidedly musical and vibratory.

As the patient did not suffer from sudden palpitation and dyspnœa at the probable time of the rupture, and as this murmur gradually diminished in pitch, while the regurgitant murmur became slightly more pronounced, it is probable that the tear at first was slight and gradually increased under the great strain thrown upon it, thus increasing the area of the loose edge to be thrown into vibration, necessarily lowering the note produced.

The systolic apex murmur heard one day before death was due to the occurrence of an incompetency of the mitral valves from over distention of this orifice.

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NEW YORK ACADEMY OF MEDICINE.

THE REMOVAL OF THE AFTER-BIRTH.

At a stated meeting of the Academy held Thursday evening, April 3d, **Dr. H. J. Garrigues** read a paper in advocacy of the exclusive adoption of the Credé method in the delivery of the placenta after normal parturition. It was now thirty years, he said, since Credé had published his original communication on the subject, and since the date of this publication he had repeatedly reiterated his conviction of the correctness of his idea that the placenta should be removed, not by traction from below, but through the agency of pressure from above. Having described the method in detail Dr. Garrigues maintained that it was a mistake to practice compression on the fundus except during a regular contraction. At least three contractions were, as a rule, required for the expulsion of the after-birth, and more frequently it was not until the fourth contraction that it came away. Of late years some of the German authorities had claimed that the Credé method was objectionable on the ground that it was likely to result in retention of the membranes, but he contended that there was no foundation in fact for such an opinion.

During the last eight years Dr. Garrigues had used the method constantly in his private practice, and when he was appointed attending surgeon to the Maternity Hospital on Blackwell's Island he had introduced it into that institution. During the last two terms of his service there 408 confinements had been recorded. Two of these had been cases of abortion at the fifth and sixth months respectively, and in both there had been adherent placentæ, which he removed by means of the dull wire curette and forceps. Out of the 408 cases there were six of retained placenta, and six in which a portion of the membranes was retained, so that out of 400 cases the Credé method failed in six, or one and one half per cent. In four, however, there was the occurrence of true adhesion of the placenta, which he believed to be more rare than was generally supposed, most of the cases of retention being due, as he thought, to improper treatment. There were, therefore, in reality only two failures in 400 cases, or one half per cent., there being two cases in which there was simple retention without adhesion. In six cases (or one and one half per cent.) shreds of membranes of larger or smaller size were retained, but in only one of these was it necessary to introduce the hand into the uterus to accomplish their removal. Credé had said that he had never seen any bad effects from leaving such portions of membrane, and advised that they should be allowed to remain undisturbed in the uterus, but Dr. Garrigues strongly deprecated this course as liable to expose the patient to severe hæmorrhage and other dangers. Whenever the membranes could not be removed otherwise, the hand, disinfected with a solution of bichloride of mercury (1 to 2000), was to be carried up into the uterus, and the cavity afterwards thoroughly washed out with the same antiseptic solution.

The Credé method, Dr. Garrigues continued, was modeled strictly after the regular course of nature, and its action was simply to assist nature in completing the normal process of parturition. After the strong expulsive efforts of the uterus during the second stage of labor some atony of the organ was, as a rule, apt to result, and the manipulations comprised in the method had the effect of spurring it on to the still further action required. In the large majority of cases there was, therefore, a call for artificial aid at this stage of labor, and this, there could be no doubt, was better supplied by the method in question than any other plan of procedure. Having spoken of the action of the two sets of muscles entering into the structure and controlling the contraction and movements of the uterus he showed how, in the manipulations of Credé's method, the action of nature was assisted by the compression of the organ between the thumbs and fingers, and the pressure downwards and backwards, forcing it towards the hollow of the sacrum.

By shortening the third stage of labor the method tended to prevent post-partum hæmorrhage. In the 408 cases mentioned serious hæmorrhage occurred in only two, and in but two others was there the slightest loss of blood beyond the natural amount. In all these four cases, however, the hæmorrhage occurred before any attempt had been made at expression of the placenta, so that in not a single instance was there any hæmorrhage after the removal of the after-birth. When properly carried out, therefore, the Credé method was the best preventive of post-partum hæmorrhage. Inversion of the uterus, which was facilitated by traction, was also powerfully counteracted by it. In some instances the whole after-birth was expelled completely outside the genitals, and where this was not the case it was advised that the membranes should be twisted into a rope before their withdrawal. There was, as a rule, no necessity for the introduction of the fingers into the genital canal, and the avoidance of this constituted one of the points in the modern antiseptic treatment of midwifery cases. Dr. Garrigues said that in his own practice he delivered the child while the woman was lying on the left side, but after the second stage of labor was completed he had her turn upon the back as the most advantageous position for the satisfactory completion of the third stage.

In his last published communication Credé stated that in 2000 cases the average duration of the third stage was four and a half minutes. The average time in the 408 cases at the Maternity Hospital on Blackwell's Island was somewhat longer; but while in the lying-in hospitals in Europe the same medical attendant remained on duty for several years in succession, and thus had the opportunity of acquiring special skill in all obstetrical manœuvres, in the latter institution the resident accoucheurs were changed every two months. Still, in his opinion, Dr. Garrigues said, it was totally unimportant whether a few minutes more or less were consumed in the third stage, as long as the correct principles were carried out in the treatment of it.

In making a plea for the orginality of Credé in the method he had advanced (which, he said, had been impugned in certain quarters), Dr. Garrigues claimed that he was entitled to the credit of advancing uterine compression as a means for expelling the placenta because (1) he advised it in all cases; (2) he directed that the uterus should be firmly grasped on all sides; (3) that the whole organ should be pressed downward and backward in the direction of the pelvic axis; (4) that the cord or placenta should not be touched unless there was adherent placenta; and (5) that the fingers should not be introduced into the genital canal. The advantages which he claimed for the Credé method were: (1.) Its certainty. (2.) Its efficiency in exciting uterine contractions. (3.) The prevention of post-partum hæmorrhage. (4.) The prevention of hour-glass contraction of the uterus. (5.) The prevention of inversion of the uterus. (6.) The prevention of avulsion of the cord or uterus. (7.) The prevention of uterine inertia.

There was still another plan of procedure, sometimes called the Strasburg method, which consisted simply in the absence of any kind of interference whatever, and which was as yet but an experiment. In 100 cases reported in which it had been tried, the placenta came away within half an hour in twenty-four cases, within one hour in twenty cases, within two hours in twenty-five cases, within three hours in eleven cases, within four hours in nine cases, within five hours in five cases, within six hours in three cases, within eight hours in two cases, and within twelve hours in one case. In every case it was found that the fœtal surface of the placenta presented first. In two cases there was hour-glass contraction of the uterus, and in one case there was a decided putrid odor. Dr. Garrigues said that he failed to see a single advantage in this method, and that it was not even natural, since the recumbent posture, in which the women referred to were kept, was unfavorable to the spontaneous delivery of the placenta. Dr. Engelmann, in his comprehensive paper on parturition among savage peoples, had stated that the placenta generally followed soon after the birth of the child. When the latter was delivered the woman was apt to change her position, and if the after-birth did not readily come away massage was frequently resorted to. Dr. Sussdorf in his account of the labor of an elephant related that the mother, in order to facilitate the completion of the third stage, pressed her abdomen forcibly against the stake to which she was chained.

In the 408 cases at the Maternity Hospital there had been no instance of hour-glass contraction, and this accident, according to the statistics of the best authorities, was more liable to occur where no compression was made than where the Credé method was employed. It was hardly necessary to point out, Dr. Garrigues continued, that it was positively dangerous to allow a placenta to remain in the uterus till it became offensive. On the other hand, there was no necessity for undue haste in delivering the placenta, and all that the accoucheur was required to do was to abridge the third stage of labor in such a way as to keep the patient from danger.

DR. ALEXANDER HUNTER, in opening the discussion on the paper, spoke of the advisability of commencing the uterine compression just before the delivery of the child, and said, in the course of his remarks, that he believed that the uterus should always be allowed to expel the fœtus from itself, and from the vagina also, unless the fœtus were in danger of suffocation. By thus resorting to abdominal pressure early he thought the delivery of the placenta was much shortened, as well as the danger of post-partum hæmorrhage diminished.

DR. HADDEN spoke of the evil consequences that were liable to result from improper management of the third stage of labor, and of the coolness, judgment, and intelligence required in conducting it satisfactorily. During the last twenty-five years he said he had attended about twenty-three hundred cases of confinement, and had never lost sight of the importance of attending with special care to this part of labor, the neglect to do which, if it was not followed by any immediate bad results, might leave the patient a chronic invalid. In his last thousand cases he had had one fatal case of post-partum hæmorrhage, but the patient was the subject of *purpura hæmorrhagica.* For the expulsion of the placenta it had been his practice to depend partly on gentle traction and partly on abdominal pressure. He always took pains to see that the uturus was afterwards firmly contracted, presenting a distinctly globular outline, and was accustomed to watch the patient for at least an hour and a half after the completion of labor. In the only case in his experience in which there had been an attempt at inversion of the uterus the accident occurred before any effort whatever had been made to remove the placenta, and was due, apparently, to a relaxation of the circular muscular fibres while the longitudinal ones were in active contraction. The fundus, to which the placenta seemed to be attached, was thus forced down so that it could be felt through the os, while there was a cup-shaped depression in the top of the uterus as felt through the abdominal walls. Up to that time he had been inclined to believe that traction on the cord might possibly induce inversion of the uterus, but now he was somewhat skeptical on this point, and it seemed to him that the cases which had been reported as of this character were in reality due to the fact that the placenta was attached near the fundus (a comparatively rare condition), and the effort to expel it resulted in the inversion of the organ.

DR. MARY PUTNAM JACOBI remarked that the expulsion of the placenta was being prepared for all through the later weeks of utero-gestation by the formation of thromboses around its edges. Up to that time the uterine circulation was predominantly venous, but when the time approached when the uterus was expected to undergo the active contractile efforts which were necessary for the expulsion of its contents the circulation gradually became more and more of an arterial character, through the formation of these thromboses and the migration of leucocytes, which caused coagulation and tended to cut off the supply of venous blood. The stimulus required for exciting uterine contraction could be supplied alone by arterial blood, and hence it seemed probable that in those cases in which there was a failure to contract there was an abnormal continuation of the supply of venous blood. The Credé method had the direct effect of diminishing the amount of venous blood going to the uterus, thus continuing the process already begun in the ordinary course of nature, and she believed that it was the only plan of procedure to be thought of at the present day.

DR. MUNDÉ, who had arrived too late to hear the paper, made some general remarks on the Credé method, in which he went over much of the ground covered by Dr. Garrigues. In the course of them he remarked, however, that after expression had been made, and the reduced size and spherical form of the uterus, as felt through the abdominal walls, indicated that it had left the cavity of the organ, the placenta sometimes did not appear at the vulva. In such cases it was probably retained in the cervical cavity (the cervix being of exceptional length), and no amount of pressure on the fundus would cause its expulsion. Here slight traction on the cord, or, what was safer, the introduction of the fingers or hand into the vagina to get hold of the placenta, was advisable, and if the ordinary rules of cleanliness in obstetric practice were observed he did not believe that the slightest danger could result from this procedure. Where the placenta was retained simply by the firm contraction of the os, as sometimes occurred, he recommended that its relaxation should be secured by the administration of chloroform. In some cases the repeated compression of the uterus required by the Credé method gave the patient more pain than was at all desirable, and here he thought it well to follow this up with gentle traction on the cord. Dr. Mundé was strongly opposed to leaving the delivery of the placenta entirely to nature, and thought it simply criminal to allow it to remain too long in the uterus. At the same time he did not believe in expelling the placenta too rapidly, for the reason that it was liable to thus become stripped of a portion of the membranes, which would be retained in the uterus.

DR. ISAAC E. TAYLOR spoke of the effect of stimulation of the cervix by the touch of the hand in exciting, through reflex action, the fundus to contract and throw off the placenta. He believed in imitating the process of nature, and strongly deprecated too hasty interference in the removal of the after-birth, which, he claimed, should be left largely to nature, and ought ordinarily to occupy from twenty minutes to one hour or more. He was in the habit of taking hold of the cord but of making little or no traction, and he thought that the delivery of the placenta could be facilitated by modification of the position of the patient according to the part of the uterine walls to which the uterus was attached.

Remarks were also made by Drs. Fruitnight, Ransom, and Sell.

Dr. Garrigues, in closing the discussion, said he supposed that it was quite natural that the three methods of which he had spoken in the paper should each have its advocates to a certain extent, but he did not think that any one present would be willing to trust entirely to the do-nothing plan. All agreed that the delivery of the placenta was a strictly physiological process, and hence that all efforts to facilitate this should be in imitation of nature. Traction on the cord, however, did not seem to him a natural process, and in his paper he had endeavored to point out that the different manipulations comprised in Credé's method had the same effect in dislodging and expelling the after-birth that the unaided efforts of nature had in cases where she was capable of conducting the third stage of labor to a successful issue herself. He claimed, therefore, that in the vast majority of cases no traction whatever should be employed. He did not mean to say that inversion of the uterus was always due to this; but, although paralysis of the point of placental attachment, as in Dr. Hadden's case, was one of the recognized causes of inversion, he had no doubt that in a certain proportion of cases the accident was directly attributable to traction. As to facilitating the delivery of the placenta by changing the posture of the patient in accordance with the point of attachment, as suggested by Dr. Taylor, he could not understand how this could be determined without introducing the finger or hand into the uterus, and this he considered unjustifiable under ordinary circumstances. He quite agreed with Dr. Taylor as to the imprudence of too hasty interference in cases of retained placenta, and in his own practice he was accustomed to wait for at least an hour and a half before introducing the hand into the uterus. But, as he had said before, he did not think it right to wait until the placenta began to decompose.

Recent Literature.

Seventieth Annual Report of the Trustees of the Massachusetts General Hospital and McLean Asylum. 1883.

The Seventieth Annual Report of the Massachusetts General Hospital and McLean Asylum shows, like its predecessors, in a general way the excellent work which is being carried on year by year by these noble charities for the good of the community dependent upon them, and gives the details of the operations of the Hospital, the Asylum, and the Convalescent Home during the year 1883. The Treasurer's account makes a better showing than in the three previous years, the excess of expenses over income — which is charged to the general fund — having been only $10,085, instead of $29,860, which it had previously averaged. The receipts at the McLean Asylum exceeded the expenses by $4341.18, while the expenses at the hospital exceeded the receipts by $13,296.47, and at the Convalescent Home by $1130.17. The legacies and bequests received during the past year have been large, amounting to the handsome sum of $227,720, and the annual subscriptions for free beds were $10,600.

Important changes have occurred in the Corporation, in the Board of Trustees, and in the Board of Visiting Physicians. The Corporation lost its Vice-President, Mr. Nathaniel Thayer, who on many occasions had proved a most liberal benefactor of the institution. We have previously recorded the death of Dr. Calvin Ellis, and still another vacancy was created among the visiting physicians by the resignation of Dr. B. S. Shaw after a connection with the hospital in different capacities of twenty-five years, having been at one time its superintendent.

A new and commodious building for the accommodation of the Out-Patient Department has been erected during the year, and is now in full and satisfactory operation. Particular attention is called to the fact that the Convalescent Home at Belmont is designed not only for convalescents from this hospital, but also from other hospitals, private families, boarding houses, etc., and the trustees desire to have it availed of to its fullest capacity.

The Superintendent, Dr. Whittemore, reports that there were 165 patients in the General Hospital at the beginning of the year, and 2020 were admitted during the year, of which 1319 were surgical and only 701 medical patients, a disproportion justifying the reputation which the hospital is gradually acquiring of sacrificing medicine to surgery. Of the whole number of patients treated during the year 473 paid in full, 79 in part, and 1633 were free patients. Of the average number of these free patients, 138, 70 were Americans and 68 foreigners. The average time of the free patients was 4.80 weeks, of the paying patients 2.75 weeks. The greatest number of paying patients at any one time was 49; in private rooms, eight; the greatest number of free patients, 168; the greatest total, 189. The least number of paying patients at any one time was 15; in private rooms, three; the least free, 118; the least total, 143. The proportion of ward beds occupied by free patients was 77 per cent.; by paying patients, 23 per cent. About 13.7 of the paying patients occupied private rooms. The average number of patients was 168: males, 105.5; females 62.5. Sixteen per cent. of the free patients were female domestics; 29 per cent. were laborers; 15 per cent. were mechanics; and nine per cent. were minors. Proportion of deaths to whole number of results, 8.93 per cent. Number of patients received on account of accidents, 432.

The Superintendent of the McLean Asylum, Dr. Cowles, gives the following among other details of the operations of that institution. There were 167 patients in the Asylum at the beginning of the year, and 109 admissions during the year, two men being admitted twice. Of the 107 persons admitted, 67 were regarded as recent cases, and 40 as chronic, or as incurable at the time of admission.

Seventy-five persons, 34 men and 41 women, had never been in any hospital. Of the remaining 32 persons, 18, seven men and 11 women, were admitted for the second time; seven, five men and two women, for the third time; three, two men and one woman, for the fourth time.

Thirty-four cases, representing 33 persons, 10 men and 23 women, were admitted as voluntary patients upon their written applications. Two of the men were not insane: one, a case of the opium habit, was discharged recovered; and the other, of alcoholism, was discharged improved. Of the remaining 31 persons, 25, five men and 20 women, were cases of melancholia: four, one man and three women, were cases of mania; and two men were cases of general paralysis. Of these voluntary patients three, one man and two women, were committed while still resident at the Asylum; and one woman, already referred to, was discharged, and afterwards returned under a commitment. Eleven of the 34 voluntary cases, two men and nine women, were discharged within the year, recovered; four more, two men and two women, as improved or much improved; and two men and one woman as not improved.

There were remaining in the Asylum, under the voluntary relation, 15 persons, three men and 12 women, who entered during the year. Eleven of these voluntary patients had formerly been inmates of the Asylum.

The average duration of illness, from the beginning of attack, of all cases recovered, was 13.39 months; and the average duration of their hospital residence was 8.32 months. The percentage of recoveries on admissions was 33.94. The number of recoveries was larger by eleven than in the previous year.

The presence in the house of voluntary cases in increasing numbers has a good effect, Dr. Cowles thinks, particularly upon new comers, who, influenced by example, become sooner wonted to their residence. Sometimes, on the other hand, the indecision of patients as to whether to remain or go away is not beneficial. Other advantages of the voluntary method are the increased care and attention it induces hospital people to give such patients to make them contented; the necessity under which it lays friends of explaining their reasons for advising hospital residence, and the encouragement to others needing treatment which the example affords.

Much benefit was derived from the occupation by suitable cases of a sea-shore cottage at Lynn during four months of the warm weather. The employment of women as nurses in the men's wards is reported as meeting with unqualified success, and it is hoped shortly to improve the nursing service by introducing the training school system, which we should trust would eventually be felt as a benefit outside the Asylum.

A Manual of Medical Jurisprudence, with Special Reference to Diseases and Injuries of the Nervous System. By Allan McLane Hamilton, M. D. Bermingham and Company. 1883.

Dr. Hamilton is promptly on hand again this year (though the title-page says 1883) with his "little book" of 380 pages. "Its scope is limited," he says, "for I have only considered those conditions of the nervous system which nowadays are so often the bases of litigation." In such cases he hopes it will prove useful as a guide, and also as a book of reference for lawyers and doctors.

This modest little preface rather disarms criticism, for if an author aims at little or nothing and achieves it, who can say that he is not successful. If, on the other hand, he offers to the world a perfect and complete treatise, as he says, which is found on examination to be little more than a barren waste of words, he lays himself open to criticism.

Dr. Hamilton fulfills the promise of his preface and makes even a better book than he would lead us to expect. There is a good deal of value in it and a large number of illustrative cases are given, both old and recent, which have never before been collected in book form, though mostly familiar to the alienist. These cases are interesting, some of them recorded in detail, and will prove of particular value to the lawyer who wishes to crowd the interstices of his elastic brain with numerous facts for the morrow's fray, in which he will give the spectator the impression that for years he has made a special study of insanity.

The first sixty pages of the book are called General Consideration. In a very brief manner the definition of insanity, its classification, its various forms, suicidal attempts, premeditation, post-mortem examinations, etc., are considered.

Chapter II. is on the Legal Relations of Insanity, and covers 110 pages. It begins with Legal Tests, and under the heading of the Border-land of Insanity considers the case of Guiteau in a manner intended to be full, but, according to our opinion, narrow and contracted. Dr. Hamilton disposes of Krafft-Ebing's well recognized forms of insanity of *primäre* and *originäre Verrucktheit* as too sentimental. Guiteau, he says, was a neurotic criminal, and under a better environment might have been a useful member of society! He finally rests satisfied that Guiteau was an eccentric criminal, trying by his actions during the trial to humbug experts and jury.

Dr. Hamilton's whole account of the Guiteau case is an unconvincing personal argument rather than a historical statement of the case, but we can easily pardon him in a matter like this, where arguments to make out the sanity of the subject will always be necessary.

The remainder of Chapter II. contains many suggestions as to the conduct of the insane and numerous cases, all of interest, more particularly to the uninitiated student.

Chapter III., on Hysteroid States and Feigned Diseases, covers fifty pages, and contains much of interest. Some of the subjects treated of may have escaped the notice of many observers.

Chapter IV. is on Epilepsy and rather brief.

Chapter V., on Alcoholism, is also rather short.

Chapter VI. is on Suicide, and the concluding chapters (VII. and VIII.), on Cranial and Spinal Injuries, cover eighty pages, and give a little of everything bearing on these injuries.

Altogether, he who wishes to run may read this book, even if the pace be a rapid one. Our legal brother especially will do well to add it to his library.

A Short Manual for Monthly Nurses. By C. J. Cullingworth, M. D. 16mo, 79 pages. Philadelphia: P. Blakiston, Son & Co., 1884.

This is a sensible and well written book for the instruction of monthly nurses. It does not aim at teaching them how to perform the duties of the medical attendant, but tells them how best to manage a case in his absence, and also gives good advice about sending for the physician in the various emergencies before and after labor. The book will be of no especial value to a training-school nurse; but it is to be commended to the untrained as a safe and reliable guide. C. M. G.

Medical and Surgical Journal.

THURSDAY, APRIL 17, 1884.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

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No. 4 Park Street, Boston, Mass.

"FURTHER LEGISLATION TO PREVENT THE ADULTERATION OF FOOD AND DRUGS."

As our readers are already aware, the prosecution by the Massachusetts Board of Health, Lunacy, and Charity of certain manufacturers for selling drugs, — such as laudanum and citrate of iron and quinine, — which fell much below the legal standard of purity, has given rise to an attempt originating, as is more than suspected, with the convicted firms to induce the State Legislature to so modify the existing law of 1882, under which the prosecutions were successfully conducted, as to render it practically inoperative.

Advantage was taken by a majority of the legislative Committee on Public Health of a petition "for further legislation to prevent the adulteration of food and drugs" to bring in a report not only full of misstatements but containing recommendations calculated to defeat the object sought by the petitioners. The names of the signers of this report would seem to indicate that they were actuated by a variety of motives, but we were sorry to see among them that of a senator, a member of the Massachusetts Medical Society, who, after the very full discussion of the subject in committee, seems strangely enough to have been but little impressed with the claims which the general public, the medical profession, and the better class of manufacturers and dispensers of drugs make for a stringent law based on a fixed standard.

The recommendations of this majority report may be briefly stated as a substitution of one of the Dispensatories for the Pharmacopœia as a standard, the insertion of the word "materially" after the word "differs" in the paragraph defining adulteration, and an opposition to an increase of the appropriation for enforcing the law. In other words, the majority reported in favor of a loose law and an insufficient appropriation for its enforcement, and this in answer to petitioners "for further legislation to prevent adulteration." With the misstatements contained in this majority report it is not worth while to waste our readers' time.

The minority simply reported in favor of increasing the appropriation for the prevention of adulteration from three to ten thousand dollars, two fifths of this amount to be annually expended for the enforcement of laws against the adulteration of milk, the number of prosecutions and an itemized account of expenditures to be reported annually to the Legislature.

The House of Representatives last week, after a spirited debate in which the majority report was supported by a manufacturer of vinegar essence, spruce beer, and other "notions," by the paid attorney of one of the convicted firms, a member of the House, and by an eclectic medical practitioner, adopted the bill reported by the minority by a vote of one hundred and six yeas to fifty-six nays. It is now expected when the subject comes up in the Senate that honest dealing and the demands of our fellow citizens for further protection against impure drugs and adulterated food will meet with the same sturdy recognition.

The wise result reached by the members of the House of Representatives was, unfortunately, modified by the adoption of an amendment to the Act of 1882, proposed by a representative of Boston, which, in our opinion, will be found both unwise and unnecessary; unwise in so far as it may encourage the sale by grocers and others of such an article as laudanum for general consumption, and open a door — however moderate its dimensions — for fraud; unnecessary in so far as its objects are provided for in the very next sentence of the act itself.

According to section three of the Act of 1882 a drug is declared to be adulterated "if, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down therein." The amendment adopted inserts after the word "therein" the following: "Unless the order calls for an article inferior to such standard, or unless such difference is made known to the purchaser at the time of such sale, or appears obviously by inspection of the article itself."

However little comfort this amendment offers manufacturers of inferior drugs, the objections to it are sufficiently obvious.

We offer our readers outside the State of Massachusetts no apology for treating so much in detail a matter which at first sight may seem to them of purely local interest and perhaps of limited consequence. In reality it is neither. There are few subjects of more importance to modern society than the maintenance of a high commercial and hygienic standard for articles used as food or drugs. The standards and the provisions for their protection adopted in Massachusetts by the Act of 1882 are based upon the recommendations of the National Board of Trade. The emphatic reassertion of its law in regard to these points by one State is a direct encouragement to others. The specious pretexts under cover of which the law is assaulted in Massachusetts, and the facts and arguments by which these are rebutted, will be or will have to be repeated wherever the question is again agitated.

Honest manufacturers, intelligent pharmacists, and dispensers of homœopathic medicines all united here in cordially supporting the law. The threats of its opponents, on the other hand, that the trade and enterprise of Massachusetts would be throttled by the enforcement of the law seemed to find little credence, and the application of vulgar epithets to honest State officials who were conscientiously and judiciously discharging their duties under the law evidently produced a directly opposite effect to that intended.

We respectfully refer other legislative bodies engaged in protecting their constituents against adulterations of food and drugs to the debate in the Massachusetts Legislature. And members of Congress who are now discussing the propriety of appointing a committee to investigate adulteration from a national stand-point would do well to give it their attention.

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THE EDINBURGH TERCENTENARY.

The tercentennial anniversary of the University of Edinburgh to be celebrated to-day is an occasion of great interest to all educated men the world over. It is said that among the distinguished men who have been summoned thither *honoris causa* are MM. Charcot and Chevreuil, who will receive the degree of Doctor of Laws. The names of some of our own countrymen who are to be similarly honored have already been given in the Journal. The chief educational institutions of the world are to be represented at the academic assembly to be held on this occasion. A number of our American colleges have been invited to send their delegates. The principal of the University, Sir Alexander Grant, has prepared a history which gives the story of the rise of the different departments of instruction, and of the great men who have from time to time graced the various professorial chairs. Among the natural sciences none has been more ably taught at Edinburgh than medicine. A part of the fame of this as a medical centre is doubtless due to the "extramural" instruction there given, that is, by physicians not officially connected with the University but fitting young men for their diploma examinations. But how great is the debt of the profession to many of the renowned and revered men whose names stand on its professorial roll! Truly *exegeunt monumentum perennius ære.*

Some entertaining stories are told about the elder professors of medicine in this University. Among them was Charles Bell, who it is said once visited the class-room of Roux in Paris. Roux omitted his lecture and dismissed the class, saying, "Sufficient, gentlemen; you have seen Charles Bell." Sir James Y. Simpson's boldness in introducing chloroform gave him a reputation as universal as it was deserved. A Scotchman was presented at the Court of Denmark, when the king said, "You come from Edinburgh? Ah, Sir Simpson was of Edinburgh." Of Simpson himself it is said that he esteemed it a higher privilege to have delivered a woman without pain than to have been made physician to the queen.

Of the contemporaneous teachers at this seat of learning, and of the many men who in other departments than medicine have lent it renown, we cannot speak in detail. That there is no falling off in the quality of the instruction is shown not only by the fact that it is to-day the largest university in the world, but by what is more valuable than any numerical test, its reciprocal action on the mental status of the Scotch people, and by the lofty position which Edinburgh has so long held as an intellectual centre.

May the beneficent influence of this seat of sound learning in medicine and in art continue to grow during another three hundred years!

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MEDICAL NOTES.

— The friends of Dr. Whittemore, the Superintendent of the Massachusetts General Hospital, will learn with regret that the indisposition from which he has been suffering for the past few months has necessitated the amputation of the right hand and a portion of the left. We understand that since the operation Dr. Whittemore has been relieved in great measure of the pain which had formerly been so severe, and is in a comfortable and satisfactory condition.

— A French lady is in the courts with two bills whose coincidence in point of time is rather aggravating to her. One is of 2000 francs from a dentist for making a false uvula, to obviate a somewhat nasal tone resulting from the amputation of the natural uvula, which she had procured. The artificial organ caused such interference with appetite, digestion, and speech that medical attendance was necessary, with the result of the second bill of 4500 francs. The dentist's bill was reduced by the court to 600 francs.

— A correspondent of the *New York Medical Journal* relates a case of the morphia habit where the victim took the remarkable dose of a drachm of morphia crystals at night and twenty-five grains in the morning daily for nine days. The reporting physician himself injected twenty-five grains at once, each of three successive evenings.

— Last month a serious case of poisoning, though fortunately not fatal in any of the patients, occurred in Scotland among the boys of the training ship Cumberland. The boys had been sent out for their usual morning exercise, and began gathering roots and herbs which were strewn along the shore. One of them, believing the herb to be harmless, commenced eating it, and his companions followed his example. Shortly afterwards ten of their number complained of sickness, and before they could return to the ship three of them fell into a kind of stupor, and lay helpless in the road. They were carried into a neighbor's house, where some warm milk was procured, but the lads gradually grew worse, as did also several others. Four of their number were conveyed to an infirmary in the neighborhood, where everything was done to produce nausea and to prevent them from falling into a stupor, but despite the efforts of the medical men they remained in an unconscious condition for upwards of five hours. The remaining six were taken on board the ship, where they were duly tended, but in the course of the afternoon it was found necessary to send one of them ashore to the infirmary. These five were in a critical condition for some time, one of the cases being almost hopeless; but all finally recovered. The herb which did the mischief was discovered to be of the hemlock class and of exceedingly virulent action.

— Dr. Saint-Martin (*Revue Médicale*, March 15th), in an inaugural thesis collects a few of the rare instances of rupture of the tunica vaginalis in hydrocele. The individual who has a voluminous hydrocele suddenly feels a keen pain in the scrotum, and on examination finds that the previously circumscribed tumor has disappeared, giving place to a general infiltration of the subcutaneous cellular tissue. In one case referred to, the scrotum, penis, and skin of the abdomen were enormously distended, as if by infiltrated urine. In such extreme cases there is danger of inflammatory complications; but ordinarily the fluid is absorbed and the rupture is an accident of slight importance. Occasionally, however, it gives rise to parietal hæmatocele. Usually the vaginal wound heals and the hydrocele is reproduced, suppuration with adhesions of the sac being rare.

— In one of the recent discussions on the cholera question before the Epidemiological Society of London a somewhat striking illustration of one mode in which cholera is propagated was furnished by Sir William Smart, K. C. B., R. N., who told how the French troops at Varna returned from a march into the Dobrudsha smitten with cholera, and encamped on a plateau, through which ran a stream, from the mouth of which the English admiral's ship and others obtained their water, while higher up the French soldiers were washing their soiled clothes. The flag-ship lost 140 men, but Sir William's, which had brought a supply of pure water from Corfu, remained perfectly healthy except once, when moored near the shore while the wind was blowing strong from the French camp a single case occurred. At his suggestion the captain took her straight out to sea, and no other case appeared on board.

NEW YORK.

— At a special meeting of the County Medical Society held April 7th Dr. David Webster, chairman of the Committee on the Collective Investigation of Disease, read the report of the Committee on Intestinal Obstruction, founded on the replies of members to whom blanks on the subject had been sent. Records, more or less complete, were received of fifty-one cases, in forty-one of which there was total and in four incomplete obstruction of the bowels. In twenty-four cases there was no stercoraceous vomiting, and in three no obstinate constipation, while in one there was no vomiting, though nausea was present. Twenty-one cases, or over forty-one per cent., recovered. Out of nine cases in which the abdomen was opened, and peritoneal bands divided, there were two good recoveries, while in a third case that might have recovered the fatal result seemed purely attributable to imprudence. In sixteen cases the causes of the obstruction were ascertained by operation or post-mortem examination, and were as follows: Peritoneal adhesions in eleven cases; twists in the intestine in two cases; stricture in one case; invagination in one case; and impacted fæces in one case. Dr. Webster then proceeded to read the reports of the fifty-one cases in detail, but before the reading was completed it was decided, on motion of Dr. H. G. Piffard, that the entire report of the committee should be entered upon the minutes and printed, and that discussion of the subject should be postponed until after printed copies had been sent to the members.

— Dr. Piffard then called up the subject of a bill, now pending in the Legislature, to incorporate a college of midwifery in the city of New York (a different one from the proposed bill in regard to which action was taken at the last meeting of the Society), and, on motion of Dr. A. W. Warden, the following preamble and resolutions were adopted: —

Whereas, An effort is being made to incorporate, by act of Legislature, a private institution under the name and title of the College of Midwifery of the City of New York, asking that such proposed institution have the right to confer the degree of graduate in midwifery, and that such diploma be a license to practice midwifery in the State of New York; and

Whereas, The bill incorporating such institution is defective in many important respects, and the objects sought by such bill are considered injurious to the interests of the State of New York and to the medical profession of the State; and

Whereas, No opportunity has been afforded to the medical profession of this State or to the Medical Society of the County of New York to be heard in regard to this measure; therefore

Resolved, That the Medical Society of the County of New York hereby petition that the Assembly of the State of New York defer action until such time as this Society can be heard in opposition to such measure.

Resolved, That a copy of this resolution, signed by the president and secretary of the Medical Society of the County of New York, be transmitted without delay to the Assembly of the State of New York.

On motion of Dr. Piffard it was decided that a committee should be appointed to go to Albany as soon as practicable to oppose the bill now before the Assembly, and a motion of Dr. Garrish having been carried to the effect that the committee should consist of two, and should be appointed by the chair, Dr. Alfred C. Post, acting president, appointed Drs. A. W. Warden and H. J. Garrigues as the committee.

— At a meeting of the Society of Medical Jurisprudence and State Medicine held Thursday evening April 10th, Dr. J. Henry Fruitnight read a paper on The Status of the Midwife, Legal and Professional, in the course of which he deprecated the large number of irresponsible and unfit women now engaged in the practice of midwifery, and contended that either midwives should be prohibited altogether from attending to obstetric cases or that they should be rendered better qualified for their duties and held responsible like physicians. The paper was discussed by Drs. H. J. Garrigues, A. W. Warden, J. C. Peters, A. Jacobi, R. Newman, E. C. Spitzka, and E. Harwood, and at the close of the discussion a resolution was adopted condemning the proposed incorporation by the Legislature of the college of midwifery, in regard to which action was taken at the meeting of the County Medical Society on the 7th of April.

— At a meeting of the Military Service Institution held at Governor's Island April 10th, Gen. Egbert Viele, Commissioner of the New York Park Department, read a paper on Camp and Garrison Sanitation. He began by showing from official statistics the enormous disproportion in a number of great wars between those killed in battle and those who died of disease. Thus, in the war between the United States and Mexico there were killed in battle 120 officers and 1429 soldiers, and died of disease 101 officers and 10,885 soldiers, to which if 9749, discharged for disability, were added, it would make an invalid loss of 20,634 out of the aggregate of 104,454 men engaged in the war; while during the late Civil War the Federal army lost 93,969 men who were killed in battle or died of wounds, and 210,400 who died of disease. Afterwards he spoke of the Walcheren expedition, sent out by the British Government in 1809 to take Antwerp, where more than 40,000 soldiers and a magnificently equipped fleet accomplished nothing on account of the disabling of the troops by disease, and in contrast to this described the building of forts on malarious islands at the mouth of the Savannah River during the late war, where the soldiers by the observance of strict sanitary discipline were enabled to withstand the injurious effects of their surroundings.

A critical examination into the barrack life of the British army made a few years ago, he went on to say, showed that over-crowding, bad ventilation, bad drainage, and bad water were the rule, and not the exception; but great improvements had been made in foreign camp sanitation, and he mentioned particularly the hygienic corps, thoroughly organized and educated in sanitary principles, which was one of the features of the military organization of Switzerland. He then proceeded to show how badly the United States army was quartered. Of all the 187 forts and barracks, he said, no two were alike in plan, profile, or perspective, and if there was any similarity, it was in the discomforts and inconveniences by which they were nearly all surrounded. Some of them had been constructed in such places and in such a manner that it would seem as if human ingenuity had been exercised to the utmost in order to achieve the climax of human stupidity, and the condition of the sea-board forts and harbor stations, he said, was particularly bad. In this connection he quoted the following from Surgeon Bill's report of experiments on atmospheric impurities of soldiers' quarters: "I made no examination of the barracks of Governor's Island, nor of the casemate quarters of the men. As well make an examination of a pig-stye. They disregard every modern notion of hygiene; they are dark, damp, cold, and may or may not contain excess of carbonic anhydride; probably they do not, and hence analytical results would merely mislead." Having described particularly the sanitary defects existing at Fort Adams, Newport, Fort McHenry, Baltimore, and Fort Hamilton, New York Harbor, he went on to say that the evils complained of were found in all the sea-board forts, and, what was worse, the most recent attempts which had been made at improved quarters had resulted in conspicuous failure; the combined result of cheapness, bad contractors, and of too little knowledge of the true principles involved in the construction on the part of those charged with the duty of their erection.

To remedy the errors of years, General Viele said in conclusion, would not be easy, but the principles of sanitation could at least be learned. A porous soil, with good natural drainage, should be selected for a camp. There should be good drinking water, which should never be polluted. The direction of the prevailing wind and sunshine should be considered. Shade trees were an essential element. The drainage should be made perfect. The disposal of refuse matter should be carefully arranged. No subject was less understood in garrisons than ventilation. Every man ought to have eight hundred cubic feet of space to himself, and this should have direct or indirect channels to the outer atmosphere. Disinfectants should be constantly used, and sulphate of iron was especially recommended for this purpose. A bad cook was declared to be the men's worst enemy, and the cooking should be daily inspected. Personal cleanliness should be systematically required, and all the conveniences for securing this provided. The paper was discussed by a number of army surgeons and other gentlemen present, and on motion of General Tower, who said that this important subject was now stirring up the whole medical corps of the army, it was voted that it should be published.

— The State Senate has passed the bill prohibiting the manufacture or sale of oleomargarine or other imitations of butter, and the Adirondack bill, entitled An Act to Create a Forest Commission for the State of New York, and making an Appropriation therefor, which provides for the appointment of three commissioners, with salaries of $2500, to lay out and locate the lands belonging to the State and protect them against trespassers, and for the appropriation of $15,000.

— The health authorities, in investigating the cause of a recent outbreak of typhus fever among the Polish Jews on the East Side, have found that the disease was imported. The first case reported was that of an immigrant child, who arrived here on the steamship Nebraska on the 22d of March and afterwards died of the fever, which she contracted on the vessel. Some of the other cases reported were among immigrants who arrived on the steamer Moravia on March 26th.

— In the death of Mrs. Oswald Ottendorfer, wife of the proprietor of the *New Yorker Staats Zeitung*, New York has lost one of its most liberal benefactresses. In addition to many other charities during her life she built the Isabella Home for Aged Women, at Astoria, in memory of a deceased daughter, at a cost of over $100,000, erected and furnished a wing of the German Hospital (the woman's pavilion) at a like cost, and expended over $150,000 for the German Dispensary Free Reading Rooms, now in course of construction. In her will, besides many other charitable bequests, she left $10,000 to the German Hospital and Dispensary of New York, and $5,000 to the German Hospital at Newark, New Jersey.

— The death of the oldest son of Mr. Joseph H. Choate, a member of the freshman class of Harvard College, who died at his father's residence in New York on the 5th of April, was due to apoplexy, although he was but nineteen years of age.

Miscellany.

MALARIA AND DIPHTHERIA IN CONNECTICUT.

The secretary of the Board of Health reports for the month of February in Connecticut that the month does not present as good a record as it should for a short one. The total mortalities are too high, and the ratios are higher than those for the same month in previous years. The most noticeable event is the return of acute tertian ague. For some time past reports have been made of this recurrence, now here, now there, until it has extended over nearly all the region that has been invaded by malaria, where dumb ague and the like and the continued type of disease had been the rule. The last new start is reported from Middlesex County, from Durham, and adjacent towns, thus completing the whole area except here and there localities that have not yet showed the movement. It has been irregular both as to time and space, and at first suggests a renewed onslaught of malaria as it first appeared, but there is no increase in the periodic type, and, as a rule, after the appearance of quite a number of cases the frequency diminishes, and scattering cases continue to be encountered. As clearly defined cases of tertian ague had rarely been seen over a large area, where the decline of the periodic type and the decrease in malarial cases indicated an entire disappearance of the disease, the reappearance excites attention, and the developments will be closely watched to learn what the prospects are that the malarial type has become a permanent one. As typho-malaria fever still lingers in England we may expect the same result here, but whether acute ague is to be a regular affliction is another question.

The epidemic of diphtheria continued unabated during February. In Hartford the death-rate is even higher than in January, and the number from zymotic diseases and the infantile deaths are slightly increased over those of January. The total mortality since January, 1883, from croup and diphtheria is 295, a condition unprecedented in the sanitary history of the State.

DURATION OF THE MENSTRUAL HÆMORRHAGE IN RELATION TO THE DEVELOPMENT OF THE FŒTUS AT TERM, AND TO MULTIPLE PREGNANCY.

The *London Medical Record* summarizes a paper by Cuzzi (*Rivista Clinica* and *Annali Univ. di Med.*, July, 1883), in which the author seeks to establish his conclusions on the basis of much statistical material collected in the clinics of Modena, Milan, and Turin. He was led to this research by the idea that by the amenorrhœa of pregnancy a so much greater quantity of maternal nourishment was retained for the benefit of the fœtus, as the sanguineous loss was greater in menstruation. Not being able to determine exactly the quantity lost at each period he took its duration as a guide which, considering the number of his observations, may be regarded as more or less equivalent. As to a longer duration of the menstrual hæmorrhage a corresponding ovarian activity can be supposed; so, also, the hypothesis may be justified of a more easy rupture of more ovisacs, and a greater probability of multiple pregnancy. From the analysis of very numerous observations Professor Cuzzi thinks himself justified in formulating the following conclusions: (1.) The weight and length of the fœtus at term are in direct relation with the number of days menstruation occupied. The longer the usual period of menstruation the heavier and larger the fœtus. (2.) There is a direct relation between multiple pregnancy and the duration of the menstrual period. That is, multiple pregnancy is most frequent in women in whom the period is long and the loss free.

INTERNATIONAL HEALTH EXHIBITION.

A somewhat novel feature in connection with the exhibition this year will be the establishment of a Library and Reading Room, a home for which the Executive Council have assigned in a large double room in the Albert Hall, overlooking the Conservatory. Steps have been taken to secure a representative collection of works on vital statistics, of reports and regulations relating to public health, of regulations with reference to injurious trades, and of works thereon, and of reports, statistics, and other works on the science of education. Foreign powers have been invited to lend their coöperation in this effort to create an international library of works of reference bearing on the two divisions of the Exhibition, and several responses have already been received. India and the Colonies have also been asked to contribute towards the same end. Publishers and authors have likewise been invited to forward copies of their works. In addition to the Library of Reference there will be a Reading Room, to which the current numbers of periodical publications of a sanitary or educational character will be admitted. All books and periodicals sent to the library and reading room will, under certain regulations, be arranged for the use of visitors, and not merely for exhibition. The books will be submitted to the jurors, and a full catalogue will be issued. All parcels for the Library and Reading Room should be addressed, carriage paid, to the Secretary of the Library Sub Committee, Royal Albert Hall, London, S. W.

April 2, 1884.

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS UNITED STATES NAVY FOR THE TWO WEEKS ENDING APRIL 12, 1884.

Wales, P. S., medical director, granted one year's leave of absence from March 28th, with permission to leave United States.

Bates, N. L., medical inspector, ordered to Washington to attend sick officers.

Bradley, M., medical inspector, ordered to continue duty at League Island Navy Yard.

Whitaker, H. W., assistant surgeon, ordered to Naval Rendezvous at Philadelphia, Pa.

Gunnell, F. M., surgeon-general, appointed Chief of Bureau of Medicine and Surgery and Surgeon-General of the Navy, with the relative rank of commodore, from March 27th.

Rush, C. W., passed assistant surgeon, ordered to Naval Academy.

McMurtrie, D., surgeon, detached from Naval Rendezvous, Philadelphia, and to await orders for duty at Navy Yard, Washington, D. C.

Nelson, H. C., medical inspector, ordered before Retiring Board.

Gorgas, A. C., medical director, to be medical director from 4th March on the active list.

Battle, S. W., passed assistant surgeon, ordered before Retiring Board.

Wells, H. M., surgeon, detached from Naval Hospital, New York, to report at Bureau for special duty.

Hibbett, C. T., passed assistant surgeon, placed on waiting orders.

Stewart, H., surgeon, placed on retired list from April 10th.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 5, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	611	239	14.88	17.28	—	5.12	2.56
Philadelphia	927,995	402	154	10.25	17.75	3.50	3.50	1.75
Brooklyn	644,526	261	91	12.92	12.16	.38	6.68	1.90
Chicago	632,100	245	133	17.35	13.05	1.35	4.95	2.25
Boston	423,800	176	54	15.39	17.10	1.14	5.13	2.28
Baltimore	408,520	142	53	19.17	15.62	2.84	2.84	1.42
St. Louis	400,000	138	42	12.96	17.28	.72	5.04	2.88
Cincinnati	272,400	139 [1]	23	12.96	19.44	.72	2.16	.72
New Orleans	234,000	130	39	19.22	16.15	—	1.54	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	81	24	11.07	20.91	—	3.69	4.92
Pittsburg	180,000	80	41	8.75	8.75	2.50	1.25	3.75
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	25	4	8.00	12.00	4.00	—	4.00
Nashville	54,400	14	3	21.52	—	—	—	—
Charleston	52,286	37	12	7.40	24.30	2.70	—	—
Lowell	71,447	23	5	8.70	13.05	4.35	—	4.35
Worcester	69,442	15	7	6.66	26.66	—	6.66	—
Fall River	62,674	13	7	7.69	—	—	7.69	—
Cambridge	60,995	16	5	12.50	12.50	6.25	6.25	—
Lawrence	45,516	15	6	—	—	—	—	—
Lynn	44,895	13	2	—	14.38	—	—	—
Springfield	38,090	13	2	—	14.38	—	—	—
Somerville	31,350	5	0	40.00	40.00	—	40.00	—
Holyoke	30,515	8	2	12.50	37.50	12.50	—	—
New Bedford	30,144	12	2	8.33	16.66	—	—	—
Salem	29,503	7	3	14.28	28.56	—	14.28	—
Chelsea	24,347	11	4	9.09	9.09	9.09	—	—
Taunton	22,693	7	2	14.28	14.28	—	14.28	—
Gloucester	21,400	2	0	—	—	—	—	—
Haverhill	20,905	8	1	—	12.50	—	—	—
Newton	19,421	8	1	—	—	—	—	—
Brockton	18,323	4	1	—	25.00	—	—	—
Malden	15,273	4	1	75.00	—	—	—	—
Newburyport	13,947	8	2	12.50	37.50	—	12.50	—
Fitchburg	13,433	3	1	33.33	—	—	—	—
Seventy-six Massachusetts towns	344,254	62	15	17.71	46.35	—	3.22	8.05

[1] Of the above 139 deaths 41 were killed during the riot.

Deaths reported 2640 (no reports from Buffalo, Milwaukee, and Providence): under five years of age, 981: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 377, consumption 465, lung diseases 397, diphtheria and croup 111, scarlet fever 60, diarrhœal diseases 43, typhoid fever 34, measles 35, whooping-cough 21, erysipelas 17, puerperal fever 14, small-pox 16, malarial fevers 13, cerebro-spinal meningitis 10, typhus fever three. From *diarrhœal diseases*, Chicago 11, New York 10, Cincinnati six, Philadelphia and Malden three each, Boston, St. Louis, and District of Columbia two each, Brooklyn, Baltimore, New Orleans, Charleston, New Bedford, and Milford one each. From *measles*, New York 12, Baltimore 10, New Orleans seven, Chicago four, Brooklyn two. From *whooping-cough*, New York nine, Brooklyn, Boston, Baltimore, and Cincinnati two each, Chicago, New Orleans, Marblehead, and Lee one each. From *erysipelas* New York five, Boston three, Brooklyn and Chicago two each, Baltimore, St. Louis, Cincinnati, and Brooklyn one each. From *small-pox*, New Orleans 12, Cincinnati two, Pittsburg and Nashville one each. From *puerperal fever*, Boston four, Chicago three, Brooklyn and Nashville two each, Baltimore, St. Louis, Cincinnati, New Orleans, and Fitchburg one each. From *malarial fevers*, Brooklyn three, Chicago and Baltimore two each, New York, Philadelphia, St. Louis, Cincinnati, New Orleans, and Charleston one each. From *cerebro-spinal meningitis*, New York five, Philadelphia two, Chicago, Boston, and St. Louis one each. From *typhus fever*, New York three.

Six cases of small-pox were reported in St. Louis, Cincinnati one; scarlet fever 44, diphtheria 17, typhoid fever four, and measles one, in Boston.

In 96 cities and towns of Massachusetts, with an estimated population of 1,352,159 (estimated population of the State 1,955,104), the total death-rate for the week was 16.77 against 18.21 and 22.61 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending March 22d, the death-rate was 22.1. Deaths reported 3709: acute diseases of the respiratory organs (London) 373, whooping-cough 143, measles 141, scarlet fever 86, diarrhœa 42, fever 35, diphtheria 28, small-pox (Birmingham four, London, Liverpool, and Sunderland three each) 13. The death-rates ranged from 15.2 in Plymouth to 31.5 in Preston; Birkenhead 18.9; Leicester 19.6; Sunderland 19.9; London 20.6; Sheffield 21; Huddersfield 21.8; Birmingham 21.9; Liverpool 27; Manchester 27.9; Leeds 28.2. In Edinburgh 18.6; Glasgow 25.8; Dublin 27.5.

For the week ending March 22d, in the Swiss towns, there were 36 deaths from consumption, lung diseases 27, typhoid fever 35, diarrhœal diseases 24, whooping-cough seven, diphtheria and croup six, scarlet fever five, measles one. The death-rates were, at Geneva 40.8; Zurich 19.7; Basle 25.6; Berne 28.9.

The meteorological record for the week ending April 5th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barom-eter.	Thermome-ter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March–April, 1884.	Daily Mean.	Daily Mean	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 30	29.715	17	43	10	89	77	100	89	NW	NW	N	34	34	22	S	O	F	—	—
Mon., 31	29.811	28	37	17	93	57	80	77	NW	NW	NW	22	25	16	F	C	C	—	—
Tues., 1	29.748	37	46	27	83	45	61	63	NW	NW	NW	12	14	8	C	C	C	—	—
Wed., 2	29.319	32	38	30	74	100	100	91	NE	E	N	4	18	18	O	S	S	—	—
Thurs., 3	29.051	36	40	29	100	89	81	90	NW	NW	W	16	22	19	S	R	O	—	—
Fri., 4	29.210	37	41	34	90	78	81	83	NW	NW	NW	23	19	17	S	R	O	—	—
Sat., 5	29.388	33	42	31	72	64	81	72	NW	NW	NW	15	21	14	O	O	O	—	—
Mean, the Week.	29.463	31	41	25				81										56.00	1.86

[1] O., cloudy; C., clear; F., fair; G., fog; H., sleet; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MARCH 29, 1884, TO APRIL 11, 1884.

Woodhull, Alfred A., major and surgeon. Granted leave of absence for twenty-two days, to take effect about April 6, 1884. Paragraph 13, S. O. 72, A. G. O., March 28, 1884.

White, Robert H., captain and assistant surgeon. To be relieved from duty at U. S. Military Academy, West Point, N. Y., August 28, 1884. Paragraph 7, S. O. 74, A. G. O., March 31, 1884.

Mearns, Edgar A., first lieutenant and assistant surgeon. Assigned to duty at Fort Verde, A. T. Paragraph 1, S. O. 22, headquarters Department of Arizona, March 19, 1874.

Sutherland, Charles, colonel and surgeon. To be relieved from duty in Division of the Pacific and to report to the commanding general, Division of the Atlantic, for duty as medical director of that Division and of the Department of the East. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

Baily, Elisha J., colonel and surgeon, ordered to report to the commanding general, Division of the Pacific, for duty as medical director of that division and of the Department of California. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

Sternberg, George M., major and surgeon. Ordered to be relieved from duty in Department of California, and to report to commanding general, Department of the East, for assignment to duty.

Moseley, Edward B., captain and assistant surgeon. Ordered to be relieved from duty in Department of the East and to report to the commanding general, Department of the Columbia, for assignment to duty. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

Smith, Joseph R., major and surgeon. Directed to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held in Washington, D. C., on the 6th of May, 1884, and on the adjournment of the Association to return to his proper station (San Antonio, Texas). Paragraph 7, S. O. 81, A. G. O., April 8, 1884.

Wilcox, Timothy E., captain and assistant surgeon. Ordered to be relieved from duty in Department of the Columbia and to report to the commanding general, Department of the East, for assignment to duty. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

OBITUARY.

Dr. Pliny A. Jewett, a prominent practitioner of New Haven, and well known as having been an expert witness in a number of important medico-legal cases, died April 10th in Providence. He went to Providence a week before to testify, as an expert, in a murder case, and was taken with pneumonia. He was a life director in the Connecticut General Hospital, and during the war was in charge of the military hospital in New Haven. He graduated from Trinity College in 1837, and was appointed Professor of Obstetrics in Yale College in 1856. He leaves two sons and one daughter

Suffolk District Medical Society. — The annual meeting of the Suffolk District Medical Society will be held on Saturday, April 26th, at 7.45 P. M. Dr. A. Day will present a paper entitled Popular Medical Delusions. Other papers will also be presented. Business: Election of officers. The following is the ticket reported by the nominating committee: *For President*, James C. White. *For Vice-President*, George B. Shattuck. *For Secretary*, C. M. Green. *For Treasurer*, E. M. Buckingham. *For Librarian*, B. J. Jeffries. *For Commissioner of Trials*, Charles W. Swan. *For District Nominating Committee*, George C. Shattuck. *For Committee of Supervision*, Benjamin S. Shaw, Samuel A. Green. *For Committee on Social Meetings*, Calvin Stevens, H. I. Bowditch, George W. Gay. *For Censors*, A. N. Blodgett, E. G. Cutler, T. M. Rotch, F. C. Shattuck, F. H. Williams. *For Councilors*, S. L. Abbot, James Ayer, H. H. A. Beach, H. J. Bigelow, C. J. Blake, J. G. Blake, H. I. Bowditch, S. Cabot, D. W. Cheever, Hall Curtis, H. Derby, O. W. Doe, F. W. Draper, Thomas Dwight, W. H. Thorndike, R. H. Fitz, C. F. Folsom, J. O. Green, S. A. Green, F. B. Greenough, W. H. H. Hastings, J. R. Draper, R. M. Hodges, C. D. Homans, John Homans, W. Ingalls, B. J. Jeffries, F. I. Knight, S. W. Langmaid, G. H. Lyman, F. Minot, C. B. Porter, John P. Reynolds, W. L. Richardson, G. C. Shattuck, B. S. Shaw, A. D. Sinclair, D. H. Storer, A. M. Sumner, C. W. Swan, G. G. Tarbell, O. F. Wadsworth, J. C. Warren, Thomas Waterman, James C. White, E. N. Whittier, W. G. Wheeler, H. W. Williams. Supper at the usual hour.

H. C. Haven, *Secretary*.

The American Medical Association. Section of Practice of Medicine. — The chairman, Dr. John V. Shoemaker, of Philadelphia, Penn., submits the official programme for the meetings of the Section of Practice of Medicine, to be held in Washington, D. C., Tuesday, Wednesday, and Thursday afternoons, May 6, 7, and 8, 1884. The following special subjects have been promised, and those who are announced to enter into the discussions have accepted and will be present: (1.) Discussion on A Contribution to the Clinical Study of Epilepsy, will be opened by Prof. William Pepper, of Pennsylvania. (2.) A discussion on the Clinical Study of the Heart Sounds, will be opened by Prof. Austin Flint, Sr., of New York. (3.) A discussion on Tuberculosis, will be opened by Dr. Henry F. Formad, of Pennsylvania. No less than twenty-one papers on various medical subjects are also promised, and have been accepted.

Books and Pamphlets Received. — The Pathology, Diagnosis, and Treatment of Diseases of the Rectum and Anus. By Charles B. Kelsey, M. D., Surgeon to St. Paul's Infirmary for Diseases of the Rectum, etc. With two Chromo-Lithographs and nearly 100 Illustrations. New York: William Wood & Co. 1884.

Moral (Affective) Insanity, Psycho-Sensory Insanity. By C. H. Hughes, M. D., St. Louis. (Reprint.)

Shakspeare as a Physician. Comprising every Word which in any Way relates to Medicine, Surgery, or Obstetrics found in the Complete Works of that Writer, with Criticisms and Comparison of the Same with the Medical Thoughts of To-Day. By J. Portman Chesney, M. D. St. Louis: J. H. Chambers & Co 1884.

Lectures.

CLINICAL LECTURE ON A CASE OF MYXŒDEMA.

BY ROBERT T. EDES, M. D.,
Visiting Physician Boston City Hospital.

A PATIENT was exhibited whose history, as elicited by a member of the class, with some assistance from the hospital books, was as follows: —

She is forty-five years old, and is still menstruating regularly. She has two children, the youngest being thirteen years old, and is a housekeeper of regular habits. She has had "neuralgia" for nine years. For the last two years she has had some indistinctness of vision, and also some swelling of the eyelids, two facts which she seems to consider (incorrectly) to be related to each other. She has also had some swelling of her hands and wrists, but says there has been none elsewhere. She complains of some prickling and numbness in her hands and feet, which are apt to be cold. According to her own statement she was formerly of a more lively disposition, and talked more rapidly than at present, though whether this change is greater than can be accounted for by the sobering influence of years is not apparent, and no friends have given us any history of her former characteristics.

She has suffered from frequent headaches. There is no cough, but a certain amount of dyspnœa on exertion. Her appetite is only moderate, her digestion not very good, and a moderate degree of constipation is present.

Upon examination she is seen to be a woman rather inclined to stoutness, with a rosy complexion, and a peculiar physiognomy. The whole face appears somewhat swollen, including the lips, which gives a heavy and mask-like expression to the lower part of the countenance. The cheeks are quite red, but the eyelids and forehead are rather brown and dusky. The hair is quite abundant, and very dark brown, slightly streaked with gray. Her hands, small, and naturally well shaped, are a little swollen, so that her wedding ring has not been removable for a long time, though she says she can turn it round. The ends of the fingers are *not* clubbed. The skin of the hands is dry and rough. The legs, which she says are not swollen, are very slightly so, and can be slightly pitted by firm pressure. The subcutaneous œdema of the eyelids and hands is not easily to be driven out by pressure as is the case with an ordinary serous anasarca. The thyroid gland, so far as it can be distinguished from the adipose tissue of the neck, is neither absent nor enlarged. Her speech is slow and deliberate, but perfectly distinct and well articulated. Her mind seems perfectly clear, and there is no apparent delay of comprehension or answer. The hearing is considerably diminished, as she hears the watch only at ten inches. Dr. Green finds no advanced aural change, but a little opacity of the lower part of the drum membrane.

It was not unnaturally thought, at first sight, that these symptoms pointed to a chronic nephritis, but a further study of the case renders this diagnosis improbable, that is, so far as either of the ordinary forms is concerned, for in the first place the urine is not that of *parenchymatous* nephritis, as it is found of about normal specific gravity, and not deficient in quantity (from about thirty ounces or a litre to double this quantity), while the albumen is either none at all (hospital) or a very slight trace (Dr. Wood), and there are a *few* transparent and granular casts of medium diameter. If this were the urine of *interstitial* nephritis, which, so far as albumen and casts are concerned, it might well be, its quantity should be much larger. In this case, too, if it had gone on long enough to give rise to dropsy, we should have a right to expect cardiovascular changes consisting in hypertrophy of the heart and the pulse of high tension, neither of which is present, as may be shown by a physical examination of the thorax and the sphygmographic tracing which has been taken. The dimness of vision, already spoken of, does *not* depend, as we are informed by Dr. Wadsworth, upon albuminuric retinitis, of which she shows no trace, so that if this is a case of chronic nephritis it is a very unusual one. But it is no more than fair to say that it has been claimed by one physician who has given special attention to renal diseases (Dr. Mahomed) that cases of the kind which we shall consider this to be are neither more nor less than exceedingly chronic examples of Bright's disease. Most authorities, however, and it seems to me correctly, consider them as forming a very distinct group which has little to do, at least in the early stages, with nephritis, although changes in the kidneys, in common with other organs, have been found after death. They have received the name of myxœdema (Μυξα, mucus) from the peculiar character of the œdema, which does not consist, like ordinary œdema, in the accumulation of serum in the subcutaneous and submucous cellular tissue, but, in places at least, of a firmer substance, which is less easily displaced by pressure, and contains mucin and an abnormal number of swollen nuclei.

It will be admitted, I think, that the case before us, if her most prominent symptoms be compared with the descriptions given by many observers, is fairly to be classified under this head, but other conditions to which much importance has been attached, and which, indeed, lend a considerable part of the interest which is now felt in this curious affection, are but slightly developed. It is evident that our patient is not an advanced case. The general state of her nutrition is not so far "below par" as in most of the cases recorded. Thus the temperature is not below the normal standard, as it has been usually found. As to the amount of urea excreted, one quantitative analysis has given about twenty-five grammes per diem. She has not the œdema of the palate, glottis, and pharynx which cause the nasal voice and sometimes difficult respiration. Her hair has not suffered.

It is, however, in regard to the nervous symptoms, so pronounced in many cases, that we notice the most marked difference from the type. To represent these she has only the numb feelings in the hands and feet, and the slight sluggishness of manner. Of the incoordination, which has caused, at times, confusion between this disease and locomotor ataxy, or the condition spoken of as cretinism, she has hardly a trace. Whether these are to come or not, time alone can show, but in consideration of the short time during which this distinct type of disease has been recognized, and the somewhat limited statistics in our possession, we may consider it at least possible that there may be cases in which these are fortunately absent or long delayed.

In view of the infrequency with which these cases have been met with it was thought that an examination of the condition of the blood might prove interesting, but it showed no deviation from the normal, the amount of hæmoglobin as shown by Gower's color estimate being equal to that of a healthy person, and the count of the blood corpuscles being 4,625,000, the corpuscles not being deformed, and there being no excess of leucocytes or microcytes. It is seen that at present there is no anæmia.

Two other cases were briefly described by the instructor for purposes of comparison. The first of these, presenting more of the classical features and evidently more advanced, came under observation thirteen or fourteen years ago. I used to meet in the street a rather large woman, walking slowly and much wrapped up, with a pale, swollen face, whom I supposed to be suffering from chronic Bright's disease or the most extreme anæmia, and mentally made a most unfavorable prognosis, expecting her to die within a year or two at the furthest. This was before I knew anything about her professionally or about myxœdema either.

Some time, I think some years, afterward I found a condition similar to that of our patient here but much more extreme, especially as regards loss of strength and the degree of anæmia. Her illness dates back to the cessation of menstruation.

There was great swelling of the whole face, the lower eyelids hung down in great bags, and the hands were of the most ponderous proportions, but neither white and shiny like those of renal dropsy nor cold and purple like those of impeded circulation.

Her voice was a little hoarse, and together with her general manner exceedingly slow and deliberate, though how great the change may have been from her former condition I cannot say, as I had not known her in health. Her appearance was noticeable from the amount of wraps she habitually used even in warm weather. She has from time to time had shooting pains in the limbs and stiffness in using them. She has suffered a large part of the time from chronic diarrhœa with much pain, for which various drugs have given only temporary relief, the most trustworthy being opium, which unfortunately she does not bear very well.

Her urine was found at various times of the specific gravity 1.016 to 1.034, and not notably changed in quantity. I was greatly surprised never to find in the several examinations I made any albumen, and on the only occasion where I find casts distinctly spoken of in my notes (though I have no doubt I examined several times) their presence is denied.

Her blood count was 3,320,000.

A noticeable feature in her case was the entire loss of her hair, which has, however, since been replaced by a new growth of soft brown hair several inches long all over her head. She remains in essentially the same condition, though having lost in strength, and is a striking instance of the chronicity of the disease.

Another case, which in some respects was the most marked of the three, and presented special points of interest, was seen about two years ago with Dr. West, of Roxbury, who will soon report it in detail, together with the autopsy.

In this case the physiognomy was similar to that of our patient, but the voice, probably owing to œdema of the palate, pharynx, and glottis, was husky and nasal. She died suddenly after going to bed in no worse condition than usual, attention being called to her by the cessation of the snoring. This result is to be looked upon as an accident to which such patients are liable rather than the natural or usual termination of the disease.

The morbid appearances in this case were largely negative, but showed in some certain localities the presence of a peculiar form of œdema. I understand they are to be reported in detail in connection with the clinical history.

The pathological appearances found in this affection have already been spoken of in a general way, and many of the symptoms, especially the nervous ones, have been accounted for, with some probability, by supposing that the general deposit of mucous tissue so "pads" the ends of the sensitive nerves and perhaps also the nervous centres as to destroy the delicacy of their function. This is, however, as yet to a considerable extent theoretical, and we have to wait for further observations in this direction.

There is no reason to suppose that the prognosis of the case before us differs in any essential respect from that which is usual. It is stated that the condition generally grows worse, that marked anæmia and renal disease accompanied by the ordinary form of dropsy are likely to supervene; the nervous symptoms become aggravated, the patient gradually getting into a condition described as closely resembling cretinism.

Quite recently it has been found that patients whose thyroid glands have been completely removed present after a time symptoms almost identical with those of advanced myxœdema.

There have been exceptions enough to this unfavorable prognosis to give a certain amount of encouragement that a cure may not always be impossible, or that at any rate symptoms may be mitigated and life prolonged even beyond the usual very chronic course. Curiously enough it has happened that in some cases when *ordinary* dropsy comes on as a consequence of renal disease supervening on the condition we are now discussing the *myx*-œdema has disappeared.

One case is reported where abdominal dropsy occurring in a man affected with myxœdema grew sufficiently severe to demand tapping, which having been done both ascites and myxœdema disappeared. In another case pregnancy and childbirth, which was accomplished with some difficulty, put an end to the morbid condition. Other cases of recovery have been spoken of as not due to any specific treatment. Where, however, the progress is steadily toward the worse it is often extremely slow. In the second case spoken of in this lecture the disease has been going on probably for at least fourteen or fifteen years, with no immediate prospect of a fatal termination, though there is a very decided loss of strength.

No treatment so far proposed has been attended with invariable or even very marked success. Favorable results have been claimed for strychnine, and quite recently for jaborandi in not too large doses but continued for a long time. Hot-air baths may also be of service, the action on the skin of the last two remedies being obviously very similar.

In our case nothing very active has yet been done. It is well, in hospital practice at least, when the case is not urgent to wait a little to see what change and rest will do; in this way many mistakes as to the effects of remedies may be avoided. She has had iron and quinine and the faradic current to the hands, which has relieved some of the uncomfortable sensations. She expresses herself as much better, and there is certainly less swelling than when she entered. By and by perhaps jaborandi may be used.[1]

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[1] She has since left the hospital

Original Articles.

THREE CASES ILLUSTRATING SOME POINTS IN THE PATHOLOGY OF CERTAIN INJURIES OF THE SHOULDER-JOINT.[1]

BY C. B. NANCREDE, M. D.,

Surgeon to the Episcopal Hospital, and to St. Christopher's Hospital for Children.

A few preliminary anatomical points must be passed in review for the ready comprehension of my later remarks. The shoulder-joint differs in many important points from any other articulation of the body. A moment's reflection upon the almost unlimited range of movement which it enjoys will at once suggest that the ligaments of this articulation cannot be the means by which the joint surfaces are held in apposition; otherwise anything like freedom of movement would be impossible in a ball and socket joint where the socket is so shallow as in this articulation. What then does hold, firmly apposed, the articular surfaces? It must be something always tightly stretched, yet always capable of lengthening or rather always practically loose. Nothing but muscle could fulfill any such purpose. In truth, the muscles surrounding the joint are the most important ligaments the articulation possesses. When these are paralyzed, or in the cadaver, the head of the humerus readily falls away from the glenoid fossa. Bearing this fact in mind, you will clearly apprehend that the joint surfaces are kept pressed together solely by muscular tension. Again, the glenoid fossa, unlike the socket of any other important joint, *has no epiphysis*, which explains to a degree the fact that even in the young the head of the humerus may be so affected as to demand excision, while the glenoid process is either entirely or nearly healthy. Closely related with the scapulo-humeral joint, we find a number of bursæ, some of which commonly communicate with the joint, while others do not. To the former alone I shall devote my remarks. There is a large one between the acromial process and the coraco-acromial ligament upon the one hand, and the shoulder capsule upon the other. Two bursæ — the exact sites are unimportant for our present purposes — are situated between the subscapularis muscle and the capsule. An occasional one is placed between the infraspinatus muscle and the capsule, into which it often opens, as do the others just mentioned. Let an inflammation be set up in these sacs, and it certainly spreads to the joint itself, should communications exist, or nearly as surely by mere contiguity of tissue, if no opening between joint and bursæ is present. The articulation is securely covered in by the voluminous deltoid, so that any direct injury to the fibrous or synovial tissues of the joint is almost impossible from direct force, as a blow, although a twist *may* injure it, notwithstanding the latter is more apt to tear the bursal walls. The upper epiphyses of the humerus — of which there are three — coalesce at five years, but they leave a layer of epiphyseal cartilage between head and tuberosities and shaft, which in places either coincides with the capsular attachment or is actually within it. From these anatomical facts it must be clear that direct force, as a blow, can rarely injure the joint itself, but must either set up trouble in the surrounding bursæ or in the epiphyseal cartilage, or in both. Once again the interior of the joint, the muscles moving the joint, and the skin over their attachment are all supplied by the same nerve or nerves; so that let a joint injury start where it may, the articulating surfaces of the shoulder-joint are subjected to such an injurious degree of pressure from direct or reflex muscular contraction as is possible for no other articulation. The bearing of these anatomical facts upon prognosis and treatment need hardly be pointed out.

The first specimen I proposed showing was presented to the Society some years back, and my reason for again showing it is the sharply contrasted result presented by the second specimen which I shall exhibit.

On November 27, 1878, the Society had an opportunity of examining the first patient and the admirable results of the case. To those who were not present, or who have forgotten the details, I will briefly recapitulate the history of the case, with the treatment pursued: —

COMPOUND FRACTURE AT THE ANATOMICAL NECK OF THE HUMERUS.

The patient, J. M., aged fourteen years, fell, upon the afternoon of September 23, 1878, from a tree, about twenty-five feet, landing on the ground, but striking in his fall against the branches of the tree, and sustained the following injuries: The shaft of the humerus was separated from the head and greater and lesser tuberosities. The line of fracture closely followed the epiphyseal cartilage, although in several places the diaphysis was fractured. The shaft, slightly split, was driven through the integuments over the lower part of the deltoid muscle on its anterior aspect, tearing in its course the following parts: the insertion of the deltoid was completely stripped off with the subjacent periosteum; the coraco-brachial, teres major, and latissimus dorsi were in like manner torn off, the latter carrying with them the posterior lip of the bicipital groove. The tendon of the pectoralis major was torn off about half an inch from its insertion, and one if not both heads of the biceps was ruptured. In consequence the head and neck of the bone, deprived of periosteum, merely hung suspended by the capsular ligament and the rotator muscles. The shell of bone connected with the head and tuberosities was fissured at various portions of its circumference, as if by the impacting action of the wedge-shaped extremity of the shaft. I enlarged the wound and removed the fragments you see, namely, four and one fourth inches of the humerus, including its head. Seven weeks after the operation he could remove his coat, vest, and shirt without assistance. Ten weeks after the injury considerable reproduction of bone, even up to the margin of the glenoid cavity, was observed, with new attachments for the pectoral and latissimus dorsi muscles, as determined by Dr. C. T. Hunter. The actual shortening consequently amounted to only one and a half inches. He had perfect use of the fore-arm, could put his hand to his mouth, behind his back, and to his ear. Of course he had lost all over-hand movements.

The course of treatment pursued, and my reasons for deciding upon it, seem worthy of detail, since such injuries are but seldom seen, and, as far as I can discover, no clear rules have been laid down for their treatment. To the members of this Society who devote themselves especially to surgery, I need hardly say that no question of amputation arose in my mind;

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[1] Read before the Philadelphia County Medical Society, March 20, 1884.

but to those in pure medical practice I would say that when the main vessels and nerves of a limb remain intact, the injury to the soft parts having been produced by the bone itself, not the fracturing force, almost any degree of shattering of the bones may be recovered from, in the young, without amputation. Two lines of treatment then offered for consideration, namely, the simple return of the bone, closure of the skin-wound, drainage, and trusting the case to nature; or the resection of the injured bone. Theoretically the first would have seemed the better course, promising no shortening of the limb, and the retention, in a measure, of the power of the deltoid. In reality, however, the chances of union were not one in a thousand; and if not union, then necrosis with its consequent shortening; necrosis, too, meaning months or years of inflammation and suppuration, matting the muscles together so that when recovery occurred — almost necessarily by an operation — the usefulness of the limb would be but slight. Resection, on the other hand, offered the complete removal of all injured portions of bone, and with them the most important factors of trouble after such an injury, thus permitting rapid healing, and the smallest possible amount of inflammatory adhesions between muscles, tendons, etc. If the bone had been simply returned, the risk to life would have been greater, owing to the prolonged suppuration incident upon the separation of the necrosed bone and the deep-seated abscesses so common after compound fractures. Against it was the absolute shortening of the arm, with the prospective cessation of growth due to removal of the upper humeral epiphyses.

The actual result, I think, bears me out in the course of treatment pursued, for I hardly think that in seven weeks he would have been in so good a condition, with the wound soundly healed, if I had followed what is often but falsely called the "conservative" plan of treatment. I believe that true conservatism indicated exactly what I did. The amount of shortening would not have been much less had the case been left to nature and necrosis. Had this occurred union of the severed head could not have taken place, and then the same shortening would have obtained as surely as if the epiphysis had been removed. Army experience has shown that when a portion of the upper end of the humerus is removed for injury nothing is gained by leaving the uninjured head, since it necroses.

Although not cognizant of this fact of experience at the time of operation, anatomical knowledge, general surgical principles, and experience induced me to arrive at a conclusion by *a priori* reasoning, which I have since found that extended experience had already proved.

I believe, therefore, that, theoretically and from experience, resection ought to be performed for such injuries. It is hardly necessary to say anything about the operation itself, since each case must be a rule for itself, the only point being to remove the bones with as little additional damage to the soft parts as practicable. The wound was dressed antiseptically, and when I transferred the wards to my colleague, Dr. Packard, no suppuration had occurred, and there was not the slightest inflammatory blush about the wound. He did uninterruptedly well, and the wound was soundly healed in less than seven weeks, the greater part at a much earlier date.

Sharply contrasted with this case and its results is that of the patient from whom the next specimen was removed, where the head of the humerus, luxated and partially fractured, and protruding through the skin of the axilla, was *reduced* instead of being resected. Here the tension of irritated lacerated muscles, conjoined with the necessarily imperfect drainage, kept the injured bone bathed in unhealthy pus. This with the original injury resulted in an osteomyelitis, which necessitated my amputating at the shoulder-joint. I believe had the head of the bone been removed a fairly useful limb would have been the result at the end of a few weeks' treatment, while instead, after three months of illness and risk to life, amputation was the best I could do for him.

COMPOUND LUXATION (WITH FRACTURE) OF THE SHOULDER-JOINT.

—— ——, aged thirty years, man, three months ago had his right arm caught by the belting, and drawn over a large drum in a position of extreme abduction and probably of extension. The head of the bone was luxated, the greater tuberosity torn off, and the caput humeri thrust through the axillary integuments near the anterior axillary fold. When I first saw him at the Episcopal Hospital after the accident he was very pale, with a constant discharge of pus from an opening at the site of the old wound, that is, near the anterior axillary fold, while the orifice of another deep-seated sinus was seen over the middle of the triceps, on the outer side of the arm. A probe introduced into the anterior sinus readily touched the denuded carious head of the humerus. I attempted to exsect the head of the bone, but when prepared to saw it, after its protrusion through the wound, I found such evidences of osteomyelitis as to render amputation at the shoulder-joint necessary. He did well, and recovered, but even some months later a sinus existed, doubtless the result of necrosis of some of the fragments of periosteal bone produced by that irritated structure. As before said, had the head of the injured bone been excised a useful arm would have probably resulted.

The third and last case is one where a comparatively trivial injury, owing to non-treatment at first, resulted in a condition which demanded resection of the shoulder-joint.

CHRONIC ARTHRITIS OF THE SHOULDER-JOINT: EPIPHYSEAL ABSCESS OF THE HUMERUS.

Anna M., aged seventeen years, was admitted to the female surgical ward of the Episcopal Hospital May 14, 1883. One year ago last May she fell down stairs and struck her shoulder. She was unconscious for a short time, but was soon able to walk home. The arm did not become inflamed, and seemed to the patient well. Nine months after the fall she noticed pain in the shoulder, and an elevated papule formed near the joint, which was opened at the dispensary. This relieved the pain, but left a fistulous tract discharging healthy pus. She attended the dispensary until the 14th of last May, when she was sent into the house, Dr. Seltzer, the assistant surgeon on duty, having touched dead bone with the probe. After admission she had pain from time to time, gradually increasing in intensity until shortly before operation. Other free openings for drainage were made by Drs. Simes and Kelley. The probe detected an apparent sequestrum within the humeral head. Diagnosis, epiphyseal abscess.

The operation showed complete destruction of the joint, a carious and denuded humeral head, with an abscess about the epiphyseal site containing a sequestrum. The glenoid cavity was denuded of cartilage and roughened. The portions of head and shaft, such as you see, were removed, while all the glenoid cavity was cut away with the gouge-forceps except where the long head of the biceps was attached. Further details of the operation are unnecessary. The patient was practically well at the end of two weeks. Perfect quietude of the joint at the outset might have averted all subsequent trouble.

What was the condition here after the accident? Probably the bursæ and fibrous tissues surrounding the joint were involved, and the vascular epiphyseal cartilage was congested from the jar and injury of the fall. Congestion of all these parts, instead of being relieved by complete functional rest of the articulation, with the local application of ice, leeches, etc., as appeared indicated, was kept up by the girl following her usual occupation of housework. Although in no sense markedly strumous, yet the tendency was in that direction. As the congestion increased inflammation and suppuration were set up in the bursæ, the disease spread to the articulation, gelatinous arthritis with epiphyseal abscess supervened notwithstanding the skillful treatment of my colleagues who, *too late*, had the opportunity of treating the case.

REPORT OF A SUMMER COURSE IN OBSTETRICS.[1]

BY C. M. GREEN, M. D.

THE cases included in this report were attended during the summer of 1883 by a class of six second-year students under my supervision and instruction. The report is based on the records of the students; but their observations were in many instances verified or corrected by my own.

	Cases.	Males.	Females.	Total.
Primiparæ	9	4	5	9
Multiparæ....	34[2]	14	21	35
Total.........	43	18	26	44

The youngest primipara was nineteen years of age, the oldest twenty-three: the youngest multipara was twenty, the oldest thirty-eight.

There were two cases of ante-partum hæmorrhage: one case occurred three weeks before delivery, without apparent cause, due presumably to a slight placental detachment by painless uterine contractions. The other case, in which the hæmorrhage was considerable, occurred between the fifth and sixth months: the woman had been in a drunken mêlée and had been kicked and beaten. She was found with a temperature of 102° F. and very restless: the fœtal movements were much exaggerated. She was kept in bed for several days, and the uterine irritability controlled with morphine, and she was delivered at full term of a living child. There was one case of sciatica in the second month, and another of obstinate neuralgia in the face, head and back which lasted throughout pregnancy and ceased only several days after the termination of the labor.

POSITION AND PRESENTATION.

O. L. A.	O. R. A.	O. L. P	O. R. P.	Foot: S. A.	Head: Position Uncertain.	Total.
29[3]	3	1	2	1	8	44

The eight cases in which the diagnosis of position was not made were not reached by the attendant until after the child was born, or until after rotation had occurred which brought the head into the conjugate diameter of the pelvic outlet.

AVERAGE DURATION OF THE STAGES OF LABOR.

	Cases.	1st Stage.	2d Stage.	3d Stage.
Primiparæ....	5	13 h. 44 m.	1 h. 23 m.	17.4 m.
Multiparæ....	27	8 h. 44 m.	45 m.	16.5 m.

In a recent work by Dieterlein of Paris on The Natural Delivery of Primiparæ, which is reviewed in the *Centralblatt für Gynäkologie*, No. 47, 1883, the average duration of first labors is placed at 15 hours: of the five cases in this report the average duration was 15 hours 24.4 minutes. The duration of the expulsive stage is placed by Dieterlein at 1 hour 15 minutes: in my five cases the average duration of this stage was 1 hour 23 minutes. Dieterlein bases his calculations upon cases below thirty years of age; for those above that age the labor is correspondingly longer, especially the second stage. My cases were between nineteen and twenty-three years old and therefore come within the limits of those on which Dieterlein based his calculations.

THE THIRD STAGE.

In all the cases but two the placenta was expelled by the uterus or expressed by the method of Credé: in two cases it was necessary to introduce the hand.

There were two cases of moderate post-partum hæmorrhage, which yielded readily to ergot, ice and compression of the uterus; and one case of severe hæmorrhage, which was finally checked with injections of iced-water and vinegar.

Of the placentæ one was very large and had several cretified nodules and plates. In one case the cord had two small diverticula about six inches from the umbilicus: in another, the cord was forty-eight inches long and was twice wound about the child's neck. In the case of twin labor the placentæ and membranes were distinct, and the fœtuses were male and female.

STATISTICS OF THE PERINÆUM.

Of the thirty-four multiparæ the perinæum was in no instance ruptured: of the nine primiparæ the perinæum escaped rupture in six cases. In one of the three cases in which rupture occurred the tear was slight and required no operation. In the second case, in which podalic version was performed, the perinæum was torn superficially for half an inch: the tear was lightly dusted with iodoform, the vagina kept clean with a one per cent. carbolic acid solution, and healing took place. In the third case, the patient being exhausted after a first stage of twenty-four hours' duration, Dr. G. P. Twitchell, in my absence, very kindly attended and delivered with forceps: the head was arrested in the superior strait, and in the extraction the perinæum was torn nearly to the sphincter: three sutures were inserted by Dr. Twitchell, the vaginal douche employed, and perfect union took place.

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[1] Read before the Boston Society for Medical Improvement, April 14, 1884.

[2] Including one case of twin pregnancy.

[3] In two cases the head was extended and the brow presented.

AVERAGE FŒTAL WEIGHT AND LENGTH.

	Cases.	Weight.	Length.
Males.....	16	8 lbs. 14.25 oz.	19.7 inches.
Females ..	24	7 lbs. 5.00 oz.	18.9 inches.

The largest boy weighed 11.25 lbs. and measured 20.0 inches.
The smallest boy weighed 6.00 lbs. and measured 18.5 inches.
The largest girl weighed 11.00 lbs. and measured 21.0 inches.
The smallest girl weighed 3.50 lbs.

THE PUERPERIUM.

There was one maternal death, that of Frau R., a Bavarian, thirty-seven years of age, who had had nine children and one abortion. When about six months advanced in this, her eleventh, pregnancy, she had double pneumonia under the care of a Boston Dispensary physician, during which sickness she said she raised much blood. Three years before she had had acute rheumatism with heart complication. I first saw her when she was about seven months pregnant and found her very weak, with extensive œdema of legs and feet, and a loud, systolic, apex murmur due to mitral insufficiency: she became deeply cyanosed on slight exertion. She was treated with digitalis and acetate of potassium, which greatly reduced the œdema and improved the respiration: she also took iron, and by the time her labor was at hand she was in a tolerably good condition: nevertheless I looked forward to her delivery with some apprehension. Her labor was tedious, lasting twenty-four hours, but was in every way normal until after the placenta was expelled, when there was moderate hæmorrhage: this was promptly controlled; but it recurred with some severity within two hours, and was again checked with pressure and ice. She did well up to the tenth day, the temperature never exceeding 99.5° F., when she took cold and suffered a return of her former symptoms: she was not seriously sick, however, until ten days later, when there was found to be dullness and bronchial respiration from the angle of the right scapula to the base of the lung, with moist and sibilant râles. She was then removed to the City Hospital, where death ensued in two days, three weeks after labor; but although occurring in the puerperal period, the fatal issue can be only indirectly, of course, ascribed to childbirth.

The other cases convalesced normally. Thirty-eight mothers suckled their infants, and three more could have done so had their infants lived. In two cases only was the mother unable to nurse.

The infantile mortality amounted to four cases: —

(1.) The fœtus weighed ten pounds and was born healthy; but the mother's milk failed in three or four days, and the child succumbed to bottle-feeding when three weeks old.

(2.) A quintipara, thirty-five years of age, suffered with palpitation, dyspnœa, cough, neuralgic pains and difficult locomotion for two weeks or more before delivery, and was wholly unable to walk in the last week. Her abdomen was greatly distended by dropsy of the amnion, and an enormous quantity of liquor amnii escaped when the membranes ruptured. A feeble, female child weighing five and one quarter pounds was born after a labor lasting seven and a half hours: respiration was established by alternate immersion in hot and cold water; but the child survived only two and a half hours. The placenta was enormous: the cord was long and wound once about the child's neck. There was moderate post-partum hæmorrhage, which was controlled with ergot and ice: the woman made a normal convalescence.

(3.) The third instance of fœtal mortality occurred in the case of a nonipara affected with moderate hydramnios. The child was much emaciated, weighed four and a half pounds, and survived only three hours. Throughout the progress of the case the woman persistently refused vaginal examination on account of her experience in her last preceding labor: on that occasion, she affirmed, her attending physician, after vaginal examination, informed her that delivery would not take place for several days; he therefore gave her a sub-cutaneous injection of something, presumably morphine, and left her. On awakening the woman found her child born, and strangled with the cord wound three times about its neck: she therefore concluded that treatment was dangerous, and that vaginal examination was of no use except, to use her own words, "to gratify a morbid desire on the part of the physician."

(4.) The fatal issue in the remaining case was due to imperforation of the anus. The head presented, O. R. P.; but it was arrested high up: forceps were therefore applied and the head brought to the pelvic floor: anterior rotation then took place and the labor terminated normally. The cord was four feet long and was twice coiled about the child's neck. The child weighed seven and a half pounds and was apparently healthy: the atresia ani was overlooked at the time and was not discovered until the next day. Another day was consumed in obtaining consent to an operation, and on the morning of the third day an attempt was very kindly made by Dr. Beach at the Massachusetts General Hospital to establish an opening with the bowel: as yet there had been no vomiting and the general condition was good. When the child was placed on the table meconium was first observed oozing from the meatus. There was a slight dimple at the proper place for the anus, and here a careful dissection was made in the hope of entering the rectum. At a depth of about one and a half inches a cavity was opened and about an ounce of meconium escaped: it was thought at the time that the opening was made into a fistulous connection between the bladder and the rectum. The child survived the operation for thirty-six hours; but during this time there was no further escape of meconium: no autopsy could be obtained.

OTHER CASES OF INTEREST.

(1.) Super-rotation: —

This phenomenon was observed in a fifth labor with a small child: the head presented, O. L. A., and the occiput normally rotated to the arch. After the birth of the head, however, instead of the usual rotation of the shoulders, a complete rotation took place, the child's face turned to the mother's left side, the left shoulder came to the arch, and the child was born as if originally in right position.

(2.) A case of chronic Bright's disease with severe uræmic vomiting: —

This occurred in a nonipara, thirty-five years of age, in whose second pregnancy premature labor had been advised on account of severe vomiting: the advice was declined, however, and the child was born still. Her sixth, seventh and eighth children were also stillborn coincidently with uræmic vomiting. In the present instance labor set in two days after severe vomiting began and progressed normally: no medicinal treatment succeeded in checking the vomiting until, after the child was born, croton oil was given to the extent of free catharsis, with ice to epigastrium and head. The child was born alive and the woman made a good recovery, so far as the labor was concerned.

(3.) A case of suppression of urine: —

B. C., aged twenty-two, who had never menstruated since her first pregnancy, and now pregnant for the third time, was seized, when about six months advanced, with vomiting, severe headache, œdema of the legs and a gradual suppression of urine. On the day before total suppression the amount passed in twenty-four hours was only two ounces: the specific gravity was 1.018, there was a trace of albumen, a little blood and renal epithelium, and hyaline and fine granular casts. Under the use of elaterium, digitalis, and acetate of potassium the kidneys resumed their function in forty-eight hours; rectal injections of chloral hydrate and bromide of potassium were employed, but failed to relieve the headache. One month later the symptoms returned and, as the child was then viable, I urged the induction of premature labor; but the operation was declined: the patient was therefore treated with saline cathartics and diuretics, and finally gave birth at full term to a living male child weighing nine and three fourths pounds. The woman made a good recovery and her urine was free from abnormal constituents two weeks after labor.

(4.) Two cases of simple flat pelvis: —

Case I. A primipara, aged twenty-one, had been in labor thirteen hours: the os was dilated, the membranes unruptured. The fœtus was in left position, the sagittal suture was in the transverse diameter of the brim, the head was extended and the brow presented. The pelvis was slightly contracted antero-posteriorly and, in accordance with the usual mechanism in such cases, the head was seeking to enter the pelvis by its bi-temporal diameter. The head was at once flexed by pressure on the brow; but with the next pain it re-extended. The head was again flexed and forceps applied; but, as might have been expected, the first traction again extended the head. Believing that in such cases version affords a far better chance of delivering a living child than the prolonged use of long forceps, and that, if carefully performed, version is not more dangerous for the mother than the high forceps operation, I at once performed podalic version and delivered a living female child weighing ten and one quarter pounds. The perinæum was torn half an inch, but healed with the use of iodoform and the carbolized douche. The woman's temperature never exceeded 98.5° F., and she made a normal convalescence.

Case II. A sextipara, aged twenty-nine, had been in labor twelve hours: the fœtal position was left, the sagittal suture was in the right oblique diameter of the pelvis, the head had engaged by its bi-temporal diameter and the brow presented: the os was dilated and the membranes unruptured. The head was at once flexed, the membranes ruptured and forceps applied at the superior strait; but two efforts at traction resulted in again extending the head. The conjugate diameter was slightly contracted and it seemed to me clear that it would be unwise to again attempt delivery with forceps: I therefore determined to substitute the shorter, bi-mastoid diameter for the bi-temporal, and at once performed podalic version. The extraction was difficult, as the child was very large: the arms were brought down as soon as within reach; but for some moments it seemed impossible to extract the head. Aided, however, by the powerful, evenly distributed, downward pressure of the attending student I finally delivered an asphyxiated fœtus which weighed eleven and one quarter pounds. The child was resuscitated after half an hour's exertion and subsequently did well: the mother made a rapid and normal convalescence.

(5.) A case of symmetrically contracted, or æqualiter justo-minor, pelvis, with slight scoliosis: —

The patient, twenty-four years of age, was delivered of her first child when nineteen years old: forceps were used and the child was stillborn. Her second child was born naturally one year later, but lived only fifteen minutes. She had been in labor with her third child sixteen hours when I saw her: the os was fully dilated two hours before, the membranes had ruptured and the expulsive pains were strong but ineffectual. The head had engaged in the right oblique pelvic diameter, the position was left and the head was markedly flexed: the fœtal heart was beating. I applied forceps immediately and with some difficulty delivered in twenty minutes a living female infant weighing eight pounds, the head maintaining throughout the extraction a position of extreme flexion. The child did well and the mother made a rapid and normal convalescence.

From the previous obstetric history of the patient, from inspection of the pelvis, and from the peculiar mechanism of the labor it was evident that there was pelvic deformity: subsequently therefore I made careful measurements with a view to determining the nature thereof. The woman was below medium stature and her bones were small and delicate. There was no history nor physical evidence of rickets except a slight scoliosis which resulted in tilting up the pelvis on the left side, whereby the left iliac crest was about an inch higher than the right: there was no imperfection in the gait, nor could I detect that there was any compensatory curvature of the sacrum. The external measurements of the pelvis were as follows: —

	Normal Average.	This Case.
Circumference of pelvis	90 cm.	77.0 cm.
Between iliac crests	29 cm.	25.0 cm.
Between ant. sup. iliac spines	26 cm.	23.5 cm.
External conjugate	20 cm.	17.0 cm.

It was evident from these measurements that the pelvis was contracted in all its diameters, and so far as I could detect the contraction was a symmetrical one. By computation from the external and the diagonal conjugate I estimated the conjugata vera to be from 8.0 to 8.7 c. m., that is, from 3.2 to 3.5 inches, — a contraction of from 0.5 to 0.8 of an inch. There was of course no means of accurately measuring the transverse diameter; bat I estimated that the contraction in this diameter was about 0.5 of an inch.

The mechanism of the labor was quite characteristic of the justo-minor pelvis; that is, the head entered the pelvis in an oblique diameter and passed through the canal in a state of extreme flexion; whereas in the simple flat pelvis, or in any case where the conjugate is contracted and the transverse diameter of normal length, it is usual for the head to enter by the transverse diameter with more or less lateral obliquity of Naegele: in this latter class, too, instead of assuming a position of marked flexion, it is the rule for the head to extend and enter the pelvis, if at all, by the bi-temporal diameter, as illustrated in the two preceding cases.

From the existence of the lateral curvature of the spine, presumably of rachitic origin, and from the fact that the diminution in the distance between the iliac crests was somewhat greater than that between the spines, and again from the fact that the conjugate was perhaps a trifle more contracted than the transverse diameter, I was at first led to believe that this pelvis should be classed as of the generally, asymmetrically contracted, flat, rachitic variety. But the mechanism of the labor was not such as obtains in that class of pelvis; moreover I was unable to detect other evidences of rickets, and the pelvis seemed to me symmetrical. I therefore believe that if rickets existed in early life, it was recovered from before the pelvis was affected thereby to any appreciable extent; or rather that its influence was exerted in the disturbance of nutrition which caused a premature suspension of bone-growth rather than a bony deformity.

PERIURETHRAL PHLEGMON.[1]

BY THOMAS WATERMAN, M. D., BOSTON.

The following cases illustrate both mild and severe attacks of periurethritis, although the *most* severe and dangerous cases complicated with urinary fistula have not been met with by me.

I have retained the somewhat antiquated term *phlegmon* because the disease was first described under that title; it should be borne in mind, however, that it is to be interpreted in this paper as meaning simply an abscess, and that it has *not* a distinctly phlegmonous character, nor is there violent inflammation or gangrene of the cellular tissue. Some of the cases may appear trivial, but they are reported on account of their *rarity*, which consists in the fact that *they occurred as a complication of simple gonorrhœa*, and have nothing to do with the every-day abscesses of the penis and scrotum resulting from the urinary infiltration of tight strictures or accidental wounds of the urethra. These four cases are all I have met with in sixteen years.

Case I. A. B. C., a police officer, thirty-five years of age, of steady good health and temperate habits, presented himself to me in 1879, with the following history, namely: three weeks previously, after impure sexual connection, he contracted urethritis of mild type, which readily yielded to the same treatment which he had employed in a former case of the disease. Three days before I saw him he had noticed a swelling on the right side of the frenum. On examination I found a small globular tumor, somewhat less than a centimetre in diameter, slightly sensitive to the touch, and obviously containing liquid. I suggested incision, which was refused. Three days later he came again and showed me that it had opened spontaneously by a rather small orifice. He then stated that three years before he had had gonorrhœa, which was followed by a similar small abscess, and, he thought, in nearly the same situation. The discharge from the urethra had diminished and troubled him but little. He said that he could now take care of both clap and phlegmon himself, and I saw him no more.

Case II. J. O. L., a mechanic, aged thirty. A short, slim, wiry man, but always in robust health. Never had any venereal disease before. On July 6, 1882, he had connection with a prostitute; two days later he detected a moisture at the meatus, and on that day or the next he felt a small lump on the right side of the frenum. Four days later it broke and discharged pus.

He placed himself under my care August 7th; previous to this time he had been treated by an apothecary who had medical aspirations. I found that he had a pretty free urethral discharge and an induration at the point above indicated, surmounted by an ulcer, the remains of the unhealed phlegmon. There were no indurated glands in either groin. I prescribed an injection of zinc acetate and an ointment of iodoform and cosmoline. In spite of his distinctly phlegmonous history, I thought at this time that he had a chancre. Six days later, as his sore was unchanged in appearance, I discontinued the iodoform and prescribed a lotion of chlorinated soda. The ulcer soon after healed, but the cure of the urethritis was not complete until late in September. You will ask how do I *know* that he did *not* have a chancre. Because the history was plainly that of induration, inflammation, and suppuration; because the patient was desirous of wedlock, and dreaded to such an extent the possibility of infecting his future wife that his fears amounted almost to syphilophobia. He was hypochondriacal, frequently inspected himself with the most scrupulous care to detect the earliest secondary symptoms, and came at regular intervals to me for *cross*-examination. I had him under observation for months, and failed to detect the simplest lesion of secondary syphilis.

Case III. B. R., a lawyer, aged thirty-seven, stout, fat, and flabby. Extremely addicted to over-indulgence in sexual intercourse both at home and abroad. He had connection with two different shop-girls on February 9th and February 14th, 1880. He came to consult me February 17th, having noticed a moisture at the meatus the day previous. Two days later he had chordee. Nothing unusual occurred until March 5th, when an induration was noticed on both sides of the frenum. Fluctuation was detected five days later, and an incision was made on both sides. At the time of the incision the abscess was globular in form and bilobed by reason of the constriction exerted by the frenum. A few days later a probe could be passed through from one wound to the other beneath the frenum. At about this time I incautiously (as it proved) one day told him that the wound was now fistulous, and that it would be extremely difficult if not impossible to heal it without dividing the frenum. It seems that he had

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[1] Read before the Boston Society for Medical Observation, February 4, 1884.

had a fistula in ano some years before and was not pleased at the prospect before him. Without informing me of his intention, he went immediately to the surgeon who had treated him for the anal fistula and showed him his penis. He was then rather bluntly and gruffly told that he had a chancre, and that he had secondary symptoms at that very moment. Back he came to me in terror and told me the story. I carefully examined him, and finding no indurated glands in the groins, and not a trace of secondary syphilis, I endeavored to reassure him. He had at this time a patch of ordinary herpes on the lower lip. I then went with him to Dr. F. B. Greenough, who, after hearing his story and examining the lesion, coincided with me in the diagnosis of periurethral abscess and dissenting from the "snap" diagnosis of the surgeon referred to above. A seton was suggested; it was introduced and retained for a considerable time. No benefit ensued from its use either before or after removal.

May 29th the frenum was divided, producing a large, flat, ulcerated surface, and a variety of stimulating applications succeeded each other in a vain attempt to induce it to heal. Its centre was somewhat depressed, and this was frequently probed, but neither the finest probe nor colored urethral injections ever revealed any communication with the urethra.

September 5th the patient consented to an operation. He was accordingly etherized, and a Curtis's sound introduced to distend the urethra to its fullest extent at the site of the ulcer. The granulating surface was carefully pared off as deeply as was consistent with preserving the integrity of the urethra, and the indurated margin refreshed. The edges of the wound were then brought together longitudinally and united with several fine sutures. All went well for a few days, the sutures had been removed, and silk floss moistened with collodion applied to support the wound. About five days after the operation an erection occurred and the edges of the wound were torn open. The upper and lower ends of the wound had healed, however, and the sore, diminished in size, granulated healthily and was soundly healed about a month later under the use of black wash and occasional touches of lunar caustic.

As this patient was a married man he was as anxious as Case II. to know positively whether or not he had contracted syphilis. He was, therefore, diligent in his personal examinations, and reported to me at regular intervals for a long time after the final cure. Four years have now elapsed, but no secondary lesions have ever appeared. His gonorrhœa ceased coincidently with the cure of the phlegmon.

CASE IV. E. W., a clerk, aged forty-eight, short, slim, cachectic, never possessed of robust health, contracted syphilis twelve or thirteen years ago and never entirely cured. Occasionally has plantar psoriasis. Eight years ago his first attack of gonorrhœa appeared, which was accompanied by a superficial abscess beneath the fossa navicularis at the left of the frenum. It opened spontaneously and healed readily. One year and a half later a second attack was followed by abscess on the right side of the frenum. This was incised and also quickly healed. Four or five years ago a third attack of gonorrhœa was contracted. An abscess then formed higher up the penis about half way between the glans and the peno-scrotal angle and in the median line. This was incised by an apothecary and was not completely healed for ten months or a year afterwards. An indurated lump, movable beneath the skin, always persisted at the site of the abscess.

He came to me December 11, 1880, with this history, and stated that he had again caught the "clap," and that ten days after the discharge showed itself the lump before mentioned began to enlarge. On examination I saw a large, shiny, tender, purplish tumor surrounded by boggy œdema, and not distinctly fluctuating. Seven days later it was as large as a walnut and evidently full of pus. There was little or no constitutional disturbance and no dysuria, although the pressure of the tumor upon the urethra had diminished the force and size of the stream of urine somewhat. The abscess was freely incised parallel with the length of the penis, and poulticed. About a week after the incision a sinus four centimetres in length was discovered extending upwards towards the bulb. The patient declined another incision at this time, and efforts were made to cause the sinus to heal by means of carbolized injections and packing with medicated lint. These methods were fruitless, and one month after the first incision the sinus was freely laid open with scissors, no opening into the urethra was found, and the resulting wound was induced to granulate from the bottom. Three weeks later the cure was complete, the discharge from the urethra having ceased previously. An examination some months later revealed no induration at the site of the cicatrix.

Periurethritis, periurethral phlegmon or abscess is rare, half a dozen cases probably being a large number for even a specialist to see in thrice as many years. It is said that folliculitis or follicular abscess of the penis is still more uncommon. The seat of attack is similar in the two affections, but they are anatomically distinct. The former is an inflammation of the cellular tissue which connects the skin of the penis with the corpus spongiosum, and always terminates in suppuration. The latter is an inflammation of the follicles of Morgagni, which open into the urethra and is cystic in character. Owing to the rarity of periurethral phlegmon its literature is meagre. C. Hardy, Ricord, Fournier, Bumstead, Otis, Van Buren, and Keyes all devote some space to it, the French writers more particularly.

Periurethral phlegmon is periurethritis ending in abscess. Chordee is a periurethritis, but it has no tendency to suppurate. It will be noticed that only one of the cases had chordee, and it was but slight. Suppurative periurethritis is probably never idiopathic, always resulting from acute urethral inflammation, leaving out of consideration those more common cases caused by infiltration in connection with stricture.

It appears from Cases I. and IV. that having once happened a recurrence is to be expected at each attack of gonorrhœa. Cases II. and III. had never suffered from venereal disease previously, and may be heard from again in the future. The phlegmon may be situated at any point of the urethral side of the penis from the glans to the bulb, but it is said that the points of election are the neighborhood of the frenum and the peno-scrotal angle. Those near the frenum may be limited to one side, as Cases I. and II., or both sides may be involved as in Case III. They are globular, not large, and superficial. The abscesses higher up on the penis, as Case IV., are larger, deeper-seated, occasionally retard the flow of urine, and sometimes cause constitutional disturbance. The abscess usually opens externally, and this is the most favorable termination. It may, however, break into the urethra, and subject the patient to the grave dangers of urinary infiltration and sloughing of the cellular tissue of the penis and, perhaps, of the scrotum also. In some cases the abscess breaks both internally and externally.

In regard to treatment it is self-evident that the phlegmon should be incised freely as early as possible after suppuration is definitely established. If possible any sinuses, which may exist, should be detected at the same time, and laid open to their extreme limit. The resulting wound should then be packed with lint, and allowed to granulate from the bottom. The cure in Case III. would doubtless have been less chronic if the bilobed abscess had been opened transversely, and the frenum divided in the first instance. Much troublesome induration, which prevented cicatrization, would thereby have been avoided. The sinus in Case IV. should have been laid open when the abscess was incised, and would have been if the patient had been etherized. If the abscess breaks into the urethra a counter-opening may be made externally at once, which is probably the most prudent course, or we may wait for the possible occurrence of infiltration, which Fournier says does not commonly happen. A urinary fistula may be the termination of a phlegmon, and is more liable to result near the bulb than towards the glans. Hardy says that "at the latter place it gives rise to an accidental hypospadias which is difficult to cure."

Perhaps the most interesting practical point connected with this complication of gonorrhœa is its liability to be confounded with a primary syphilitic lesion, as illustrated by Cases II. and III. When it is a typical phlegmon, already containing pus, the diagnosis is easy. In the initial stage of induration, however, on one side of the frenum, before suppuration is established, the physician may well be pardoned for postponing a positive opinion until more light is thrown on the case by subsequent developments. Again, as in Case II., where a patient does not present himself until the phlegmon has opened, and it is seen for the first time in the condition of a small granulating ulcer with indurated base, expectant treatment should be practiced, and a long period of incubation allowed to occur before a final opinion concerning the nature of the lesion is given.

REPORT ON ORTHOPEDIC SURGERY.

BY E. H. BRADFORD, M. D.

LENGTH OF LIMBS AFTER DISEASE OF THE JOINTS.

THAT limbs, after resection of the joints and after disease, sometimes cease to grow or grow less rapidly than the healthy limb is a well-known fact, and has been explained as an effect of the disuse of the limb, or as a result of the disturbance of the nutrition of the bone through injury of the line of the epiphysis. Wolff,[1] after a number of measurements, has come to the conclusion that neither of these is sufficient to account satisfactorily for the result. A shortening takes place not only of the bones which were affected by the disease or the operation,"but also those which apparently have been healthy. For example, ten or twelve years after disease or resection of the hip a shortening of the femur will be noticed, and a shortening of the tibia and fibula to a slight extent, while a much more marked arrest in the size of the foot and in that of the patella is almost constantly observed. And after affections of the knee and shoulder a lengthening of the humerus and femur is sometimes noticed. Diminution in the size of the patella is not observed in affections of the knee out of proportion to that of the limb, while a shortening of the foot is noticed.

The explanation of these facts offered by Wolff is that a primary joint affection is followed by a secondary affection of the nervous system of the limb, which gives rise to an arrest of development of the bones of the limb. Analogous to this is what is seen in infantile paralysis and progressive muscular atrophy, and in the nervous muscular atrophy described by Valtat in inflammations of the joints.

TUBERCLE BACILLI IN JOINT AFFECTIONS.

Koch, Marchand, Schuchardt, and Krause have all come to the conclusion that the bacillus plays an important part in the ætiology of fungous osteitis and arthritis, but they agree as to the great difficulty in demonstrating the presence of these organisms as the number present is relatively small. Müller has, at the Göttingen Clinic, been able to examine for the presence of bacilli the bones from thirty cases removed by resection. In the majority of cases a few bacilli were to be found after examining a number of sections, but in a number of specimens of undoubted tuberculous ostitis the result was entirely negative. In one case, however, of coxitis, in the very earliest stages, appearing a short time before death from phthisis, and manifesting the symptoms of pain and contraction of the limb, and at autopsy a focus of tubercular granulations at the head of the femur, near the insertion of the ligamentum teres, perforation of the cartilage, pannus of the cartilage around the spot of cartilaginous perforation, and congestion of the synovial membrane, the tubercles in the granulations were numerous, but not caseous, but on examination a very large number of tubercle bacilli were found, and the writer suggests that, possibly, the bacilli may, in the earlier stages, be present in larger numbers than after the ostitis is more destructive, though the matter is one which will need further investigation. It would appear, however, that unlike those in tuberculosis of the lung the bacilli of chronic disease of the joints promise but little for diagnosis or prognosis.

TREATMENT OF TUMOR ALBUS BY ARSENIC.

Landerer[2] reports several cases where marked improvement followed the administration of arsenic internally (0.004, 0.008, and 0.012 in pills daily for several weeks), and in one case the subcutaneous injection of an aqueous solution of acidi arsenicosi, 1 to 1000.

The writer does not regard arsenic a specific against tuberculosis, but, relying on experiments on guinea-pigs, he concludes that it increases the resisting power against tuberculous infection.

STATISTICS OF RESECTION OF THE KNEE.

Mensing[3] has collected eighty cases of total and three of partial resection of the knee, operated upon at Kiel, and nine operations of removal of a wedge-shaped piece of bone for rectangular anchylosis. Forty-eight of these (52.01 per cent.) were discharged well. The average shortening was two and one half centimetres, and flexion only occurred in two cases; two had good motion; one only slight motion. From thirty-two of these later information as to their condition was obtained, and in three cases a moderate flexion had taken place; in two a relapse had occurred, followed in one case by a second resection, and in another by amputation.

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[1] Vide Berl. klin. Wochenschr., 1883, Nos. 28-30.

[2] Centralblatt f. Chirurgie, November 24, 1883.

[3] Centralblatt f. Chirurgie, No. 49, December 8, 1883.

In thirty-four patients the excision was not perfectly successful (that is, thirty-seven per cent.), fourteen undergoing a subsequent amputation, and twenty having an unhealed sinus at the time the patients left the hospital. Of these twenty the ultimate results of thirteen were obtained: in ten cicatrization took place; three died. Of the fourteen secondary amputations ten recovered, and two died.

Ten patients who underwent excision at the clinic died directly from the operation, five of pyæmia, one of Bright's disease, one of general tuberculosis, two of exhaustion, one of hæmophilia.

These operations were performed in the years from 1857 to 1883, and the time is divided by the writer into three epochs: First, before the introduction of Listerism and Esmarch's bloodless method; Second, after these were introduced; Third, after the introduction of Neuber's permanent dressing. The mortality in the first period in twenty-one cases was 33.03 per cent.; in the second period, twenty-three cases, was 8.7 per cent.; and in the third period, forty-eight cases, two per cent. The length of time required for healing in the first two periods averaged 129 days; in the third period eighty-nine days.

RESECTION OF THE KNEE.

Ollier[1] reports that before the introduction of antiseptic surgery his mortality in resection of the knee was eighty per cent.; since then his mortality has fallen to fourteen per cent.[2] Formerly he used excision simply as a life-saving measure, but at present he feels justified in recommending it as a means of shortening the course of the disease. In children, however, he is disinclined to perform resection for fear of limiting growth. In operating Ollier is careful to spare as far as possible the periosteum and ligaments, though the capsule or ligaments should not be spared if diseased. A straight incision is only used for traumatic cases. In fungous disease an H-incision is to be used. The two lateral incisions should be as far forward as possible in order to spare the lateral ligaments. If the patella is affected it should be removed. The bones are wired together as well as the ends of the cut ligaments, and drainage tubes are to be inserted above and below if the posterior part of the capsule is diseased. In traumatic cases a single straight incision is advised dividing the patella. This method he has only tried on the cadaver, but is recommended because the ligaments are best spared in this way. Resection is to be performed in deformity at the knee if ostitis is present. If, however, perfect cicatrization has taken place with a rectangular position of the limb an osteoclast is to be used, but one devised that the rupture should take place directly at the desired point; but in some cases osteoclasis cannot be used on account of cicatricial contraction at the back of the knee. A wedge-shaped piece of bone is to be removed in these cases, and this is best done at the point of the obliterated joint.

THE ACTUAL CAUTERY IN CHRONIC JOINT AFFECTIONS.

The routine French treatment for tumor albus is "boutons de feu" (that is, touching with the galvano-cautery), immobilization, repeated blisters, tincture of iodine. The want of effect produced by ignipuncture has suggested more thorough treatment, namely, the pushing of the cautery directly into the bone and exciting a cicatrizing sclerosis. It is said that simple ignipuncture succeeds where it is not indicated, and fails where it is.

Curetting is a favorite method of Volkmann, Schede, Boeckel. It is a method, according to M. Vincent, either insufficient or excessive, excessive in simple granular fungous synovitis, and insufficient where excision is demanded, it being impossible to completely remove by a curette all the foci of disease. Ollier's method is described as follows:[3] Before the operation the patient is to be thoroughly washed, the site of incision being scrubbed with soap and brush, and any hair that may be present shaved. The operation consists of arthrotomy, the line of incision being parallel to the axis of the limb, either a knife being used cleansed by heat or a point of the Paquelin thermo-cautery. The incision should divide the skin and all lardaceous tissues, and if necessary the joint should be completely exposed by a cross incision. If the fungosities are tolerably superficial, the Paquelin cautery will be sufficient, but in extensive cases the old-fashioned "cautery irons" will be needed to riddle the diseased bone.

In young subjects the cauterization should be pushed quite far, and is followed by excellent results. Irrigation by an antiseptic completes the operation. Iodoform is then dusted on the wound, and the limb wrapped in boracic acid compresses wet in carbolic, carbolic gauze and salicylicized cotton, mackintosh, and bandages. This dressing should reach up to the middle of the thigh in cases of affections of the knee, and the whole should be wrapped in a silicate bandage, strengthened by card-board or light wood. A second dressing is not applied for three weeks or a month.

DISEASE OF THE BONES OF THE PELVIS.

The initial site of the chronic disease of the joints is placed by the best authorities at the line of junction of the epiphysis with the diaphysis. "The point of election," to quote the words of Ollier, "is not the epiphysis but the 'region juxta' epiphysaire." Gouillaud and Ollier have pointed out that this is also the case in pelvic osteitis. Pelvic caries may be either intra-cotyloid, not distinguishable from hip disease, or pericotyloid, with difficulty separated from hip disease, or marginal, the site being partly dependent upon the age at which the inflammatory process is awakened, as before puberty the most active growth is at the junction of the three pieces of bone which form the ilium; after puberty the most active cellular process is on the margin at the epiphysis there. Acetabular hip disease is much more common than is supposed; it is regarded by the writers as at least as frequent as the femoral variety.

The most common age for marginal pelvic disease is twenty-three years, and the places most frequently attacked are the crests of the ilium, the posterior iliac spines, and the apophyses of the sacrum, anatomical points where the epiphyses are developed even in early adult life.

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[1] Revue de Chir., 1883, Nos. 4 and 5.

[2] Vide Revue de Chirurgie, February 10, 1884, page 157.

[3] Vincent, Arthrotomie Ignée, Revue de Chirurgie, January 10, 1884.

The early symptoms of this marginal pelvic caries are chiefly indications of visceral affections, that is, the intestine and bladder, and the appearance of abscesses either in the bladder or intestine.

In childhood frequent aspiration of abscesses and expectation are indicated, unless the hip is threatened. In case of pelvic hip disease excision naturally gives the best drainage, and perforation of the acetabulum so far from being a contra-indication to that operation imperatively demands it.

In the adult opening of the abscess is indicated, whatever its seat. If intra-pelvic, the pelvis can be trephined, an operation first done in 1778 by Boucher, and repeated with success by Verneuil.

SACRO-ILIAC DISEASE.

This affection is so rarely observed that the records of four cases are of value.[1]

One patient was a child six years of age, who recovered. A second was observed in a woman, who recovered after long suppuration. In the third case death took place after long suppuration, and an autopsy revealed extensive ostitis. The fourth patient died of phthisis, but underwent an operation of removal of carious bone by chiseling through the ilium. Riedel mentions having seen three cases, two in children of five and fourteen, one in a woman of thirty. The first was operated on by extraction of the sequestrum through an incision dividing the gluteus maximus, and in the second and third cases the iliac bones were trephined. Recovery took place in the first and third patients, the second dying of extensive caries.

REPRODUCTION OF BONE AFTER RESECTION.[2]

Experiments have been made on young dogs to determine this matter. The lower end of the femur, the patella, and the semilunar cartilages were removed subperiosteally, the saw being always applied in the line between the epiphysis and diaphysis. A complete regeneration took place, the bone consisting of the ordinary spongy bone tissue, and covered to a greater or less extent at the end with cartilage. The bone began to be developed partly from the periosteum of the diaphysis, partly from the marrow, and partly, but to a less degree, from subperiosteal tissue which had surrounded the excised portion, the formative activity of the periosteum being greater at a later stage. The surface of the tibia suffered little alteration except where the differences in pressure or mobility affected the growth of the bone.

THE FEVER OF GROWTH.[3]

Bouilly has described and named "la fièvre de croissance," the symptoms sometimes seen in growing children, which are probably analogous to those grouped in popular language under the head of "growing pains." Bouilly is inclined to classify it as a light form of osteo-myelitis which runs its course without suppuration, and is most prevalent at the time of the most rapid growth. A comparison may also be suggested with the view of the nature of rickets which has been advanced, that the disease is characterized by a faulty circulation of the bones caused by imperfect development. Bouilly's "fièvre de la croissance" appears in three forms: (1) acute, which is the lightest and most frequent; (2) an acute form with severer symptoms; (3) a chronic incipient form. All these varieties have fever and pain in the bones, chiefly in the juxta-epiphyseal zone, most frequently near the lower epiphysis of the femur. The short and flat bones are seldom affected. The joints are almost never affected, but exceptionally effusions into the joint are seen. In the lightest form the symptoms pass in thirty-six hours, in severer cases the fever may last several days and even be attended by some typhoidal symptoms, followed by a sudden fall of the fever and recovery. The chronic subacute form may last for months, and relapses may occur; the prognosis is, however, favorable. Quinine and tonics are recommended. The disease may appear from the fifth to the twenty-first year, and the symptoms may be brought on by long walks, strains, or fatigue.

ÆTIOLOGY OF LATERAL CURVATURE.[5]

Sklifosowski[4] found, on examining twenty-one cases of scoliosis, in seventeen shortening of one limb, in four the shortening was so slight as to escape observation. In eleven the right thigh was longer than the left; and in twelve the right leg was lengthened. In nineteen young persons not suffering from lateral curvature, in five a difference in length of the lower extremities was observed, and the writer concludes that a difference in the length of the lower extremities alone could not account for the existence of lateral curvature, and in all probability some disturbance in the development and growth of the bones of the spine is influential in bringing about the distortion. Confirmatory of this he found other abnormalities in the development of the skeleton (genu valgum, pes planus, valgo planus) in two thirds of the cases suffering from lateral curvature.

THE NATURE AND TREATMENT OF RICKETS.[5]

Kassowitz is of the opinion that rachitis results from an abnormally increased vascularization of the bone-making tissues. Wegner reports as a result of a series of experiments upon animals the opinion that phosphorus given in small doses for a length of time gives rise to a diminution in the amount of the medullary tissue and arrests the normal transformation of osseous tissue into medullary cells, while large doses cause the reverse condition, namely, an increase in the medullary transformation, that is, an artificial osteo-malacia. Kassowitz, therefore, has in a number of five hundred and sixty patients administered phosphorus with beneficial results, namely, a diminution of the nervous symptoms, spasm of the glottis, restlessness, sleeplessness, and an improvement in the ability to walk, an improvement in the general condition of the patient, as manifested by an increase in weight and appetite. The phosphorus is administered with cod-liver oil in from half a teaspoonful to two teaspoonful doses daily, of a mixture of 0.01 of phosphorus to 100.0 of cod-liver oil, or in older children the medicine can be given in pills commencing with a dose of half a milligramme.

OSTEOTOMY IN OBSTINATE CLUB-FOOT.

A discussion on this subject took place in the Société de Chirurgie[6] in Paris, occasioned by a paper by

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[1] Vide Tilling, St. Petersburg Med. Woch., 1883, No. 29. Centralblatt f. Chir., 1884, No. 3.

[2] Vide Bajardi, Centralbl. f. Chirurgie, No. 42, October 20, 1884.

[3] Vide Gaz. des Hopitaux, 1883, page 1034, also Nos. 136 and 137.

[4] Centralblatt f. Chirurgie, 1884, No. 3.

[5] Zeitschr. f. klin. Med., 1883, Bd. vii., p. 36.

[6] Bull. de la Soc. de Chir. de Paris, t. viii., p. 766.

Dr. Beauregard reporting successful cases. The majority of the French surgeons were strongly opposed to this method of treatment, Guerin, Anger, and Verneuil being especially so, the former claiming that except in the club-feet of adults no deformity of this sort existed which could not be corrected by tenotomy and apparatus. Polaillon and Chauvel and some others thought the operation might be of advantage in talipes equino-varus of adults.

E. Boeckel[1] makes a distinction between osseous and tendinous club-foot; the first of these can be cured by tenotomy and apparatus; in the second class tenotomy is of no use, and though improvement follows a long-continued course of treatment by massage and apparatus, yet in his experience relapses easily follow when apparatus are discontinued, the cause of this being the curling inward of the hindmost foot at the end of the step, caused by the instinctive turning of the foot inward, to aid the gait when the dorsal flexion is only possible to a right angle. Boeckel thinks that the chief hindrance to correction of the foot is in the deformity of the tarsus, which is radically relieved by extirpation of the astragalus, which he has performed four times with perfect success.

TREATMENT OF SPINAL ABSCESS.

Lacharriere[2] has collected twenty-eight cases treated by antiseptic incision dressed with strict antiseptic precautions. Of these five died, fourteen were healed without sinuses, and in nine the result was uncertain. Twenty-one cases were treated by curetting the abscess walls, and of these two died, fourteen were healed, and in five sinuses were left. This latter procedure is not possible except in abscesses of the lumbar region and of the back. In psoas or iliac abscess such a treatment is not only not always possible but in certain cases dangerous.

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Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

April 14, 1884. The President, Dr. Charles D. Homans, in the chair.

SPONTANEOUS PHLEBITIS.

Dr. W. C. B. Fifield reported the case, which is unique in his experience. The patient, an anæmic young lady who had been occasionally treated for neuralgia during many years, had a temperature of 104–105° F., with a rapid pulse. She was dizzy, and complained of pain indefinitely situated near the great sciatic notch, and of heaviness of the left lower extremity. Being uncertain as to diagnosis, the speaker had called a competent consultant, who, while also unable to form a positive opinion, believed the trouble to be mainly hysterical, and cited an asylum case in support of this belief. The treatment agreed upon was unsatisfactory in its result, and the following evening Dr. C. E. Stedman was called in consultation.

By this time a new symptom had developed, a swelling of the leg, which was, however, still so slight as to be detected only by measurement. Pain, with high temperature and rapid pulse, continued. It was agreed to alter the last night's prescription of bromide of sodium with hyoscyamus to the bromide with chloral, and with this the patient got some rest. The case, however, went on, the calf swelling enormously and the thigh to twice its size, both pitting and assuming a white marble look, the pulse becoming 130. The treatment consisted in brandy and opium until the pain was over, and then brandy and quinine. As two grains of quinine every four hours caused cinchonism, it was omitted, thirty drops of tincture of chloride of iron being substituted. This drug caused the patient to vomit, as it often does her as well as some others, and it was in turn omitted. Dr. Fifield can find no accounts of spontaneous phlebitis. Trousseau reported it as an accompaniment of rheumatism and claimed that the cases got well with quinine and stimulants. He did not state the condition of pulse and temperature. Simpson and others have reported it as a puerperal complication, and supposed it to be of septic origin. We know that varicose veins get inflamed with formation of blood clots. The speaker had seen phlebitis as a complication of dysentery.

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[1] Gaz. Méd de Strasbourg, 1883, Nos. 6 and 7.

[2] Thèse de Paris, 1883. Also Chavasse, Lancet, 1883, ii., 1064; also Treves, International Cyc. of Surgery; Weiss, Mem. sur quelques cas. de Chir. Nancy, 1883. 124.

Dr. James Ayer mentioned its following typhoid.

Dr. C. E. Stedman said that a year seldom passed at the City Hospital when there were not one or more examples of phlebitis in patients, mostly men, in the third and fourth weeks of typhoid fever.

Dr. C. D. Homans said that the nearest approach to spontaneous phlebitis that he had seen had been with a fractured thigh in which good union had occurred. He had seen it after amputation for accident in a patient over sixty. It is not very uncommon after typhoid, and in his cases has got well after a time.

Dr. Fifield replied that he had seen phlebitis after dysentery, but never after typhoid. Arteritis occurs as a sequel of typhoid, and he mentioned a case at La Charité in Paris amputated by M. Gosselin in 1875 for gangrene, and dying from gangrene of the other leg. Both femoral arteries were found to be plugged.

EXTERNAL URETHROTOMY, WHEELHOUSE'S OPERATION.

Dr. Fifield thought that this operation, comparatively little known here though well known abroad, was sure to grow in favor. He has done it once, so far as he knows being the first surgeon in the United States to do the operation, and has seen it done once. In the common way it is not always easy to find the urethra. In cases of extravasation of urine Bryant prefers to pass a catheter, or to open the urethra. This is more easily said than done. The speaker never leaves a catheter in, but makes incisions and tries to introduce it three or four days later. Since his own operation he has seen it very well done by Dr. H. L. Burrell.

Dr. C. M. Green read a paper on

A SUMMER COURSE IN OBSTETRICS.[1]

Dr. O. W. Doe said that he had had two recent cases in which not so much as a drachm of milk could be got at any time.

Dr. Green said in reply to a question by Dr. Fifield as to how he successfully performed version and extraction of such large children, that the version was done in the usual way, but that great care was taken not to extend the arms and head. In the first case traction was made only during the pains: in the second case, owing to the absence of pains, the uterus was followed down with the hands of the assistant. As soon as the arms could be reached they were brought down. In the second case the extraction of the head at first seemed impossible: forceps were tried without success; and finally extraction was accomplished with the aid of powerful pressure on the uterus from above.

Dr. A. T. Cabot read a paper on a case of

MULTIPLE CALCULI IN THE BLADDER,

and showed the specimens. The paper will be published in a succeeding number of the Journal.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

February 4, 1884. **Dr. Thomas Waterman** read a paper on

PERIURETHRAL PHLEGMON.[2]

Dr. Fitz said that the name of periurethral phlegmon should be confined to those cases in which there was a diffuse inflammation of the tissue. These cases were rather periurethral abscess, and this difference in nomenclature may have accounted for the small number of reported cases mentioned by the reader.

Dr. J. W. Elliot then read a paper on

THE TREATMENT OF RETROVERSION OF THE UTERUS WITH ADHESIONS.[3]

Dr. C. M. Green said that packing will often give good results even when there is subacute peritonitis or cellulitis present. He also mentioned the following case in which packing had been used: —

The patient had her last child fifteen years ago. Since then much pain, constantly recurring attacks of peritonitis, and no ability to work. Examination shows cervix torn, uterus prolapsed, external os just within the opening of the vagina. The examination gave much pain, but nevertheless a light tampon of cotton, soaked in glycerine with ten per cent. of iodoform, was inserted. The iodoform was used because it seems to relieve the local pain. Relief soon followed. She has been under treatment two months, and is now free from pain. The uterus is higher, and more in place; the adhesions are absorbing.

In a second case there were no local symptoms, and very little dysmenorrhœa; there was some headache and a general confused feeling, but the symptoms were so slight that the patient thought an examination was unnecessary; however, when this was made retroversion and adhesions were found, and treatment with a tampon was begun. In two months the uterus was brought forward into good position by replacing the tampon twice a week. Some medication was resorted to for the headaches, but without success; when, however, the uterus had been replaced these disappeared. The after-treatment was by a pessary. This was once removed for a week, but a slight retroversion returned, which was again cured by the continued use of the pessary. He thought the treatment by tampons often proved quickly successful, and that the nervous symptoms which accompany the retroversion were often the most difficult to treat.

Dr. Lombard mentioned the treatment by manipulation repeated every two to four days for five to ten minutes. He had seen very good results from this method even when it caused considerable pain to the patient, but he thought the reader's method better, as it gave a constant and equable pressure instead of the interrupted manipulations.

In answer to **Dr. Sabine** as to what class of cases it was not best to undertake this treatment, the reader said that in old women, long past the climacteric, where there was retroversion without any peritonitis, and, again, in all cases where there was a local acute peritonitis.

Dr. C. B. Porter then reported

A CASE OF PILO-NIDAL SINUS.

N. L., forty-two years, jeweler, entered the hospital January 11th for a fistula in ano, which had given him trouble for about two months. The patient had a large amount of hair on the chest and other parts, and on the left buttock, in addition to an ulcerated point about two inches from the anus, which had been discharging about two months, there was a pilo-nidal sinus from which a tuft of hair projected. This was laid open by a cut some three inches in length, and a large mass of hair removed. The wound was then dressed with iodoform and charpie and myrrh, and healed readily.

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[1] See page 389 of this number of the Journal.

[2] See page 392 of this number of the Journal.

[3] Boston Medical and Surgical Journal, vol. cx., p. 193.

Dr. Porter then reported the following case: —

DIPHTHERITIC PERINEAL WOUND; CHRONIC CYSTITIS; BILATERAL INCISION OF PROSTATE FOR REMOVAL OF STONE; ACUTE SUPPURATIVE PERITONITIS. AUTOPSY.

January 21st. L. D. V., aged thirty eight, farmer, about seven years ago first had pain on passing water. Had at that time a stricture which he claims was not of venereal origin. About a year later he underwent the operation of perineal section. Judging from the scar the incision was made through the scrotum down to the anus. There is now only a line of cicatrix. About three years ago noticed a desire to pass water very frequently; also noticed some pain both before and after passing urine. Passed small particles about the size of rice, which were hard; also passed blood at intervals. Since then his condition has been steadily growing worse. He now can retain his urine at best only ten or fifteen minutes. Has great pain at times, which he locates both in the back passage and in penis.

January 23d. Examination by Dr. Wood. Color smoky; specific gravity 1008; sediment, much; reaction alkaline; albumen, large trace. Sediment: much pus; considerable blood; little triple phosphate; one epithelial cast seen; no large excess of bladder epithelium.

January 24th. Dr. Porter passed No. 23 sound, and in the prostate the sound struck on a solid substance which gave the feeling of stone. Examination by rectum shows a dense, hard mass situated in the prostate. Seems to be immovable, and causes pain when pressed upon. The mass appears to be about as long as the finger.

January 26th. Etherized. Dr. Porter tried to introduce a lithotrite with intention of crushing stone, but was unable to get into bladder. Patient then brought down into position for perineal section. A staff was introduced into urethra. A cut was then made into perinæum about four inches long downwards and outwards. Staff was exposed, and left lateral incision made through prostate. Attempts were made to seize the stone with forceps, but without success. The prostatic incision was enlarged, and another made on the right side in a corresponding manner, in other words, bilateral incision of the prostate. After several attempts the stone was firmly clasped by the forceps, and withdrawn. A canula was then inserted, and wound packed with sponges. This afternoon canula withdrawn, and bladder washed out thoroughly with hot phenyle. Weight of stone 1320 grains.

January 27th. Patient very comfortable. Bladder washed out with hot phenyle.

January 28th. Wound doing well.

January 29th. Patient has almost no appetite. Whiskey ℥ss. every four hours. Pulse rather weak and 120. Complains of considerable pain over abdomen.

January 30th. Complains of severe pain over abdomen, and especially over right side, extending up into chest. Has a sighing respiration, which at times is a moan. Amount of urine cannot be accurately estimated, but judging from the staining of sheets it would seem to be much diminished in last two days. Patient had poultices to side and over abdomen. Subcutaneous injections of morphia, grain one sixth, this morning, which gave some relief.

At eleven A. M. had an ounce of brandy, and a half ounce repeated every half hour after twelve.

About two P. M. was transferred to Ward D. Hot poultices and hot fomentations to side and over abdomen. At five brandy increased to ʒvi. every hour. Throat dry and parched. Talks with difficulty. Lies in a sort of stupor. Moans, and can be aroused only with some difficulty. About nine P. M. had much trouble in taking stimulants. Brandy ʒvi. Beef tea ℥iii. given hourly by enema.

The rest of the night grew weaker, and died Thursday morning at five A. M., five days after operation.

The autopsy was made thirty-four hours after death by Dr. Fitz, who showed the urinary organs in continuity. He stated that the peritoneal cavity held several ounces of thick creamy pus. The peritonæum presented a moderate vascular injection, and the intestines held but little gas. The lumbar lymphatic glands were enlarged to the size of almonds, soft, gray, and injected; the afferent pelvic lymphatics contained an opaque yellow lymph.

The bladder was firmly contracted, forming a dense, unyielding mass as large as the fist, in close apposition to the anterior wall of the pelvis, and nearly filling its cavity. The subperitoneal tissue over the fundus was abundantly fatty. On opening the bladder its cavity was found to be of the volume of a small peach. The walls varied in thickness from a half inch to more than an inch, and were incapable of distention, being largely composed of a dense fibrous tissue in which opaque yellow streaks were seen, suggestive of a fatty degenerated muscular wall. The mucous membrane was thickened and of a bluish slate color, with occasional small, shallow diverticula. A bilateral wound through the cervical portion of the bladder was continued into a perineo-urethral incision. The cut through the urinary tract was over two inches in length. The lips of the perineal opening were glued together, and the general surface of the wound was coated with opaque yellow patches, firmly adherent, and representing a superficial necrosis of its tissues.

Both ureters, especially the left, were dilated, thickened, elongated, and tortuous. Each contained a considerable quantity of muco-purulent fluid. The right ureter was large as the fore-finger, the left of the size of the thumb. The renal pelves were moderately dilated, and were connected with sacculi the size of the finger tip. The mucous membrane of the pelves and ureters was thickened, rough, gray, somewhat translucent, and showed numerous varicose, injected bloodvessels.

The kidneys were diminished at least one third in size. The capsules adherent, portions of the surface of the kidney being torn away with the former. The surface was irregularly lobulated, with gray, filmy patches. On section the cortex was atrophied, the tubular regions and Malpighian bodies indistinct. The alterations described were summarized as indicative of a diphtheritic perineal wound, lumbar lymphadenitis, and acute suppurative peritonitis, chronic cystitis and paracystitis, chronic pyelonephritis, with dilatation and hypertrophy of the ureters.

Dr. Porter also reported a case of

REMOVAL OF A FRAGMENT OF CATHETER FROM THE BLADDER.

January 15th. William L. N., farmer, aged sixty-four. Patient has an enlarged prostate, in consequence of which he has been obliged to catheterize himself for the past six years, using for the purpose a soft rubber catheter. Sixteen hours ago, while inserting the instrument, it broke in the middle of the urethra, leaving inside a piece five inches long. He immediately put his finger on the under side of the penis and felt the piece there, but on removing the finger it slipped into the bladder.

He has no pain, but says that since the accident his urine has dribbled away constantly.

Patient was etherized, and the bladder explored with a small lithotrite, but nothing was caught. A medium-sized lithotrite, with closely-fitting, finely-serrated blades, was then introduced, and after several attempts the instrument caught a small object that proved to be, when withdrawn, a little calculus the size of a pea. After a few more attempts the lithotrite seized the catheter. The blades were then locked, and an attempt was made to withdraw the instrument, after first moving it about to make sure that the wall of the bladder was not nipped. When the blades of the lithotrite reached the middle of the urethra they were held so firmly that it was almost impossible to move them. Externally there could be felt, just at the knee of the lithotrite, a large, irregular lump. In order to explore this and make sure that the wall of the urethra was not being pulled along in front of the catheter, the urethra was slit up on its under side for a distance of one inch. A director, being then introduced, felt, by the side of the lithotrite, the end of the broken catheter. Strong traction then brought out the lithotrite with the fragment of catheter caught, an inch and a quarter from its rounded end, in the bend of the instrument. The piece of catheter lay along the shank of the lithotrite, and just at its middle was a double fold which had been made by the hitching of the end of the catheter while passing through the prostatic part of the urethra; this was the explanation of the difficulty in withdrawing the instrument, and the large, irregular lump felt in the urethra. At the moment of withdrawing the catheter it broke at the point where it was grasped by the lithotrite. It proved to be a dry and brittle piece of No. 16 French (9 E.) catheter.

A No. 12 English gum elastic catheter was then fastened in the bladder, and the patient put to bed, with a bottle and tube arranged to catch the urine. One stitch was taken in the cut on the under side of the penis, and a little iodoform applied. Patient slept comfortably all night, and had no further discomfort. The catheter was removed after forty-eight hours, and the patient discharged on the third day. His temperature rose to 100° F. on the morning of the second day and the evening of the third day, being 99° F. in the mean time. It was normal at the time of discharge.

Recent Literature.

A Manual of Practical Hygiene. By E. A. PARKES, M. D., F. R. S. Sixth Edition. With an Appendix. Volume I. Wm. Wood & Co. 1883.

The publishers of the Library of Standard Medical Authors have done a good service in issuing this excellent manual in its present shape, thus popularizing a valuable work, and awakening a deeper interest in a branch of medicine too much neglected by the general practitioner.

Chapter I. treats of Water; the quantities necessary for its use by man; modes of collection, storage, and distribution; its quality and impurities; modes of purification; effects of insufficient and impure supply; its examination for hygienic purposes. II. Air; its impurities and the diseases produced by them. III. Ventilation. IV. The Examination of Air. V. Food. VI. Its Quality, Choice, and Cooking. VII. Beverages and Condiments. VIII. Soils; their conditions, constitutions, and modes of examination.

Volume II. contains a continuation of Book I. which treats of the following topics: Habitations; The Removal of Excreta; Warming of Houses; Exercise; Clothing; Climate; Meteorology; Individual Hygiene; Disposal of the Dead; The Prevention of Disease both Specific and Non-specific; Disinfection and Deodorization; The Value of Statistics.

Book II. treats of Military Hygiene, the conditions under which recruits are admitted to service, the conditions under which the soldier is placed, the effect of military service, foreign service, military and naval, from the British stand-point.

The American appendix to this volume is especially valuable as containing not only new material, but also matters peculiar to this side of the Atlantic. Due credit is given to Massachusetts for early and valuable work in the direction of Public Hygiene. The chapter on Water by Prof. E. Waller is quite full and complete. Professor Britten contributes a chapter on the Character and Distribution of American Soils. Dr. J. G. Richardson a valuable paper on the Climatology and Meteorology of the United States. Dr. D. F. Lincoln treats of Ventilation and Warming. E. S. Philbrick contributes a clear and concise paper on Removal of House-Waste, illustrated. The paper on Food Adulteration, by Prof. E. G. Love, is especially valuable for its abstract of the legislation of such States as have enacted adulteration laws up to the present year. The New York law is quoted in full.

Brief chapters follow on Disinfection, Vital Statistics, and Sanitary Inspection.

A Manual of Pathology. By JOSEPH COATS, M. D. Philadelphia: Henry C. Lea's Son & Co. 1883.

This manual was written with the idea of furnishing a work on pathology in English to replace that of Wilks and Moxon, which has become antiquated. It is well up to the times and presents the subject in a very readable manner. This is increased for the general practitioner by numerous allusions to the clinical bearing of the changes noticed. The importance which micro-organisms play in disease is recognized, and a due place is given to their consideration and illustration.

The work has not a great deal that is original beyond the illustrations, most of which were made especially for this work. The arrangement of the material is a very good one, and can be recommended to the student and practitioner as a good exponent of the modern condition of pathology, both general and special, in a volume of reasonable size.

— An aged Welsh Druid was recently tried for burning the body of his child, but was discharged on the ground that there was no law prohibiting it.

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REFORM OF MEDICAL SERVICE ON SHIPS.

Somewhat more than a year ago the British medical journals, as well as some of the daily newspapers, were vigorously agitating the question of the medical service on passenger vessels, largely incited thereto by the statements upon the existing conditions of Dr. J. A. Irwin, whose zeal and knowledge of the subject, resembling that of Mr. Plimsoll in regard to other marine abuses, enforced attention and carried conviction.

It was expected that a measure for the improvement of the medical service on all British vessels would have been introduced into the British Parliament by the president of the Board of Trade before this. The subject, however, is one of the utmost importance to American travelers and immigrants, and indirectly in periods of epidemics — as the recent one of small-pox — to the country at large, and it is very necessary that its proper regulation should be secured.

At the Cleveland meeting of the American Medical Association a committee was appointed to consider the regulation of emigration by Congress. This committee recently drew up a bill, which was presented to the national House of Representatives last month by General Slocum, and referred to the Committee on Commerce as an amendment to the Emigration Act of last year. The bill will be found in full on another page. Its passage and enforcement would reform many of the abuses which at present unquestionably exist, and tend to place the marine medical service — an extremely necessary department upon large passenger steamships — upon a positively and relatively useful and suitable footing, which at present is notoriously not the case.

The weak part of this bill is plainly the insufficient space prescribed for hospital accommodations. It may be that no more could be wrung from the cupidity of the owners of vessels, especially when it is at the same time demanded that the ship's surgeon, whose *maximum* pay has hitherto been only £9 or £10 per month and his position on a par with that of the chief steward or carpenter, should not only be provided with necessary assistants, but remunerated and treated as is the first officer or chief engineer,

It is said that competition between competing lines and dullness in trade and emigration have brought about a "cutting of rates" on ocean steamers similar to that with which we are familiar on our railroads. If so the present will prove both a difficult and desirable moment to introduce the proposed reforms.

We all recall the perfunctory and even fraudulent methods of complying with the laws for the vaccination of immigrants on some vessels of some steamship lines coming to this country, but when one becomes acquainted with the obstacles and want of facilities or support under which the surgeons of these vessels labored, a large part of the indignation, then only too justly aroused, should be transferred in many instances from the surgeon to his employer, the Steamship Company.

The great body of our citizens, whether those who travel or those who stay at home, have too direct and personal an interest in this reform of the medical service on ships to permit of its being dropped out of sight.

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THE MEDICAL MAGNATES OF EDINBURGH.

During the earlier part of this century it was not uncommon for our medical graduates to finish their academic labors at the University of Edinburgh, which has just celebrated its tercentenary jubilee by conferring an honorary degree on Drs. Fordyce Barker and John S. Billings, beside a host of European celebrities. It is proper, therefore, to recall a few of the names that have made the University of Edinburgh illustrious in the annals of medicine and the kindred branches of learning. The University of Edinburgh, now one of the very largest in the world, and having more students than any other university except Paris, Berlin, and, perhaps, Vienna, was opened in 1583 as a town college created by and subject to the municipal council of the Scotch capital. The medical department of the University began in 1726, although a professor of botany had served since 1676, and Sir Robert Sibbard was not only appointed Professor of Physic in 1685, but received in the same year two unsalaried assistants. In 1706 Sibbard advertised in the *Edinburgh Courant* that he would teach natural history and the medical art *in privatis collegiis*, provided applicants could bring satisfactory testimonials as to their knowledge of Latin, Greek, mathematics, and philosophy. The Independent College of Surgeons, which had received a patent in 1695, caused a "Public Dissector of Anatomy" to be appointed in 1705.

But the medical department of the University owes its existence in part to the good sense of John Monro, a surgeon of King William's army, in part to four physicians — Sinclair, Rutherford, Plummer, and Innes — who, on their own petition, were appointed the Medical Faculty in 1726. The illustrious layman who helped nobly in this work was George Drummond, who founded the Royal Infirmary, opened in 1741. Meanwhile Alexander Monro had been appointed Professor of Anatomy in 1720, and may, perhaps, be called the father of the Edinburgh Medical School, because he made it famous by his Osteology, published in 1726, by his lectures, and by his son, who died in 1817 in the enjoyment of a European reputation due in part to the folio volume of 1783, On the Structure and Functions of the Nervous System. The third Alexander Monro, likewise an anatomist, died in 1859, and had published his four volumes on the Anatomy of the Human Body in 1813. The next name, John Goodsir, brings us down to the present Professor of Anatomy, William Turner.

The Institutes of Medicine were taught first by Sinclair, who followed Boerhaave's Institutiones. Robert Whytt, professor from 1747 to 1766, was an advanced physiologist, but was surpassed by his successor, William Cullen, whose works are still quoted occasionally. James Gregory, an apostle of blood-letting, was succeeded by the two Duncans, of whom the elder taught from 1790 to 1819, and established a dispensary, an insane asylum, and the horticultural society of Edinburgh. His successors in office were, after his son, Alison, Thomson, John H. Bennett, and W. Rutherford, the present occupant of the chair.

The Practice of Physic has been taught by Rutherford, Gregory, Cullen, Home, Alison, and Thomas Laycock, who was partial to mental diseases. Midwifery was taught successively by Gibson (1726–1739), Robert Smith (1739–1756), Thomas Young (1756–1780), Alexander Hamilton (1780–1800), James Hamilton (1800–1839), Sir James Simpson (1840–1870), and his nephew, the present occupant. In 1847 Sir James Simpson professed himself less interested in having been appointed physician to the Queen than in having delivered a woman without pain while she was under the influence of ether. In the same year he discovered accidentally the modern use of chloroform, and soon after announced his discovery to the world, though some few persons thought it wrong to interfere with the curse of pain. Materia Medica used to be taught together with Botany, but was treated separately by Sir Robert Christison, who died two years ago, and was probably the most popular man ever connected with the University, among both teachers and students, beside being the head of the medical profession in Scotland. Christison is known to have finished his autobiography up to 1830.

The professorship of clinical surgery was held by James Russell from 1803 to 1833, and by James Syme from 1833 to 1869. Syme, it is needless to say, was the leading surgeon of his time and country, and one of the greatest of all Edinburgh professors. In 1818 he invented the waterproof "Mackintoshes," which the historian of the University, Sir Alexander Grant, thinks should be called "Symes." The same historian relates that Syme started a hospital of his own in the Minto House, where his assistant, Dr. John Brown, obtained the material for the famous tale, Rab and His Friends. Syme was succeeded by Joseph Lister, of antiseptic fame. Sir Charles Bell was Professor of Surgery from 1836 to 1842, Sir Wyville Thomson was Professor of Natural History from 1870 to 1882, and Joseph Black, Professor of Chemistry from 1766 to 1795, deserves a place by their side, as he was among the founders of quantitative chemistry. Finally it should be mentioned that Sir David Brewster was principal of the University from 1859 to 1868.

The medical department of the University of Edinburgh exceeds all others both as to professors and students, the latter numbering about 1800, or more than one half of all the students connected with the University. In 1826, the palmy year of the medical school, it had about 900 students; but it had only about 400 in 1840. The professors used to be appointed by the town council, with which they had many a brave fight. At present they are appointed by a board of seven curators. The medical department confers three degrees, — bachelors of medicine, masters in surgery, and doctors of medicine, the candidate for the latter alone being required to present a thesis on "some branch of medical knowledge, which he may have made a subject of study" after graduating as M. B. The Faculty is bound, also, to recognize extra-mural teaching over which the University has no control. In fact, the medical school of the University does not possess autonomy, and need not be consulted even in the appointment of new professors, unless those in authority so prefer.

EXTRAMURAL TEACHING IN EDINBURGH.

At this time some details of the system of extramural teaching, which has largely contributed to make Edinburgh the medical centre it is, may prove interesting to many, especially as we chance to be in possession of such recently contributed by a well-informed correspondent.

In Edinburgh there is a large number of teachers, outnumbering even the professors, there being as many as two or three teachers of one subject, as midwifery, chemistry, or medicine, each lecturing independently of the other and in different rooms. These extramural lecturers or teachers set up for the most part under the auspices of the Royal College of Surgeons or the "School of Medicine" in Edinburgh. They may lecture without attendance on their lectures by a student being held as equivalent to attendance on the same class or subject intramurally or within the university. But it is almost the universal custom for each teacher to previously obtain the recognition of his status by the university, so that attendance on his lectures may count for the degree as equivalent to attendance on the same class within the university.

These lecturers for the most part give courses quite similar in character to those within the university, and therefore lecture, if one may so say, in opposition to the professors; and should a particular professor chance to be unpopular or a bad teacher, the extramural lecturer or lecturers may have a large class.

The fees charged by the extramural teachers are commonly one guinea less than the university fees (say £3 3s. instead of £4 4s.), but if it is desired by the student that his attendance on the extramural class should count for the university degree then he must pay to the extramural lecturer the same fee as he would have paid to the university professor, and the fact of his having paid the larger fee must be noted on his card or certificate of attendance before it can be accepted by the university authorities. The Colleges of Physicians and Surgeons in Edinburgh grant licenses to practice, and it is largely in preparation for these that students attend the extramural lectures, and in such a case there is no restriction as to fee. Nor is there any restriction in the case of a university student if he has taken out the same class in the university and paid the usual fee, or has taken out the class at any other university.

Each extramural lecturer pays for his own rooms, provides his own apparatus, and holds all the fees he gets from his class. He is practically responsible to no one, but the university can always withdraw recognition of his lectures if they see a fit reason. When they grant recognition all they require is that the person has some status or standing in the subject on which he proposes to lecture, but recognition is often granted to comparatively young and inexperienced men; so much the worse for themselves if they are incompetent. A student for a university degree may only take out any four such extramural courses; all the others he must take in the university. This limits the effect of the opposition.

Besides these lecturers on the same subjects as university professors there are a few others who give courses on subjects not specially taught within the university, and not compulsory for the degree, as a course on diseases of the ear, eye, etc. Recently, however, a university lecturer on diseases of the eye has been appointed, as also one on insanity. These are the only two lecturers, not professors, holding their appointment direct from the university. In no case is the number attending the class limited. There are no small cliniques. Each of the clinical professors at the infirmary has a following of from twenty up to even eighty and one hundred. Men are drilled in the elements of practical diagnosis in groups of ten or twenty by the clinical tutor acting as assistant to the clinical professors.

The extramural teacher can lecture *when* and where he pleases, only he commonly finds it most convenient and profitable to lecture at the same hour as the professor of the same subject.

This system of extramural teachers is of great antiquity in Edinburgh, and has been found to supply a healthy stimulus to the university professors, many of whom came from the ranks of the extramural lecturers, especially in the practical subjects of medicine, surgery, and midwifery. A majority of the present professors were extramural lecturers before being appointed professors. The professor has always the advantage of endowment, better equipped and more commodious laboratories, and the chance of examining the student for his degree, which last induces men to stick to the university teachers.

In Glasgow a similar system has only recently been established, and there is now a very large number of extramural teachers there.

In Aberdeen the system or practice does not exist, and university professors are unopposed.

MEDICAL NOTES.

— Two more deaths from foot-ball are reported from England, both from injury to the spinal cord. In one case death was sudden; in the other the unfortunate young man lingered for four months in a hopeless state of paraplegia resulting from hæmorrhage into the cord.

— Mr. Lawson Tait recently read a paper on Relations of Ovulation to Menstruation before the Midland Medical Society, as we learn from the *Birmingham Medical Review.* He gave a historical sketch of the literature of the subject since 1843, the date of the publication of Dr. Ritchie's papers, and observed that although Ritchie's discoveries had been amply and frequently confirmed, the text-books still reiterated the mistaken view that menstruation was the equivalent of the œstrus or rut, and that it was due to the ovarian excitement of the ripened follicle. He next gave a series of observations derived from his surgical practice, in which it was shown that in forty-nine observations there was evidence of the concurrence of ovulation and menstruation in nine only, whereas in forty cases the evidence was either negatively (fifteen cases) or positively (twenty-five cases) against the ovulation theory of menstruation. It was therefore impossible to maintain a theory which was controverted by nearly eighty-two per cent. of evidence.

— The *London Practitioner* quotes a practice said to have been used for some time in the Milan Hospital for an aid to the diagnosis of fracture of the neck of the femur. The measure consists in exploring (whenever fracture of the neck of the femur is suspected) the short space between the trochanter and crest of the ilium. In place of considerable resistance, which is then produced in the sound limb through the tension of the tensor fasciæ latæ, there is found, when injury has occurred, a deep depression due evidently to the diminution of the tension of this muscle owing to the approximation of its points of attachment.

— A recent visitor to the venerable University of Pavia found among other relics of Scarpa, who is the special glory of that seat of learning, the head of the great anatomist with the soft parts entire preserved in a bottle. The fingers are also exhibited. Probably most such zealous devotees of science would be willing to occupy permanently a niche of a museum if they could thereby serve to illustrate any curious point of anatomy or of pathology. But it would seem more appropriate to most minds outside of relic-worshiping Italy, that if any remains of the old professor were to be made immortal, they should at least have combined a scientific with a personal value. His triangle would have been a more tasteful souvenir than his face.

— A curious pathological fact is related by M. Guillaume Chapus in a memoir, Sur les Médicins et la Médecine en Asie Centrale, which we find noticed in a French journal. One town of Turkestan, Kokane by name, is composed in great part of individuals afflicted either with goitre or cretinism. The traveler is struck with the appearance of the inhabitants, who present all degrees of goitre from a slight fullness to enormous thyroid tumors. The peculiarity in the case consists in the fact that outside this one town goitre and cretinism are very rare. In Kokane the hygienic surroundings seem to be the most satisfactory. It is situated in a plain at an elevation of 1300 feet, and is abundantly supplied with pure water from a mountain stream. In 1878 the Russian troops occupied this town, and it was discovered that about a tenth part of the soldiers of the garrison became affected with goitre after a few months' stay. The tumors proved amenable to the external and subcutaneous use of iodine. It was considered prudent, however, to remove the garrison from Kokane, and another town of less pathological interest was selected as the political capital of the province.

— Pleuro-pneumonia has again caused alarm among cattle owners on Staten Island, and on the 10th of April four diseased cows were killed at Sailors' Snug Harbor. The authorities have quarantined the remainder of the herd where the disease appeared.

— A correspondent of one of our contemporaries, who gives painful evidence of being a scoffer, announces the discovery of a new germ which threatens us with a dangerous epidemic. He christens it the *bacillus lunaticus medicus*.

Correspondence.

PATHOLOGICAL CONDITIONS OF THE SKIN FOLLOWING THE INTERNAL USE OF BORAX.

MR. EDITOR, — Will you kindly allow me the use of your correspondence columns to request from any physician who may have observed squamous or other pathological conditions of the skin, following the internal administration of borax (whether for epilepsy or not), very brief notes of the cases for publication?

Treatises upon diseases of the skin do not appear to recognize such conditions, which have yet been observed in England by Gowers and also by other writers upon mental and nervous diseases, as well as here in Boston. Very truly yours,

EDWARD WIGGLESWORTH, M. D.

79 BOYLSTON STREET, *April* 19, 1884.

Miscellany.

DR. ALFRED STILLÉ ON THE VALUE OF ETHICAL CODES FOR PRACTITIONERS OF MEDICINE.

PROF. ALFRED STILLÉ delivered a valedictory address to the medical classes of the University of Pennsylvania on withdrawing from the chair of the Theory and Practice of Medicine, which is at once wise and graceful in an eminent degree.

We take the following extract, which we regret is all our space will permit, from the *Medical News* of April 19th. We think few dispassionate men can read it without giving an assent, however unwilling, to what Dr. Stillé says: —

> It is sometimes asked why the medical profession alone should require a code of ethics for the regulation of its conduct. The question is not without the flavor of a sneer, and implies that there must be something peculiarly perverting in the science of medicine or corrupting in its practice which renders necessary so formal a statement of its moral duties. Let us consider the matter.
>
> The moral government of mankind has never been intrusted to merely abstract propositions. The most ancient of moral codes, the Decalogue, maintains its authority unbroken by thousands of years. Their sum and substance are embodied in the two simple precepts of the founder of Christianity, and yet the former was expounded by Moses and his successors into an elaborate system of law, was adopted into Christianity, and thence by all the civilized nations of the world until it has interfused the legislation under which we live at the present day, and not the legislation only, but the usages of society in all ages. Wherever law reigned men who were similarly employed were drawn together into guilds and societies for the common benefit of their members, and in each statutes were enacted which enforced compliance with them by heavy penalties. Even among trades ethical rules existed, and when the learned professions were gathered into their respective colleges or faculties the privileges and rights of the members were counterbalanced by laws for the regulation of their conduct. The clergy alone were destitute of any specific ethical code, because they were held to be especially under the divine law from which all other codes emanated, and yet every religious community, of whatever denomination, possessed, and still possesses, special rules of conduct by which its members must be governed. The necessity of ethical codes arises from the fact, everywhere and always recognized, that either through lack of instruction, or through a defective or perverted moral sense, or through mere heedlessness, men do fail more or less to conform their conduct to justice and equity.
>
> If men were habitually virtuous and just, unselfish and generous, if they could always see themselves as others see them, and judge their own motives and actions as strictly as they judge of other men's, then, indeed, there would be but little need for ethical or religious laws, for "they that are whole need not a physician." But law is nature's medicine for nature's defects and errors. Whoever imagines that he needs it not, that he possesses an inner light that will prevent his feet from straying into the paths of error, and enable him to decide justly in every conjuncture of life, is more to be wondered at for his boldness than admired for his modesty, for he lifts himself into a judgment seat where even Solomon did not dare to sit.
>
> I have said that the relations of a physician to his brethren and to society differ widely from those of other professional men, and, indeed, of all other men whatever. The emulation and rivalry of clergymen and lawyers are, for the most part, displayed before the eyes of the world, so that there is no special opportunity for an evil-minded man of either profession to backbite or malign his brethren. Moreover, he knows that if he offends in this manner the court may affix a stigma to his name, or the religious body or the superior upon whom he depends may ruin him by an ecclesiastical condemnation. In the medical profession there is no tribunal which is under such imperative obligations to act or enforce its decisions so rigidly. Hence one necessity of a code of ethics. But another, already implied, is even more cogent. The physician is the only human being who is habitually admitted behind

the scenes of life's stage. He is the depository of secrets to which even a confessor's ear is a stranger, secrets on which station, honor, and life itself may depend, and even when not so burdened he is more than any one else the confidant and friend of those whose diseases he has healed. He is often the guardian of families that put their trust in him. Is it any wonder, therefore, that he should be jealous of the intrusion of a rival, or even of a friend, upon his preserves, and that, the evil of human nature aiding, the rival should endeavor to supplant him, and that thereout coldness, estrangement, animosity, evil-speaking, and ill-treatment should arise? Or is it surprising that the very confidential relations of a physician to his patient should expose him to the temptation to do wrong, and that he should, therefore, be warned by written laws of the danger he incurs?

These are the grounds out of which the ethical principles of the British and the code of the American medical profession grew, and which inspired the works of French and German writers on the same subject. They are the principles of honor, morality, and whatever is best in modern civilization, and, therefore, should be had in respect by all. It is a sign of decadence in the American social and medical systems that such laws are treated as obsolete or superfluous, and sneered at as fit only for children in leading-strings. Let me, as the parting counsel of one not without experience of life, adjure you to hold fast to this rock of safety, and, far from aiding to abrogate it, to strengthen and perpetuate it by every means in your power.

Impatience of authority and restraint has, perhaps, a deeper source than I have yet indicated. Its most conspicuous and violent outbreak occurred in France a century ago, and for a time covered the country with ruins steeped in blood. In our own day, the rebellion against law, if less sanguinary and destructive, is not less vehement, and is far more extended. Its name is Nihilism, and its creed is the denial of whatever has been known as religion, a hatred of all the virtues that are the fruit of faith, and a contempt of the obligations imposed by law. It tends to rob man of trust in whatever has been loved or respected in religion, in law, in the love and authority of parents, in the affection and obedience of children, in virtue, in duty, in honor, and in the established order of things that links the present to the past and to the future, making it the offspring of the one and the parent of the other.

If it were possible for this egoistic materialism to endure and prevail, the winter of humanity would indeed be near at hand, in which all signs of life, all progress and development, all beauty and nobility would be frozen out of it, and mankind would be reduced to a lower moral level than the beasts of the field. A world without faith! A world without love! As easy were it to conceive of a world without light or heat. In such a chaos what would become of all those institutions that have been established, perfected, and reverenced by advancing civilization? Conceive, for a moment, a community where no song of bell nor inward voice called to worship; where justice had become deaf as well as blind, because every man claimed to be a law unto himself; where there was no balm to soothe, no physician to cure, no right of property, no sacredness of person, where, in a word, mankind had lost whatever has hitherto distinguished humanity. If you can imagine such a herd of human beings — for it will no longer be a society or a community — you may behold in it a picture of the one that will assuredly arise if these nihilistic doctrines, this worship of self, this scorn of faith, this contempt of the past and exaltation of the present should prevail.

Let me plead with you to shun these poisonous principles which tend to the destruction of all that has been held noblest and best by the wise and good of every age; principles which put farther asunder the nations, communities, and individuals whom the physical improvements of the age should bind together and at last fuse into one. Faith is the parent and preserver of all good works. Unbelief, like Saturn, devours its own children. Faith is to man's nature what sunlight is to the world, clothing it with beauty and life; while unbelief is like the moon, in which the sun's rays create neither motion nor color, but fall forever upon its lifeless orb. Without faith, man's ambition is but narrow selfishness, contemptuous of the historic past on which it is compelled to build, and careless of what evil germs it may plant to be developed in the future. The higher a man rises in his humanity, the more clearly does he feel himself to be a link between the past and the future; the more fully recognize that what he has received that also must he transmit, increased, perfected, and consecrated by that spirit of love for humanity without which "good gifts wax poor."

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ETHER ADMINISTERED BY THE RECTUM.

A note on etherization per rectum, which, so far as we know, is quite a novel device, is published by Dr. Molière, senior surgeon of the Hôtel Dieu at Lyons, in *Lyon Médical* (March 30th). The idea was first suggested to the writer by Dr. Yverson, of Copenhagen, who, at the conclusion of a visit to the Lyons hospital, asked what anæsthetic was used there. To the answer, ether, he asked how it was administered, by mouth or by rectum. This question was the cause of the experiments detailed. The first operation in which this method was used was upon a young girl of twenty, and was for the removal of a tumor in the parotid region. The ether was insufflated to the bowel by an atomizer, giving a mixture of air and ether. No sign of anæsthesia appeared for ten minutes. The patient then declared she felt a strong taste of ether in the mouth, which was confirmed by the odor of her breath. She then began to sob and to talk incoherently. A few drops of ether were then held before the nose, and she almost instantly fell into a deep sleep. The operation was performed without the inconvenience of a respirator. On the removal of the rectal canula at the close of the operation the patient awaked. The quantity of ether absorbed had been very small.

In subsequent cases a rubber tube of the size of the finger was introduced into the rectum and connected with a flask of ether which was plunged into a vessel of water at 50° C. The ether boiled, and its vapor passed into the bowel. In the second of the cases described, in five minutes the signs of ether intoxication were present, but as the patient then got up the anæsthesia was completed by inhalation. In the third case, where a finger was to be removed, perfect anæsthesia was secured by the rectal administration of the drug. Auscultation revealed the passage of bubbles of ether in the intestine, and the odor of the drug was distinct in the breath. At the most ten grammes of ether were used. No nausea or vomiting occurred.

As a result of the experience of Dr. Molière he concludes that this method of administration is likely to prove of great service. It suppresses, he claims, the period of excitement (this was especially noted in the case of a hard drinker, where experience teaches us usually to expect considerable excitement). It allows the quantity taken to be accurately measured, and reduces the amount necessary to a small quantity. It leaves the surgeon untrammeled by sponges and inhalers when operations are to be done on the face or mouth. It removes the disagreeable effects of inhaling the vapor. Further experiences of the method are promised us, and they will be awaited with interest.

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PROBABLE TRANSFIXION OF THE HEART, WITH RECOVERY.

In the *Edinburgh Medical Journal* (March, 1884) a case is reported of a woman with suicidal impulse, confined in an asylum, who was observed, just after getting into bed one night, to have become suddenly and violently ill, and medical aid was summoned at once. On its arrival she was found to be quite unconscious, very pale, skin cold and clammy, pupils widely dilated, but there was no conjugate deviation present; the features were drawn and altered, and the head was rolled rhythmically from side to side, patient moaning slightly at times. The radial pulse on the right side was very weak, that on the left almost imperceptible; rate 78 per minute. The left arm and leg were quite paralyzed so far as could be made out. The right arm was lifted and let fall feebly and aimlessly now and then. She had vomited a little, but no deleterious substance could be detected in the rejected matter by the rough examination possible at the time.

On palpation over the præcordia the cause of this rather puzzling condition was discovered. A knob about the size of a large pea was felt adhering to the chest wall, in the situation of the apex beat, and this proved to be the head of a large steel shawl-pin, about three and three eighths inches long, which the patient had succeeded in secreting, unobserved by the attendant in charge, and which she had thrust right into the chest, at the situation mentioned above, the part imbedded being directed slightly upwards and inwards, and measuring about two and three fourths inches. It was at once removed, and stimulants administered, and almost immediately the heart's action began to gain in force. The pulse became stronger and steadier, and consciousness slowly and gradually returned. For some time there was very urgent dyspnœa, and patient complained much of pain in the præcordia, but these unfavorable symptoms diminished as time went on, and after an hour had passed she was much better; the paralysis of the left side had disappeared; the pulse was steady, and of fair strength, rate 108 per minute, and she was quite conscious of what transpired around her. Four hours after the occurrence she was sick again, and vomited a little, but this soon passed off, and she fell asleep, and slept at intervals during the rest of the night, stimulants being given frequently in small doses. On the following day she complained of some pain at the site of puncture and of headache, but was otherwise pretty well, and her recovery after this proceeded without interruption.

The writer believes, from the point of puncture and the direction of the needle, that the heart was wounded near its apex. Reference is made to a similar case in Holmes's Surgery, and to another author who describes a tigress which lived for some time with seven lead bullets in her heart. The practical applications of these facts to the operation of cardiacentesis are of interest.

CARRIAGE OF PASSENGERS BY SEA.

In the United States House of Representatives, March 24, 1884, Mr. Slocum introduced the following bill: —

A BILL TO REGULATE THE CARRIAGE OF PASSENGERS BY SEA.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in every steamship or other vessel carrying or bringing passengers other than cabin passengers to the United States there shall be properly constructed and separated from other parts of the vessel two compartments or spaces to be used exclusively as hospitals, the one for the men and the other for the women, such hospitals to be located on the main deck or the deck immediately below it, and never on any lower deck, and to be in no case less in size than the proportion of eighteen clear superficial square feet for every fifty such passengers and crew; and such hospitals shall be supplied with proper beds, bedding, and utensils, and kept so supplied throughout the voyage.

Sec. 2. That every steamship or other vessel carrying or bringing passengers other than cabin passengers exceeding, with the crew, fifty in number, and less than six hundred, shall be required to carry a duly qualified, competent, and regularly licensed surgeon or medical practitioner, and where the number of such passengers and crew is over six hundred a junior or assistant surgeon or medical practitioner in addition, which surgeons or medical practitioners, junior and senior, shall be rated as such on the ship's articles, and shall be provided with surgical instruments, medical comforts, and medicines proper and necessary for diseases and injuries incident to a sea-voyage, and for the proper medical treatment of such passengers and crew during the voyage, and with such articles of food and nourishment as may be proper and necessary for preserving the health of infants and young children; and the services of such surgeons or medical practitioners shall be promptly given without fee in every case of sickness, disease, or accident to any of the passengers or crew, or to any infant or young child of any such passenger who may require their services; and the medical officer, where there is but one, and the senior where there are two, shall also be required to perform the duties of sanitary officers, to make daily inspections of all inhabitable portions of the vessel, and daily reports thereon in writing to the master of the steamship or passenger vessel, together with such suggestions and recommendations as in his judgment may be necessary to the preservation of health on board. He shall also exercise constant vigilance in regard to the condition of the provisions and water, and promptly report to the master anything which may appear to him to be deleterious to the health of any person on board.

Sec. 3. That for the proper exercise of these functions and the maintenance of the respect to which such medical and sanitary officers are entitled, they shall be provided with a steward or apothecary competent to dispense medicines under their direction and for their special service; and their tenure of office, remuneration, and right to suitable quarters, subsistence, and attendance shall be upon the same basis as and coordinate with the purser, first officer, and chief engineer of the vessel on which they serve.

Sec. 4. That for a violation of either of these provisions, or the disregard of the recommendations made in writing by the medical and sanitary officers as herein provided, the company to which the steamship or other passenger vessel belongs shall be liable to a penalty not exceeding two hundred and fifty dollars in every case.

Errata. — On page 157 of our present volume, number of February 14th, it should have been mentioned that the chamois leather bag devised by Dr. J. C. Warren as a substitute for strapping the testicle and for the treatment of hydrocele, of which a cut was given, could be obtained from Messrs. Leach & Greene, of Boston.

The Journal in its issue for April 10th, page 358, inadvertently spoke of an address to the Massachusetts Legislature on Adulterated Drugs as having been signed by all the living ex-presidents of the Massachusetts Medical Society. Besides the signers of this document two of the former presidents of the State Society are still in the enjoyment of life and the esteem of their several communities, — Dr. Samuel A. Fisk, of Northampton, president from 1870 to 1872, and Dr. William Cogswell, of Bradford, who served from 1876 to 1878.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 12, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	625	252	14.40	18.56	1.76	6.08	1.12
Philadelphia	927,995	404	158	12.25	14.25	1.75	4.50	1.25
Brooklyn	644,526	230	67	6 88	20 93	.86	2.15	1.72
Chicago	632,100	236	129	18.06	10.75	6.30	2.10	2.10
Boston	423,800	138	37	16.79	16.06	2.19	5.11	3.65
Baltimore	408,520	128	48	14 60	17.94	2.34	2.34	.73
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	116	30	12.04	19.78	2.58	2.58	2.58
New Orleans	234,000	122	45	22 14	11.48	2.46	—	.82
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	105	35	9 52	19 00	.95	2.85	3.80
Pittsburg	180,000	75	37	7.98	9.31	—	3.99	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	14	2	7.14	21.42	—	7.14	—
Nashville	54,400	21	6	9.52	9.52	—	—	—
Charleston	52,286	46	15	14.98	12.84	4.28	—	—
Lowell	71,447	34	8	14.70	32.34	5.88	—	—
Worcester	69,442	24	11	12.48	16 64	—	4.16	4.16
Fall River	62,674	16	5	6.25	12.50	—	6.25	—
Cambridge	60,995	15	0	—	40.00	—	—	—
Lawrence	45,516	8	1	12.50	12.50	—	—	—
Lynn	44,895	12	3	—	33.33	—	—	—
Springfield	38,090	10	4	10.00	20.00	—	10.00	—
Somerville	31,350	8	0	12.50	25.00	—	—	—
Holyoke	30,515	7	3	28.56	—	—	14.28	—
New Bedford	30,144	14	3	7.14	14.28	—	7.14	—
Salem	29,503	5	1	—	20.00	—	—	—
Chelsea	24,347	10	2	10.00	—	10.00	—	—
Taunton	22,693	4	0	2.50	—	—	—	2.50
Gloucester	21,400	6	2	—	16.66	—	—	—
Haverhill	20,905	9	4	11.11	11.11	—	—	11.11
Newton	19,421	6	2	—	16.66	—	—	—
Brockton	18,323	3	2	33.33	23.33	33.33	—	—
Malden	15,273	[8	3	—	—	—	—	—
Newburyport	13,947	5	1	—	—	—	—	—
Fitchburg	13,433	7	4	14.28	14.28	—	—	—
Eighty-one Massachusetts towns	472,743	76	9	7.92	9.24	1.32	1.32	—

Deaths reported 2547 (no reports from St. Louis, Buffalo, Milwaukee, and Providence): under five years of age, 920: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 334, consumption 426, lung diseases 321, diphtheria and croup 93, diarrhœal diseases 55, scarlet fever 38, measles 33, typhoid fever 33, whooping-cough 19, small-pox 14, cerebro-spinal meningitis 14, malarial fevers 13, erysipelas 11, puerperal fever 10, typhus fever one. From *measles*, New York 15, Baltimore eight, New Orleans four, Chicago three, Philadelphia two, Brooklyn one. From *typhoid fever*, Philadelphia nine, Boston four, Charleston three, Chicago, Baltimore, Cincinnati, and Pittsburg two each, New York, Brooklyn, District of Columbia, Nashville, Lowell, Lawrence, Acton, Chicopee, Spencer, and Marblehead one each. From *whooping-cough*, New York six, Chicago five, Baltimore two, Philadelphia, Brooklyn, Cincinnati, and Pittsburg one each. From *small-pox*, New Orleans 13, Nashville one. From *cerebro-spinal meningitis*, New York five, Philadelphia three, Chicago, Boston, New Orleans, Lowell, Worcester, and Quincy one each. From *malarial fevers*, New York four, New Orleans three, Chicago and Charleston two each, Boston and Cincinnati one each. From *erysipelas* Chicago three, New York, Philadelphia, Brooklyn, Boston, Baltimore, Cincinnati, New Orleans, and District of Columbia one each. From *puerperal fever*, Philadelphia three, Chicago two, New York, Brooklyn, Boston, Lowell, and Holyoke one each. From *typhus fever*, New York one.

Two cases of small-pox were reported in Cincinnati; scarlet fever 43, diphtheria 14, and typhoid fever two, in Boston.

In 100 cities and towns of Massachusetts, with an estimated population of 1,394,472 (estimated population of the State 1,955,104), the total death-rate for the week was 16.00 against 16.77 and 18.21 for the previous two weeks.

In the 28 great towns of England and Wales, with an estimated population of 8,762,354, for the week ending March 29th, the death-rate was 20.8. Deaths reported 3495: acute diseases of the respiratory organs (London) 359, whooping-cough 154, measles 135, scarlet fever 73, fever 41, diphtheria 20, small-pox (London 11, Liverpool and Sunderland two each, Birmingham and Newcastle one each) 17. The death-rates ranged from 12.5 in Derby to 30.7 in Halifax; Bradford 15.9; Birkenhead 17.8; Leicester 18.9; Sunderland 19.1; Sheffield 19.8; Nottingham 20.3; London 20.4; Birmingham 20.8; Leeds 21.5; Liverpool 22.2; Manchester 27.1. In Edinburgh 21.6; Glasgow 27.4; Dublin 27.2.

For the week ending March 29th, in the Swiss towns, there were 54 deaths from consumption, lung diseases 31, typhoid fever 37, diarrhœal diseases 11, diphtheria and croup 11, whooping-cough eight, scarlet fever one, erysipelas one. The death-rates were, at Geneva 31.6; Zurich 25.6; Basle 16.3; Berne 27.8.

The meteorological record for the week ending April 12th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
April, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 6	29.595	40	52	32	85	62	84	77	NW	W	NW	13	9	11	O	C	F	—	—
Mon., 7	29.713	42	48	35	87	73	77	79	NW	NW	NW	7	5	8	T	O	O	—	—
Tues., 8	29.918	39	44	35	88	90	99	92	NW	E	E	7	9	5	O	O	O	—	—
Wed., 9	29.679	36	38	33	100	100	100	100	E	NE	NE	10	19	19	O	R	R	—	—
Thurs., 10	29.505	38	41	33	100	89	94	94	N	NW	NW	13	16	3	R	R	O	—	—
Fri., 11	29.866	41	48	36	86	90	78	85	NW	SE	NW	6	6	7	F	O	C	—	—
Sat., 12	30.030	45	57	35	78	48	67	61	W	W	W	8	12	6	C	O	C	—	—
Mean, the Week.	29.758	41	47	34				84										51.10	.62

[1] O., cloudy; C., clear; F., fair; G., fog; H., sleet; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM APRIL 12, 1884, TO APRIL 18, 1884.

Baily, Joseph C, major and surgeon. Leave of absence extended three months. By paragraph 8, S. O. 83, A. G. O., April 10, 1884.

Newton, R. C., first lieutenant and assistant surgeon. Relieved from duty at Fort Sill, Indian Territory, and ordered to Fort Elliott, Texas, for duty. Paragraph 1, S. O. 77, headquarters Department of the Missouri, April 14, 1884.

Pilcher, James E., first lieutenant and assistant surgeon. Assigned to duty at Camp Poplar River, Montana. Paragraph 2, S. O. 37, headquarters Department of Dakota, April 7, 1884.

Chapin, Alonzo R., first lieutenant and assistant surgeon. Relieved from duty at Fort Douglas, Utah, and ordered to Fort Laramie, Wyoming, for duty. Paragraph 2, S. O. 33, headquarters Department of the Platte, April 15, 1884.

Wales, Philip G., first lieutenant and assistant surgeon. Ordered to report to the commanding general, Department of the Columbia, for assignment to duty. Paragraph 11, S. O. 84, A. G. O., April 11, 1884.

LIST OF OFFICIAL CHANGES IN STATIONS OF MEDICAL OFFICERS UNITED STATES NAVY FOR WEEK ENDING APRIL 19, 1884.

Wales, P. S., medical director, to continue on duty as member of Ration Board.

Wells, H. M., surgeon, to special duty at Hot Springs, Ark.

Peck, George, medical director, ordered as President of Board of Medical Officers detailed for special duty at Coaster's Island, near Newport, R. I.

Gorgas, A. C., medical director, **Wise, I. C.**, surgeon, members of above Board.

Nelson, H. C., medical inspector, detached from Navy Yard, Washington, and placed on waiting orders.

McMurtrie, D., surgeon, ordered to duty at Navy Yard, Washington.

Suffolk District Medical Society. Special Meeting. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, April 30th, at 7.45 o'clock. Dr. H. J. Barnes will read a paper on Sewage Systems, and the Epuration of Sewage by Irrigation and Agriculture, with a description of this method of disposal of the sewage of cities as illustrated in Berlin, Paris, Danzig, Breslau, and other large towns.

Albert N. Blodgett, M. D., *Secretary.*

Robert T. Edes, *Chairman.*

The Medical Society of the State of Pennsylvania holds its thirty-fifth annual session at Philadelphia, May 14, 15, and 16, 1884. Sessions from ten A. M. to five P. M., with intermission one P. M. to two P. M., at Annex to Union League, Broad Street below Chestnut. (Entrance on Moravian Street above Broad.)

Appointments. — Dr. John H. McCollom has been reappointed City Physician of the City of Boston, and Dr. Arthur G. Griffin Port Physician for one year from the first Monday in May. The renomination by the Mayor of Dr. S. H. Durgin as member of the Boston Board of Health not having been confirmed by the Common Council Dr. Durgin retains office under the rules until an appointment is made.

Drs. W. W. Gannett and F. B. Harrington have been appointed Physicians to Out-Patients at the Massachusetts General Hospital.

Dr. Robert T. Edes has been nominated by the Medical Faculty of Harvard University to the chair of Clinical Medicine rendered vacant by the death of Dr. Calvin Ellis.

Books and Pamphlets Received. — Drugs and Medicines of North America. A Quarterly devoted to the Historical and Scientific Discussion of the Botany, Pharmacy, Chemistry, and Therapeutics of the Medicinal Plants of North America, etc. J. U. Lloyd. C. G. Lloyd, Cincinnati. 1884. Vol. I. No. 1.

Annual Report of the Librarian of Congress, exhibiting the Progress of the Library during the Year 1883. Washington. 1884.

A Comparison of Total and Manifest Hypermetropia as determined by the Prisoptometer, with and without the Use of Mydriatics. By H. Culbertson, M. D., Assistant Surgeon U. S. A. (retired). (Reprint) 1884.

Seventieth Annual Report of the Trustees of the Massachusetts General Hospital and McLean Asylum, 1883. Boston. 1884.

Aneurism of the Femoral Artery and a Knife Wound of the Intestines. By W. O. Roberts, M. D. (Reprint.) Louisville, Ky. 1884.

Neurological Specialism. Presidential Address delivered at the Annual Meeting of the New York Neurological Society May 1, 1883. By W. J. Morton, M. D., New York. (Reprint.) 1883.

Transactions of the Rhode Island Medical Society. Vol. III. Part I. 1883. Providence. 1884.

Dictionnaire Annuel des Progrès des Sciences et Institutions Médicales. Par M. P. Garnier. Dix Neuvième Année, 1883. Paris: Germer Baillière et Cie. 1884.

Annuaire de Thérapeutique de Matière médicale de Pharmacie et d'Hygiène pour 1884 contenant le résumé des travaux thérapeutiques et hygiéniques publiés en 1883, etc. Par A. Bouchardat et par J. Bouchardat. 44e Année. Paris: Ancienne Libraire Germer Baillière et Cie. Félix Arcan, Editeur.

Twelfth Annual Announcement of the American Medical College of St. Louis, 1884–85.

Seventeenth Annual Report of the Directors of the Massachusetts Infant Asylum. Presented to the Corporation at the Annual Meeting, April 8, 1884. Boston. 1884.

Peroxide of Hydrogen in Suppurative Conjunctivitis and Mastoid Abscesses, with a Report of two Cases. By A. E. Prince, M. D., of Jacksonville, Ill. (Reprint.) St. Louis, Mo. 1884.

Original Articles.

TYPHLITIS AND PERITYPHLITIS.[1]

BY LEONARD WHEELER, M. D., WORCESTER, MASS.

I AM happy to be able to say that Hippocrates knew nothing about this matter of pericæcal abscess, nor did any of his successors for many centuries; happy because it is pleasant to come upon new ground now and then, and not be always reminded that we are merely recovering what shiftless intervening ancestors have forgotten. This subject we have somewhat cosily to ourselves, and all confined to the last half century.

French surgeons in 1825 to 1835 began to talk scientifically of inflammations in the right iliac fossa, but Dupuytren and his contemporaries failed to connect them with their commonest origin in disease of cæcum and appendix. A true understanding of the origin and course of these inflammations was first reached by Dr. Burne, of London, who, in 1836 and 1838, published two papers in vols. xx. and xxii. of the Medico-Chirurgical Transactions. In 1844 a model article on the subject was published in Copland's Dictionary of Medicine.

The methodical diagnosis and scientific surgical treatment of *pericæcal abscess* dates no further back than the prime of a man still living, Dr. Willard Parker, who, in 1867, published in the *New York Record* a paper upon the subject, in which he advocates free incision, even though there be no fluctuation, if the disease has existed over five days, and there be a reasonable suspicion from the symptoms of the case that pus has formed. Dr. Parker had, indeed, been anticipated by Mr. Henry Hancock, of London, who, in 1848, reported a case of perityphlitic abscess, and reasoned in much the same way in regard to treatment. The article was reprinted in the *American Journal of Medical Science*, but it was the report of only one case; it failed to establish any principle, and was forgotten. It was almost twenty years before Dr. Parker reached anew and independently the same point, and "employed successfully a method of treatment which may be said to have disarmed this disease of its terrors, and changed its issue from one almost invariably fatal to the reverse." This expression, which I have quoted from Dr. Gurdon Buck, is rather extravagant, for even before Dr. Parker's method came into use the fatality was probably not above fifty per cent. The next excellent paper was by Dr. Gurdon Buck, in the Transactions of the New York Academy of Medicine, 1874. He tabulates thirteen cases of operation, all successful. This paper was reprinted in 1876 along with two others by the same author in a pamphlet, to which was given the general title Abscesses in the Lower Abdominal Cavity and its Parietes. He dwells upon the anatomical arrangement of the fasciæ, which determine the direction of the migration of purulent matter in this region. The whole pamphlet is a valuable addition to the literature of the subject. In 1880 Dr. H. B. Sands published a paper in Annals of the Anatomical and Surgical Society of Brooklyn. He analyzes twenty-six cases, eleven of operation, of which one died. One other paper deserves mention as contributing to the development of the surgical treatment of these forms of abscess, namely, one by Dr. R. F. Noyes, of Providence, published in the Transactions of the Rhode Island Medical Society, 1882. Dr. Noyes tabulates one hundred cases of operation. The mortality was fifteen per cent.

Text-books are only just now beginning to incorporate the results of these studies. It is only in the very latest editions that a satisfactory treatment of the subject is found, such as Packard's Edition of Holmes, 1881, and the last edition of Gross, 1882. Dr. Sands, writing in 1880, says: "What is known about (perityphlitis) has not yet been embodied in the standard surgical text-books, but remains scattered among the pages of current medical literature." As to books on the practice of medicine, many of them, especially Ziemssen and Quain's Dictionary, contain excellent medical articles, but they do not indicate with sufficient clearness and emphasis where surgery should step in.

The following case lately turned my attention to the subject, and led me to select it for your discussion this evening: —

Mrs. H., aged thirty, mother of one child eight years old, called at my office January 8, 1883, complaining of a pain in right lower abdomen. In the summer of 1881 she had had a good deal of general abdominal discomfort and pain associated with constipation, and had slight and brief attacks of similar trouble since. More recently she had been under my care for a prolapsed and inflamed right ovary, and I at first associated the pain complained of with this. I made a careful examination, external and internal, and could find nothing to account for the pain. After a week she came again, and I found a small tumor in the right groin, which I thought an inflamed inguinal gland. It was small, superficial, not freely movable, and only slightly tender. There was pain in the inguinal region, but no considerable costiveness, no nausea, no marked fever, no deep tumor or extreme sensitiveness, and no fluctuation in the superficial tumor. February 1st, end of three weeks, during which the patient had been about until the last few days, fluctuation was distinct, skin becoming red, percussion flat. I opened the abscess by a small incision. An ounce of foul-smelling pus escaped, and a few bubbles of gas. Meanwhile, though the appetite had failed, there was no great pain, the temperature was only slightly raised, there had been no rigor, the bowels were only moderately constipated, not unusually so. There was nothing to excite any unusual apprehension except the bubbles of air, which made an intestinal perforation probable. February 13th the whole abscess cavity outside the abdominal muscles was laid open, and an opening through the fascia carefully sought with a probe, but none found. March 1st the spindle-formed cells of orange pulp (intestinal contents) were noticed in the discharge from the wound. April 13th a search with the probe still failed to discover the abdominal opening until the granulations in the bottom of the wound were scraped clean away, when an opening just about large enough to pass a silver probe was found above the middle of Poupart's ligament. Through this a somewhat devious sinus led to the cavity of the intestine one and one half or two inches away. A short time after this, air, and later fæcal matter, in small amount, began to pass with the urine. Later still a small amount of urine came through the wound. The amount of fæces or urine passing by the wound was never large enough to give much trouble, but the appetite failed entirely, the patient gradually wasted, and died of exhaustion ten months after the beginning of the trouble.

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[1] Read before the Worcester Society for Medical Improvement.

The autopsy showed firm adhesion of the cæcum to the abdominal wall and iliac fossa by a thick mass of hard tissue. There were no adhesions to other parts of the intestine. A crooked sinus, one inch in length, passed from the abdominal wall through the thick mass of hard tissue mentioned above as binding the cæcum to the abdominal wall, and entered the cæcum through an opening one fourth inch in diameter. From this sinus a branch about two inches long communicated with the bladder. The colon just above the perforation was much contracted and thickened, while the mucous surface both above and below was studded with numerous small ulcers.

My explanation of the course of the disease in this case is that it began long before in an affection of the mucous coat of the cæcum, resulting in ulceration; adhesions were formed as the disease approached the serous surface. Then the connective tissue gradually thickened as the disease advanced, and hence the tough mass in which the cæcum was found imbedded, and by which it was firmly bound to the abdominal wall and iliac fossa. A passage was slowly made by ulceration through the abdominal fascia before any extensive accumulation of pus was made behind it. The sinus leading to the bladder must have been formed in part, if not wholly, after the external opening was made.

A little consideration of the anatomy of the parts involved helps to an understanding of the varied course of inflammations of this locality. The cæcum, two and one half inches long by two and one half inches wide, lies, with the appendix vermiformis and the beginning of the ascending colon, in the right iliac fossa, separated from the iliac bone on one side by the iliacus muscle, and from the vertebræ on the other by the psoas magnus. The appendix, from two to six inches long, is usually found at the end of the cæcum, interiorly and posteriorly, and curling upward and inward. The appendix is almost entirely covered with peritonæum. The cæcum and colon are covered anteriorly by peritonæum, but posteriorly are imbedded in connective tissue, which intervenes between the bowel and the iliac fascia. Now this iliac fascia is of the utmost importance, for, like all fasciæ, it serves to guide the migration of pus whether the abscess be above or under it. It is attached externally to the crest of the ilium as far forward as the anterior superior spinous process, and interiorly to the brim of the true pelvis. Below it helps to form the outer half of Poupart's ligament, and continues down the thigh as the fascia lata. Above it extends far upward over the psoas muscle quite to its attachments. The crural arch, which is spanned by Poupart's ligament, is divided into two parts by a prolongation downward to the bone, inserted into the ilio-pectineal eminence, and continued downward in the thigh as an intermuscular septum. The outer part of the arch gives passage to the muscles, the inner to the vessels.

An abscess may be formed over or under this fascia. If under, the pus will find its way along the psoas and iliacus muscles, and under the *outer* half of Poupart's ligament, and may best be evacuated by an incision of the fascia lata of the thigh. If the pus forms above the fascia iliaca, as in the diseases which we are considering, the pus creeps along between the fascia and the peritonæum, and is best evacuated by an incision through the abdominal fascia, and as soon as may be, lest in seeking its most eligible route it break through into the peritoneal cavity or bowel. If allowed to continue its course in the most eligible route, and it does not break through into the peritoneal cavity, owing to protective adhesions and thickening, it follows the iliac vessels, and emerges under the *inner* end of the crural arch, and into the inner side of the thigh. Bartholow states that it takes this direction in two thirds of the cases.

I have included typhlitis in my subject only because perityphlitis is inseparable from it. Any inflammation of the cæcum or appendix may result in an inflammation of the surrounding tissue, may eventuate in abscess. Though most cases of typhlitis get well without a perityphlitis, and many a perityphlitis advances no farther than a phlegmon and ends in resolution.

The most common cause of inflammation beginning in cæcum or appendix is a mechanical one. Some foreign body or a mass of hardened fæces remains long enough to irritate and inflame the mucous membrane. A mass of fæces impacted in the cæcum and colon may contain matters swallowed months before. A great variety of foreign substances have been reported in different cases as causes of ulceration or as the foundation of concretions, such as kernels of various grains, the stones or seeds of fruits, beans, a piece of bone or cartilage, a pin, nail, bristle, shot, gall-stones, inspissated mucus, a mass of ascarides' eggs, a bundle of lumbricoid worms. An idiopathic catarrh may occur here, as in other mucous tracts. Disease may arise from injury or follow certain constitutional diseases, as typhoid or tuberculosis. Disease of the cæcal mucous membrane arising from either of these causes may be slight and transient or severe in any degree, though probably not fatal except indirectly by perforation of the bowel. The lighter, simply catarrhal cases of typhlitis are more common in children. The severe cases of ulcerative inflammation are more apt to be met with in adult life, and it is an important fact in connection with them that they are very liable to relapse. Cases are recorded by more than one author of a dozen relapses in the same individual.

I shall say a few words in regard to symptoms, diagnosis, prognosis, and treatment, not attempting to speak fully of either.

Symptoms. An attack of typhlitis is more common in young males. It is usually abrupt, though often preceded by an irregularity of the bowels. At the time of the attack the bowels are usually constipated. Pain and tenderness are complained of in the right inguinal region, there is slight fever and probably vomiting, and the attack may pass off with no greater trouble than this. Such cases are considered common, and are often repeated in the same individual. I have never come across one, however, or if I have, have not recognized it. The attack may be something more severe than this, a tumor be demonstrable, the right leg drawn up, and the decubitus on the right side in order to diminish pressure on the diseased part. The great majority of *such* cases even recover without the formation of abscess or development of peritonitis after a duration of from three or four to ten or twelve days, though an induration may remain for months.

Perityphlitis by no means necessarily implies abscess. The symptoms of the most formidable cases are similar to the above except in degree until perforation occurs or an abscess forms. A perforation into the peritoneal cavity makes itself very promptly known by the symptoms of acute general peritonitis. A perforation into the post-cæcal cellular tissue is not so manifest, nor is it easy to know when suppuration begins.

Diagnosis. The number of diseases with which typhlitis and perityphlitis may be confused is large, but in most cases it only seems necessary to have the disease in mind in order to discover it. Mr. Maunder, of London, was called to tap an ovarian cyst, and found a cæcal abscess. Dr. Fordyce Barker narrates two cases, both seen by eminent counsel. The first patient was the wife of a physician, who proved to have a pelvic hæmatocele, although the diagnosis had been perforation of the appendix. The second was daughter of a physician, who proved to have a perforation of the appendix when the diagnosis had been pelvic hæmatocele.

Prognosis. The prognosis in typhlitis in which no perforation occurs is good. The patients almost invariably recover. When there is a perityphlitis not suppurating the danger is from recurrences, in which suppuration may take place. Dr. Wm. Pepper has a paper in the Transactions of the Pennsylvania Medical Society for 1883, in which he lays particular stress upon this liability to recurrence, and gives one case of twelve relapses. If the disease goes on to perforation, then the result depends in great measure upon the course taken by the pus and the surgical means employed. A perforation through any part covered by peritonæum, including thus nearly all perforations of the appendix, is a desperately fatal accident. It is possible that adhesions precede the perforation, so that an opening is made directly or through the medium of an intraperitoneal abscess into one of the hollow viscera or through the abdominal wall. If a perityphlitic abscess forms, the most favorable course for the pus is through the cæcum or rectum. Perforation through the abdominal wall is not so favorable. Of twenty-eight cases collected by Dr. Bull, of New York, eleven were fatal.

Treatment. In non-perforative cases, if there is much pain and tenderness, opium is proper until there is less, then small doses of saline laxative guarded by a small opiate, for it is desirable to relieve the cæcum of contents, both for the sake of diagnosis (to exclude impaction) and to relieve the patient of pain caused by the distended gut. At the same time externally a poultice, ice, or counter-irritation, may be used. Calomel is used by English practitioners generally, and is now and then mentioned by Americans. If an abscess has formed it is to be evacuated immediately, and if there is a reasonable belief that pus is present, although no fluctuation is found, the surgeon is justified in or is required to test the belief by aspiration or incision. Upon the point of the diagnosis of pus Dr. Sands writes: "Rigor, sweating, high temperature, acceleration of pulse, abdominal pain and tympanitis, and an increasing extent combined with diminishing firmness of the abdominal tumor are the chief signs which indicate the formation of pus. But none of these signs is invariably present, and it would be a difficult matter to say which one of them is the most important. But although in the early stages of the disease it may be impossible to discriminate between the cases that are going to terminate by resolution and those that are to end in suppuration, the latter may usually be distinguished toward the close of the second week by the general unfavorable condition of the patient, who seems to be growing worse instead of better; whereas when resolution is about to take place, the later course of the disease is comparatively mild and favorable." The smallest aspirator needle may be freely used to decide the diagnosis. The operation is done by making an incision parallel with Poupart's ligament through the successive layers of the abdominal wall until the fascia transversalis is reached; the pus is then sought by the needle if fluctuation is not present, and the abscess then opened sufficiently to allow the entrance of a finger to explore the cavity for foreign bodies. Fæcal odor and the presence of bubbles of gas in the abscess do not prove the existence of a perforation of the intestine, though making it very probable. It is well to be aware that a perityphlitic abscess may be quite behind the colon and extending far upward toward the liver. In such case it would have to be approached from the side. Dr. Noyes, of Providence, has tabulated one hundred cases of this operation. The mortality was fifteen per cent. In Dr. Bull's sixty-seven cases of abscess tabulated in 1872, before the operation came much into use, the mortality was forty-seven per cent.

In cases of perforation into the peritoneal cavity it has been proposed to make an abdominal section, clean out the cavity, and stitch the opening to the abdominal wound. But the difficulty of diagnosis is too great to allow of spending much hope upon this idea.

CRITICISMS, FROM A CHEMICAL POINT OF VIEW, ON SOME FAVORITE PRESCRIPTIONS.[1]

BY HENRY LEFFMANN, M. D.

THE few points that I present to the College this evening will include little that is absolutely new, but I think the time will not be entirely wasted, as I know that the prescription list of most of our drug stores will give numerous examples of the violation of chemical principles here mentioned. My attention was called to this topic by my being shown by an apothecary a prescription calling for syr. hypophosph., tinc. ferri chlor., acid. phosp. dil., concerning which he said that in the proportions ordered he could never make the mixture up clear. I examined the precipitate, and found in it, as I had expected, a large proportion of the iron and other basic ingredients. This is a simple case of incompatibility. Turning the matter over in my mind, it has seemed to me that while some attention is paid to cautioning students as to the general nature of incompatibility, very little or none is given, especially in the shallow chemical teaching of many medical schools, to the properties and qualities of chemical substances in their relations to the animal tissues and the manner of administration. I present here, therefore, a brief consideration of a few well-known remedies.

Under the name of *colorless tincture of iodine* several preparations are used, depending for their popularity on the fact that they do not stain the skin. They are prepared either by the use of ammonia or of sodium sulphite or hyposulphite. They owe their particular property, or rather absence of property, to the neutralization of the iodine, and just to the extent that the iodine is decolorized is it to the same extent deprived of virtue. The free active affinity of the iodine, to which its local action must be due, is destroyed in these preparations, and the destruction is not slow or uncertain, but in two of the methods mentioned it is sufficiently rapid and definite to be made the basis of a method of quantitative analysis. It is certainly difficult to see how any person could go so wide of simple chemical principles as to invent or employ this mixture.

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[1] Read before the College of Physicians of Philadelphia, April 2, 1884.

Potassium chlorate, or, as it is still erroneously called by many, chlorate of potash, is a remedy concerning which extraordinary claims have been made, based upon most erroneous notions of its chemical qualities. It is employed in the laboratory as a source of oxygen. Knowledge of this fact has led to its employment as an oxidizing agent in diseases which have been supposed to express deficient oxidation. I have nothing to say here as to the clinical results obtained from potassium chlorate in any disease, — although I believe it is much less in favor than formerly, — but I enter a protest against any advocacy of its usefulness as an oxidizing agent. Under temperatures and conditions such as those which it meets in the human system it is one of the most stable of bodies, does not part with its oxygen or chlorine, and, indeed, will not begin to do so except under very high heat. I have found by actual experiment that ten grains of the salt kept for two hours at a temperature of 100° F. in contact with an artificial gastric juice did not develop oxidizing qualities sufficient to oxidize one sixtieth of a grain of phosphorus. This experiment is merely confirmatory of what everyday experience with the substance teaches.

Potassium permanganate has been more or less in favor with physicians for a score of years. It is well known as an oxidizing agent, its powers in this respect are well marked. It is as little suitable for internal administration for such purpose as the body just considered, but for an opposite reason. Its chemical properties are developed by almost every substance, and in the doses in which it is given it will be decomposed and rendered inert very shortly after being swallowed. Within a very recent period the salt has come into notice as a remedy for amenorrhœa, and great has been the tribulation of apothecaries. It has been given in pill form, and all the usual excipients have been unavailable. I have made a few tests of the permanganate pills now in the market, and I find with regard to those made by one of the most reliable houses in this city that the permanganate is all decomposed and converted into the insoluble manganese dioxide. The preparations of two other manufacturers made up with some mineral excipient, probably kaolin, were in good condition, but as soon as placed in a mixture of hydrochloric acid and pepsine they begin to decompose into insoluble manganese oxide. These pills vary in strength from one eighth to one grain. This small quantity of permanganate certainly must soon decompose in the stomach, and the only virtue which it can have is from the manganese itself, and if this is effective common sense would seem to suggest that the result could be best obtained by exhibiting some definite compound of manganese, such as the chloride or sulphate. When we consider the chemical relations of the salt, and almost certain inertness of it in small doses, the gravity with weich the learned English therapeutists, who recommended it in amenorrhœa, have discussed the possibility of its producing abortion, becomes almost burlesque. I do not desire, of course, to impugn the clinical observations that have been recorded on this point, but I feel obliged to say that if the insoluble and variable decomposition products of one eighth of a grain of potassium permanganate can affect the function of any one organ, then the difference between us and the apostles of the infinitesimal is small indeed.

I cannot dismiss these two compounds, which owe their popularity to mistaken notions of their properties, without saying a word or two as to the exhibition of oxidizing agents. If rational therapeutics or physiological study indicates remedies of the so-called oxidizing class, then it will be found that no better agents are known to us than those which have long been in our hands. In nitric acid, nitro-muriatic acid, and chlorinated soda we have substances which are sufficiently stable to resist the organic bodies of the saliva and gastric juice, and are sufficiently active to give oxidizing effects if such (other than local action) can be obtained. I have grave doubts whether the nutritious fluids of the body can be oxidized by any method, but there can be no doubt whatever that such effect cannot be attained by either a body — potassium chlorate — which yields its oxygen only at a red heat, nor by one — permanganate — that decomposes the moment it touches any form of organic matter. Some years since a correspondent in one of our medical journals gravely recommended the use of raspberry syrup to disguise the taste of potassium permanganate. It was of course entirely successful, the taste was destroyed, so was the compound.

Caffeine citrate is a remedy much in favor, and is a remarkable instance of how much physicians take for granted in the remedies they use. There is no caffeine citrate in the market, and it is doubtful whether any such a salt can be prepared. The commercial preparations are either pure caffeine or variable mixtures of it with citric acid.

The manufacturers in this city each furnish a different article, except in cases in which they buy from a common source; and a house in a neighboring city furnishes an article which contains no citric acid. Some of the samples are purely bitter in taste, while others are distinctly sour. Analyses of some of the commercial salts are recorded in a paper read before the last meeting of the American Pharmaceutical Association by Dr. G. C. Wheeler. He found the quantities of caffeine varied from 96.5 per cent. to 63.5 per cent.; of citric acid from 63.5 per cent. to 3.5 per cent.; none of these figures correspond with the proportion of a true citrate.

It seems to me that accurate clinical observation cannot be made with a preparation of so uncertain a character; for, as seen by these figures, the proportion of active ingredient may vary thirty-three per cent., and the lesson that these analyses teach us is that when the effects of caffeine are wanted they are best obtained by the use of the pure alkaloid, and not by a pretended and uncertain compound of it.

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HISTORY OF A CASE OF PERIHEPATIC ABSCESS.[1]

BY EDWARD T. BRUEN, M. D.,
Physician to the Philadelphia Hospital, Demonstrator of Clinical Medicine in the University of Pennsylvania.

THE accompanying specimen exhibits an abscess which has occurred between the diaphragm and the liver. The abscess contained nearly a pint of laudable pus. The superior wall of the abscess was the diaphragm, and the inferior the perihepatic capsule; the hepatic substance was not involved; indeed, the liver was normal. There were evidences of catarrhal inflammation in the colon, and one or two nearly cicatrized ulcers. The only other lesion in the body was found in the right pleural cavity, the lower portion of which was obliterated by inflammatory adhesions.

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[1] Read before the College of Physicians of Philadelphia, April 2, 1884.

The clinical diagnosis presented some interesting features.

The patient, a young man aged twenty-eight, was admitted to the Philadelphia Hospital November 30, 1883. His previous history indicated that he had suffered from an attack of dysenteric diarrhœa four weeks before his admission, although he had convalesced from this attack. He was evidently much emaciated. The temperature until December 8th ranged from 100° F. to 102° F.; from December 14th, from 99° F. to 101° F., after which it never rose above 99⅖° F. in the evening, and was always 98° F. in the morning; this continued until the fatal termination of the case on the 20th instant. The pulse was usually above 100. There was occasional sweating; no chills. Extreme tenderness was felt over the hepatic region, associated with pain during the first ten days, the hepatic dullness extending four inches in the nipple line, and about five inches in the axillary region. Physical examination of the chest upon the right side revealed the evidences of a dry pleurisy; there was some cough, which was dry and hard, but not very annoying. Appetite and digestion were fairly good. Urine normal.

The diagnosis of hepatic abscess was made during the first week, chiefly because the symptoms of hepatic lesion, already detailed, were antedated by dysenteric diarrhœa. The pleural lesion was regarded as a secondary inflammatory process engendered by hepatic disease. On December 10th all symptoms of pain and tenderness had vanished; the patient's strength, appetite, and general condition markedly improved; the temperature had fallen to 99° F., so that the diagnosis was revised to that of perihepatitis. From December 10th the improvement continued until the 20th, when, after an attack of vomiting, the patient suddenly died.

The autopsy appeared to prove that the inflammation which resulted in the formation of the abscess was primary in the pleura, and the secondary irritation developed the local peritoneal process.

The symptoms of abscess in the hepatic substance are frequently latent. I recall one instance of a patient admitted October 9, 1877, who walked to the hospital and remained under treatment until the 15th, suffering from apparent remittent fever. The day of his death he rose, in the absence of the nurse, and walked down-stairs to smoke a pipe; that afternoon he had a hæmorrhage from the bowels, and died. The temperature of this patient was between 99° F. and 101° F., and the clinical diagnosis was remittent fever, or typhoid of the variety called ambulatorius. The autopsy revealed an abscess about the size of a fœtal head occupying the convexity of the right lobe of the liver.

In the case I have reported this evening the subsidence of pain and tenderness, and the temporary improvement of the patient, certainly misled me. Under similar circumstances I should certainly introduce an aspirator, as I was inclined to do in the beginning of this case, because I am satisfied that the healthy liver can be punctured by a fine needle without damage, whereas either a hepatic or perihepatic abscess may at any time prove fatal by rupture.

Finally, if my explanation of the ætiology of this abscess is correct, the case is interesting as showing the relation of pleurisy to serious perihepatitis.

REPORT ON DERMATOLOGY.

BY GEORGE H. TILDEN, M. D.

PEMPHIGUS.

The opinion of Hebra that acute pemphigus did not occur is no longer accepted as correct, many isolated instances as well as epidemics [1] of the acute form of the disease having been observed. Riehl [2] reports an interesting case in this connection. The patient, a boy fourteen days old, first presented, on the sixth day after birth, a tensely-filled bulla upon the neck, in a region which, the day before, was erythematous. Shortly afterward appeared upon the face and back, and later upon the arms, a number of fresh bullæ. When seen at the hospital the moderately well-nourished child showed upon the forehead, cheeks, and lower extremities irregularly disposed bullæ of sizes varying from that of a pea to that of a dove's egg, most of which were filled with a clear, yellow fluid, while in several the fluid was already opaque. The epidermis covering these bullæ was very thin, and gave way at the slightest insult, in consequence of which many of the lesions were in a collapsed condition, the mixture of epidermis and fluid contents forming yellowish crusts. The side of the neck and the anterior surface of the thorax and abdomen presented the appearance of a burn of the second degree, so thickly were the bullæ crowded together, almost the whole extent of epidermis in these regions being separated from its bed. The outer edge of this confluent mass of bullæ was irregularly crescentic in form, and was marked by a narrow red halo, which separated it from healthy skin. The isolated bullæ were also surrounded by erythema. There was no spontaneous pain, but the excoriated regions of the body were very sensitive to the touch. The child's urine contained no albumen, its bodily temperature remained normal, and examination of the internal organs gave no evidence of disease. The general condition of the infant was fair, and it took its nourishment regularly, although suffering for several days from diarrhœa of greenish, semi-fluid stools. Besides the general eruption of pemphigus there was a certain amount of eczema intertrigo in the groins, and in the mouth aphthous spots of moderate extent. The mother was perfectly healthy, and there was no evidence of syphilis in either parent, while a former child, already sixteen months of age, had always been in good health.

The treatment consisted in the application to the eczematous regions of starch powder, and to the rest of the body of a mixture of olive oil and lime-water, while at the same time attention was given to the state of the bowels. The child was entirely well in about three weeks, the most prominent symptom, namely, the formation of bullæ, lasting in all about two weeks. The defect in the epidermis caused by an individual bulla was repaired in about a week, and there remained behind merely slight redness and subsequent yellowish pigmentation of the affected regions of the skin.

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[1] Bohn Hautkrankheiten, page 191, supplement to Gehrhardt's Handbuch der Kinderkrankheiten, and Ziemssen's Handbuch der sp. Path. und Therap., Band xiv., page 537.

[2] Wiener med. Wochenschrift, No. 51, 1883.

The contents of the freshly-formed bullæ was of neutral reaction, coagulated rapidly upon exposure to the atmosphere, and upon microscopic examination showed the presence of nothing but epidermal detritus and leucocytes. The covering of the bullæ was found to be made up of the horny layer of the epidermis and of the cells of the granular layer, together with a slight admixture of white blood corpuscles. In each one of the twenty specimens examined were found quantities of a vegetable micro-organism consisting of various sized and irregularly shaped groups of conidia or spores. These collections of spores were situated between the layers of epidermis, and accumulated, as a rule, about the openings of the cutaneous follicles. The hair follicles and the excretory ducts of the sweat glands were not unfrequently found to be stuffed full of conidia. Bands of mycelium were also present, but in very small amount, being either isolated or inclosed in groups of spores. These micro-organisms resembled very much in appearance those found in tinea trichophytina, but the amount of mycelium present was very much less than in this disease, and the grouping of the spores was more like what one finds in tinea versicolor.

In the writer's opinion the constant presence in large quantities of these micro-organisms, taken together with the fact of their situation inside of the hair follicles and ducts of the sweat glands, is evidence against their accidental admixture with the specimens examined, and is sufficient to justify the assumption of their being the ætiological factor in the production of the cutaneous lesions. That the presence of such micro-organisms in the delicate skin of infants is competent to cause the formation of bullæ is demonstrated by an instance mentioned by Riehl, in which the ordinary lesions of tinea trichophytina corporis upon an infant six months of age developed subsequently into a bullous eruption resembling in appearance pemphigus serpiginosus. Such ætiology would account for the appearance of acute infantile pemphigus in epidemics, and justifies the opinion of Olshausen and others that the disease is an infectious one. The afrebrile course of the malady, moreover, and the comparatively slight influence which it has upon the general condition of the affected children goes to show that the cutaneous lesions in such cases are due to some cause the influence of which is confined to the skin.

Dr. P. Mayer[1] publishes a case of fatal pemphigoid dermatitis. The patient, a man, sixty-five years of age, was first attacked by an eczematous eruption upon the body, which was attended by intense itching. Four weeks afterward there began to appear upon the trunk and lower extremities irregularly distributed bullæ, while at the same time ominous symptoms of general disturbance showed themselves, consisting in loss of appetite, sleeplessness, and fever, together with rapid failure in strength. The cutaneous lesions increased in extent, and developed into ulcerations with diphtheritic exudation. Death took place in the seventh week from the beginning of the malady.

At the autopsy, with the exception of nodules of broncho-pneumonia, there was nothing abnormal found in the internal organs. Microscopic examination of the skin, however, showed the existence of widely-spread endo-arteritis of the cutaneous blood-vessels, causing obliteration of their calibre. Many of the cutaneous nerve fibres in the unaffected as well as in the diseased regions of the body were found to be in the early stage of parenchymatous degeneration. The motor nerves and the nerves of the sympathetic system were unaffected, as were also the roots and ganglia of the spinal nerves. The spinal cord itself, however, upon microscopic examination showed evidence of pathological changes, consisting in grayish bands running along the posterior fissure of the cord throughout the whole of the cervical and dorsal regions. Similar appearances were also to be seen in the posterior columns of the upper dorsal region, and in the lateral columns of the lower dorsal and the lumbar regions were translucent patches. The microscope showed in all these situations thickening of the interstitial tissues, and the occasional formation of bands of sclerotic connective tissue, as a rule following the course of the blood-vessels, which themselves presented thickened walls, and, in consequence thereof, partially obliterated lumen. The anterior columns of the cord were entirely normal in appearance.

The author refers to the recent works of Leloir and Schwimmer concerning the neuro-pathogenesis of cutaneous disease, and is of the opinion that at present (thus far) all that is proven in such cases is coincidence between affections of the spinal cord and synchronous disease of the skin. Concerning the case published by himself, he draws attention to the coincident and extensive obliteration of the calibre of the blood-vessels in both the spinal cord and skin, and concludes that by reason of such changes in the blood-vessels there ensued disturbances of nutrition in both of these organs. In the spinal cord, as is often seen, such nutritive disturbances resulted in sclerosis of the interstitial tissue, and in consequent degeneration of nerve tissue. In the skin, on the other hand, there was produced trophic disturbance sufficient to cause the cutaneous pathological process, already set up by changes in the central nervous system, to assume unusual severity, and thereby destroy the life of the patient.

Another case of acute and fatal pemphigus in an adult is published by Dr. Danek.[2] The patient was a healthy man, twenty-two years of age, with good family history, and presenting no evidence of syphilis. He was first attacked by a chill, which was followed by fever, and was seen in the hospital two days afterward. He was well nourished, but the mucous membranes were somewhat pale. The neck, chest, both front and back, the arms, and, to a less degree, the belly and lower extremities, were covered with numerous bullæ of sizes varying from that of a pea to that of a hazelnut, which were filled with a clear, yellow fluid, and situated singly and in groups upon an erythematous base. There was no evidence of disease of any of the internal organs, and there was no albumen in the urine. Fever, however, was present, the evening temperature being as high as 39.4° C. The bullæ increased in size and number, and coalesced to such a degree that in ten days' time the body was almost covered by them, and large regions of skin were deprived of epidermis. At the same time bullæ of smaller size began to appear upon the mucous membrane of the lips and mouth, and the general condition of the patient became rapidly worse, with increase of fever, and the appearance of albumen in the urine. Shortly before death, which took place in three weeks from the beginning of the disease, the body presented the appearance of a burn with widely spread cutaneous suppuration, accompanied by continual high fever, diarrhœa, and delirium. At the autopsy, with the exception of hypostatic pneumonia in the base of each lung, there was nothing abnormal to be detected in any of the internal organs. The spinal cord also presented upon careful examination no pathological changes. The peripherical nervous system and the skin were not examined microscopically.

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[1] Virchow's Archiv, Band xciv., Heft 2

[2] Wiener med. Wochenschrift, No. 36, 1883.

HERPES ZOSTER.

The case of a woman seventy-six years of age, who died in hospital after having had an attack of herpes zoster intercostalis dexter, affords to Dr. Lesser[1] the opportunity for the discussion of the above subject. The eruption commenced between the spinous processes of the second and third dorsal vertebræ and extending forwards over the right breast finished at the point of attachment to the sternum, of the cartilage of the fifth rib. The eruption consisted of the usual vesicular and pustular lesions of herpes zoster and of superficial ulcerations caused by the coalition and breaking down of the same. The region of skin affected was that supplied by the fifth and partially by the fourth pair of intercostal nerves. The patient died some three months after the beginning of the cutaneous manifestations, which at the time of death were entirely healed with the formation of superficial cicatrices.

At the autopsy the fourth, fifth, sixth, and seventh intercostal nerves were dissected out from their point of exit from the foramina intervertebralia as far as the axilla. The sixth and seventh nerves were entirely normal. The fifth nerve was notably thinned, flattened, and of a reddish-gray translucent color. Similar but much less marked changes were to be seen in the fourth nerve. The spinal ganglia corresponding to the above nerves and the fourth sympathetic ganglion were subjected to microscopic examination. The sixth spinal and the fourth sympathetic ganglia were normal, while the fifth spinal ganglion presented marked pathological changes. The upper half, which was darker than normal, showed absence of almost all nerve tissue, this being replaced by connective tissue which was united with the connective tissue envelope of the ganglion, which itself was much thickened. At the line of junction between the normal and pathological regions the blood-vessels were notably dilated. The small amount of nerve tissue recognized as present in the upper half of the ganglion was mostly in a condition of granular degeneration. The lower half of the ganglion presented the normal condition of things, namely, a fine net-work of cellular connective tissue, containing strongly pigmented ganglion nerve cells and bundles of nerve fibres. Microscopic examination of the fifth nerve itself showed granular degeneration of numerous nerve fibres. The fourth spinal ganglion showed changes similar to those found in the fifth ganglion, while the fourth intercostal nerve on the other hand was entirely normal in appearance.

As cause, therefore, of the cutaneous lesions in the above case may be assumed the formation of cicatricial tissue and consequent destruction of nerve tissue in the fourth and fifth spinal ganglia and secondary degeneration of the fifth intercostal nerve. The ætiological factor in the production of herpes zoster is in the majority of cases pathological change in the spinal ganglia or in the Casserian ganglion, in some instances changes also in the peripherical nerves, and in very rare instances disease of the central nervous system. Of fourteen autopsies in cases of herpes zoster known to the author, in eleven there was undoubted disease of the spinal ganglia corresponding to the nerve supply of the regions of skin involved by the eruption, in one case a neuritis, in one instance pathological changes in the corresponding posterior spinal root, and in another cicatricial contraction in the origin of the trigeminus and probable remains of inflammatory processes in the Casserian ganglion.

As to the manner in which such changes in the nervous system give rise to the cutaneous manifestations of herpes zoster there are three hypotheses: —

(1.) The opinion of Friedreich that the eruption is due to a progressive neuritis which starts from the ganglion involved and finally reaches the ends of the cutaneous nerves, and in this way gives rise to the pathological changes in the skin. The fact, however, that cases of herpes zoster are almost never attended by motor disturbances, although the motor and sensory nerve fibres join immediately beyond the ganglion to be intimately united throughout the whole of their course, is evidence against the correctness of this opinion. In typical inflammations of the peripherical nerves, motor disturbances consisting in motor irritability, paralysis, and muscular atrophy are common symptoms. It was the fact that motor disturbances are so uncommon in cases of herpes zoster which led V. Bärensprung to seek for the cause of the disease in the posterior spinal ganglia. The small number of cases of herpes zoster in which motor disturbances are observed are dependent upon peripherical neuritis, and not upon disease of the spinal ganglia. Another fact which goes to disprove Friedreich's supposition is that, as a rule, the cutaneous manifestations of this disease appear at once and at some distance from the origin of the nerve (resp. ganglion) in which pathological changes have taken place, whereas if the eruption were due to a progressive neuritis it would appear in successive crops.

(2.) The idea that the eruption of herpes zoster is due to vaso-motor paralysis as supposed by Eulenberg[2] and Landois[3] is also not competent. Disturbed innervation of the cutaneous blood-vessels can result only in anæmia or hyperæmia of the region of skin concerned or in the exit of some of the constituents of the blood into the surrounding tissues. Such cutaneous eruptions are those which consist of erythema in its various forms and in the production of wheals the type of this variety of cutaneous pathology being urticaria. Entirely different from the above are the changes which take place in herpes zoster, which consist in typical inflammatory processes, the responsibility for which it is impossible to place upon vaso-motor disturbance.

(3.) The majority of observers have contented themselves with supposing trophic disturbance without going more definitely into the question. The theory of Neisser and Weigert[4] that it is the death (necrosis) of superficial particles of the skin caused by disturbance of innervation which gives opportunity for the entrance of "infectious material" and consequent suppuration in herpes zoster is suggestive. In the opinion of the writer, leaving "infectious material" out of the question, the death of portions of the skin is in itself sufficient to account for the eruption of herpes zoster. Each one of these necrosed portions acts as a foreign body upon the surrounding tissues, which react to such irritation with hyperæmia and inflammatory exudation. To show that disturbance of innervation is competent to cause death of tissue, the writer refers to the cases of acute decubitus which are seen in connection with disease and injuries of the spinal cord, and also to the cases of so-called herpes zoster gangrenosus in which the region of skin affected by the eruptions becomes necrosed, forming a sharply defined slough which extends into the corium. Kaposi's opinion that this gangrene is due to compression of the tissues by reason of hæmorrhage into the same is not supported by the fact that other cutaneous lesions in which hæmorrhages of much greater extent take place into the skin do not result as a rule in cutaneous gangrene. The writer considers that the simultaneous appearance of gangrene in all of the regions affected by the eruption of herpes zoster points to some cause situated in the nervous system. The hæmorrhages which take place in herpes zoster are easy of explanation. If necrosis affects the epidermis alone there results merely exudative inflammation without hæmorrhage, but if the corium becomes gangrenous, then the papillary and deeper blood-vessels of the skin are involved, and hæmorrhage to a greater or less extent takes place. The author sums up the matter as follows: "By reason of cessation of the function of certain nerves there is caused, in corresponding regions of the skin, the death of particles of tissue which may either be superficial and of microscopic size or of larger size and more deeply situated. The presence of such particles of necrotic tissue in the skin leads to reactive inflammatory processes which in the first instance result in the formation of vesicles without evident gangrene, and in the second cause the formation of a slough. It is probable that the above nerves arise in the spinal ganglia and in the Casserian ganglion, and that they accompany the sensitive nerves to the skin. The function of these nerves may be interfered with by disease of the ganglia, which is the most common cause of herpes zoster, or by inflammatory processes or injuries affecting them at some part of their course after leaving the ganglion from which they arise.

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[1] Virchow's Archiv, Band xciii, Heft 3.

[2] Berliner klin. Wochenschrift, No. 20, 1867.

[3] Wiener med. Wochenschrift, 1867.

[4] Eulenberg Real-encyclopädie, iv., p 666.

THE TUBERCLE BACILLU AND LUPUS.[1]

Koch[2] had placed at his disposal, for purposes of examination with regard to the presence of the tubercle bacillus, specimens from seven cases of undoubted lupus. The specimens from four cases consisted of bits of excised skin, and from the other three only the débris resulting from scraping was available. The bits of excised skin could alone be utilized for the purposes of direct microscopical examination. In each one of these four specimens the tubercle bacillus was detected, although only in a small number of preparations from each specimen, and only inside the giant cells. Such is the scarcity of the tubercle bacillus in lupus that in one instance twenty-seven and in another forty-three sections were examined before the bacillus was detected. It repeatedly happened, that after a number of sections were examined without showing the bacillus a group of successive sections, each containing from one to three bacilli, was met with. More than one bacillus was never seen in any giant cell. From each of the above seven cases inoculation of lupus material in the anterior chamber of the eyes of rabbits was made, and tuberculosis of the iris was produced in every instance, resulting in those animals which were allowed to live long enough (not immediately killed) in generalised tuberculosis. From one specimen of lupus the bacillus was cultivated, and inoculations of this cultivation upon animals were made with success in several instances.

THE SONG OF THE TUBERCLE BACILLUS.[3]

I.

Du hast ja die stärksten Gläser
Hast grossen Namen und Ehr'
Und hast auch die schärfsten Augen
O Koch — was willst Du noch mehr!

II.

Wir ruhten bisher in die Lunge
So sanft — da kamst Du daher
Und liessest uns Farbe bekennen
O Koch — was willst Du noch mehr?

III.

Du hast uns verpflanzt und gezuchtet
Auf Hunde — wie ordinär!
Und hast uns zu Grunde gerichtet,
O Koch — was willst Du noch mehr?

IV.

Wir büssten unser Prestige
Vom Auge sturzt uns die Zähr'
Wir kriegen noch selber die Schwindsucht
Vor Aerger — was willst Du noch mehr?

Hospital Practice and Clinical Memoranda.

MASSACHUSETTS GENERAL HOSPITAL.

FOUR CASES OF STRANGULATED HERNIA IN THE SERVICE OF DR. JOHN HOMANS.

REPORTED BY DR. CHARLES W. GALLOUPE, HOUSE SURGEON.

I. STRANGULATED HERNIA. HERNIOTOMY. RECOVERY.

ISAAC B., a Polish Jew, fifty years of age, entered on the night of July 26, 1883. Has had inguinal hernia on the right side for twenty-five years, which he has previously reduced by crossing his legs and pressing on the hernia with both hands. He has worn a truss only a portion of the time. He has had symptoms of strangulation several times, but never lasting over half an hour, and always disappearing with the reduction of the hernia. The present symptoms have lasted half a day.

At the time of entrance the scrotum was distended to the size of a man's head, hanging down nearly to the man's knees, and pyriform in shape. It was hard, tense, red, and sensitive to the touch. He had been vomiting *constantly* since the strangulation, and had had severe pain in the bowels for five hours.

He was etherized and a vertical incision was made over the ring by transfixing a fold of skin pinched up transversely. The tissues beneath were divided on a director, layer by layer, down to the peritoneum, and the intestine easily reduced without opening the peritoneal sac. A drainage tube, an inch and a half long, was laid along the bottom of the wound and the skin sewed together with carbolized silk. A carbolized sponge covered with carbolized gauze and compresses of carbolized gauze were placed over the wound and held in position by a spica bandage, — the whole dressing being subsequently sewed firmly together.

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[1] Vide Derm. Report in the JOURNAL of October 25, 1883.

[2] Mittheilungen aus dem Kaiserlichen Gesundheitsamte, Band ii., page 48.

[3] Wiener Caricaturen, March, 1884.

July 28th. The dressing, being somewhat stained with blood, was changed under carbolic spray. The wound looked well, and the general condition of the patient was excellent. He took brandy, beef tea, and milk in small amounts at short intervals. Temperature at night 100° F.

July 29th. Last night the patient, who is extremely ignorant, tore off all the dressings and got out of bed to urinate. When discovered the intestine was down, forming a hernia the size of a cocoa-nut; this was easily reduced, however, the wound thoroughly carbolized, and a fresh dressing applied.

July 30th. Patient passes flatus freely, and to-day had two natural dejections.

August 3d. The drainage tube and the stitches were removed, and collodion and crêpe lisse "butterfly" put over the wound to prevent its gaping. No tenderness.

August 6th. Truss adjusted over an antiseptic pad, and patient allowed to walk about.

August 9th. Discharged well, wearing a truss which keeps the hernia in place.

Temperature normal throughout after the first twenty-four hours.

II. STRANGULATED HERNIA. OPERATION. DEATH.

John D., aged forty-five years, entered on the night of July 27th with strangulated inguinal hernia on the right side. He was ruptured many years ago, and has never worn a truss. For the past three days the hernia has been strangulated, and during that time he has been suffering severe pain and has been vomiting constantly.

At the time of entrance the scrotum was the size and shape of a man's head, red, tense, and sensitive. Patient was in a state of collapse, the pulse was very feeble, and the extremities cold.

The patient was etherized and a vertical incision was made over the ring; the tissues were divided on a director down to the peritonæum, which was then cut, giving exit to about a quart of thin, yellow fluid, which not only came from the hernial sac but ran out of the peritoneal cavity. The portion of intestine visible was of a dark-red color. The ring was divided, and the intestine finally put back with some difficulty. The wound was sewed up with silk (the stitches including the peritonæum), a small drainage tube was inserted into the peritoneal cavity, and a sponge and compresses of carbolized gauze tightly bandaged on. Patient vomited at intervals for three hours, complaining of intense thirst. Temperature 96° F. He was given brandy and milk by the mouth and rectum. The pulse improved a little, but he gradually became weaker, the skin being cold and moist, and he died at twelve o'clock P. M., about twenty-four hours after the time of entrance.

III. STRANGULATED HERNIA. OPERATION. RECOVERY.

John C., an Irish hostler, forty-seven years of age, entered the hospital September 5th, at eight o'clock A. M., with strangulated inguinal hernia of the right side. Nine months ago he came to the hospital with a strangulated hernia, which was reduced by the house officer without any difficulty. This time the hernia had been down for three hours, and during that time he had suffered constant pain and nausea. The hernia was the size of an orange, but very tense and hard.

Patient was etherized and an incision four inches long made over the ring, and the tissues carefully dissected off until the peritonæum was reached. An attempt was then made to reduce the hernia, but it was not successful. The peritonæum was then divided, allowing about half an ounce of fluid to escape. The intestine for a distance of three inches was congested and like liver in color, and was adherent to the neck of the sac. The ring was then divided, and the intestine easily replaced. A drainage tube was inserted into the abdominal cavity, the wound sewed with silk, and covered with a graduated compress of carbolized gauze and bandaged.

Patient had considerable pain, requiring opiates twice during the day. At midnight he vomited about two quarts of dark-colored extremely offensive material.

September 6th. Patient was ordered beef tea one ounce every two hours, alternating with brandy one ounce by rectum, with twenty-five drops of laudanum until pain and restlessness should be relieved, nothing being given by the mouth. The dressing was changed under carbolic spray and all antiseptic precautions, and the wound found to be looking perfectly well. Temperature 99° F. in the morning and 96° F. at night. Pulse 120 at night.

September 7th. Patient feels much better, although still very weak. The dressing was changed under spray and the wound found to be doing perfectly well. He has passed flatus several times. Temperature 99° F. to-night; pulse 80.

September 8th. Patient feels perfectly well. Enemata of beef tea omitted, and brandy one ounce given by enema every three hours. A teaspoonful of milk given by mouth every four hours. Had a good movement of the bowels this morning. To-night the temperature was 100° F., and the pulse 100.

September 9th. Has no nausea, but slight hiccough. Milk increased to two teaspoonfuls every two hours. Temperature normal; pulse 95.

September 10th. Bowels move normally; patient put on unrestricted liquid diet.

September 11th. All the sutures and the drainage tube left out. From this time forward the temperature fluctuated irregularly between 97° F. and 99° F., and the pulse between 70 and 90.

September 16th. Complained a little to-day of pain and burning in the stomach and vomited twice.

September 22d. Wound nearly healed. Patient up and about.

September 26th. There remains only a superficial granulating surface the size of a pea. Patient discharged, wearing a truss.

IV. IRREDUCIBLE HERNIA. OPERATION. RECOVERY.

J. S. B., a native of Scotland, forty-six years of age, walked into the hospital October 19th, and gave a history of right inguinal hernia for fourteen years; it has always been reduced for the greater part, but a small lump has remained outside the ring which he thinks is the testicle, as it is congenitally absent on that side. For the past four days the tumor has been the size of a hen's egg, irreducible, and the skin over it is red and tender. He has no pain, vomiting, or other symptom.

October 20th. Patient was etherized and tumor cut down upon under carbolic spray and all antiseptic precautions. Before opening the peritonæum the greater part of the hernia was reduced with a distinct gurgle. The peritonæum was then divided, and there was no escape of fluid. A small lump of omentum, the size of a walnut, was found to be adherent outside the ring, which was then divided, allowing complete reduction. The testicle was nowhere to be seen.

The peritonæum was sewed up with a continuous catgut suture, entering at one end of the cut, traversing the wound, and emerging at the point of entrance; the two ends were then tied tightly, closing the wound by puckering it up. The skin was sewed with silk over a small drainage tube. A sponge and compresses of carbolized gauze were bandaged tightly on.

September 21st. Feels no discomfort. Temperature 100.5° F.

September 24th. Dressing changed under spray, and tube shortened to one half inch. Wound entirely healed except at point of exit of tube. Bowels moved by enema.

September 26th. Dressing changed; tube and stitches removed.

October 28th. Collodion and crêpe lisse "butterfly" applied to draw the wound together.

October 31st. Very small superficial wound remains. Graduated compress of carbolized gauze and spica bandage applied, the whole being firmly sewed together, and the patient discharged.

Reports of Societies.

BOSTON SOCIETY OF THE MEDICAL SCIENCES.

W. W. GANNETT, SECRETARY.

MEETING March 20, 1883.

DR. CHARLES S. MINOT gave an abstract of the results of recent investigations concerning

THE LIFE-HISTORY OF THE DISTOMA HEPATICUM,

the complete cycle not having been known until last year.

The eggs pass from sheep upon fields and from there are washed into pools. In the pools the larval form hatches, which swims about until it meets its first host, this being a snail, Lymnæus truncatulus. The larva gets into the animal, changes to a sporocyst, in which develop numbers of smaller larvæ, which are discharged from the cyst, pass through the body-wall of the host, encyst upon grass or elsewhere, and in turn are eaten by the sheep, in which they assume the adult form, thus completing the life-history.

DR. J. COLLINS WARREN made a preliminary report upon his investigations concerning certain changes observed in

THE HEALING OF ARTERIES AFTER LIGATURE.

Investigators who have interested themselves in the process of repair in arteries have considered the question usually from some special stand-point such as "the organization of the thrombus," "the part played by the white corpuscles," "the endothelium," etc. The object of this paper is to study the various pathological changes which occur in and around the vessel from the time the ligature has been applied until the process of cicatrization has fully completed itself.

These changes may be compared not inaptly to those which occur in long bones after fracture. In both we find an external and an internal callus, the former having only a provisional existence in the case of arteries, and subsequently giving place to a ligamentous union of the divided fragments, the latter undergoing such changes in the later stages of the process that the canal or lumen of the vessel is imperfectly reëstablished by the so-called "canalization" of the thrombus. In the mean time the walls of the vessel, like the cortical bone, have undergone certain changes which enable them to participate in the final process of repair.

When a large artery is tied in its continuity, the intima and a portion of the media are usually ruptured, and the adventitia is gathered into a dense tendinous-like sheath around the constricted ends. The first noticeable change is the formation of the thrombi and the development of a granulation-like mass of cells about the ligature, which if it has been cut short is completely enveloped by them. This appears to proceed from the connective tissue which surrounds the vessel, the periadventitial tissue. When the injury done by the constricting ligature is slight this new formation will be less in quantity, but if the coats of the vessel have been considerably bruised and a certain amount of extravasation has taken place, or the ligature has created irritation, the surrounding inflammatory tissue will form a well-marked callus. When one end of the ligature is left uncut or suppuration has taken place, the surrounding callus is imperfectly developed and secondary hæmorrhage is more likely to occur. Following the development of this tissue, we find it extends some distance up and down the sides of the divided vessel in the periadventitial tissue, the round cells of which it is composed invading only the superficial layers of the adventitia; at the point of ligature, where the fibres of the outer wall are densely packed, the cells at first do not penetrate at all; they follow the ligature as it cuts its way through, and indeed appear to exert a solvent action on the resisting fibres of the adventitia. As the walls thus liberated retract, the cells penetrate through various clefts and spaces, and eventually make their way into the clot and contribute more or less to the development of the internal growth. When a double ligature has been placed upon a vessel these cells find their way into the isolated central portions at the retracted ends and not through the walls directly as some investigators have supposed, and gradually disintegrate the various coats, invading them eventually from every point. The process, however, is a slow one, and requires several weeks for its accomplishment. If the artery has been properly removed from the body we find this growth forming a callus-like ring at the ligatured spot, in size about twice the thickness of the vessel. This was shown particularly well in the femoral artery of the dog killed on the tenth day. At the end of a month evidences are still present of such a cicatricial mass of tissue, but at three months a slender cord only unites the peripheral to the proximal end.

Early changes are seen in the proximal thrombus, well advanced already on the fourth day. In the carotid of a dog an abundant growth of young tissue was found budding from the ruptured ends of the media, and spreading in various directions throughout the clot, attaching itself to the wall at various points, and leaving spaces or meshes still occupied by the blood clot. As these fragments of clot become disintegrated and disappear, spaces are left into which blood eventually circulates, and the so-called "canalization" of the thrombus is effected. By the fifteenth day the new tissue has become very abundant, and has the appearance of granulations growing into and replacing the thrombus. By the end of a month we find but fragments of the thrombus remaining, and the granulations now present themselves to the lumen of the vessel. We find here a free communication between the spaces which separate these granulation-like masses and the lumen and an injection mass can be forced successfully for a considerable distance into them. The vessel walls are in the meanwhile undergoing certain changes. There is unquestionably a proliferation of the cells of the intima. This can be conveniently studied in those specimens where the distal thrombus is small, or in the space between two ligatures; the amount developed, however, is not sufficient to supply but a small fractional part of the internal callus. The rôle played by the endothelium appears to be one which furnishes a new endothelial covering to the cicatricial tissue and a lining to the new vessels that have been formed. Wherever the intima has been ruptured and the media exposed we find an intimate connection existing between it and the new tissue; at an early stage of the process cells are seen springing from the muscular layers and projecting into the thrombus; later one sees elongated spindle cells, like those forming the muscular layer, projecting from this layer into the newly-formed tissue, sometimes singly, sometimes in bundles, and occasionally occupying a considerable space.

At the point of ligature the elastic lamina appears frayed out, and is seen extending in various directions through the new tissue; the media begins by the end of the second week to retract, as also does the adventitia, leaving a space through which vessels eventually find their way, and communicate with those coming down from the lumen.

At the end of three months the cicatricial process is completed, the external callus has disappeared, and is replaced by a cord of connective tissue which joins the two ends of the vessel, now widely separated from one another. No traces of the thrombus are to be found, except a few pigment granules. A cicatrix, more or less voluminous, according to the size of the vessel and the situation of the ligature, is seen.

In the femoral artery of a large dog a very beautiful example of this was seen. The cul-de-sacs of the two ends were occupied by a semilunar mass of tissue, with its concavity towards the lumen. On the surface of this cicatrix was seen a thin layer of endothelium; beneath this was a crescent-shaped layer of cells, the horns extending up some distance on the sides of the vessels. These cells were parallel to one another and to the arc of the circle made by the layer. On a careful examination they were found to resemble more closely the *muscular* fibre cell than any other. The long prolongations and the staff-shaped nuclei were demonstrated by various methods of staining. A special series of stainings with aniline dyes and examination under Zeiss's oil immersion showed a close resemblance between these nuclei and those of adjacent muscular cells. Cross sections were confirmatory of this view. Below this layer was the body of the cicatrix, which consisted of interlacing fibres of connective tissue dotted over with masses of blood pigment. Through this tissue a large vessel made its way from the fundus of the cul-de-sac, rapidly diminishing in size and breaking up into branches, which anastomosed freely with a series of capillary vessels which lay between the slightly retracted walls of the vessel, and communicated with others in the slender ligament.

We see here an explanation of the immunity of cicatrices of this kind from aneurismal dilatation which occurs so frequently after wounds of vessels. The protective influence of the thrombus insures the development of a tissue closely resembling the three layers of the vessel wall, and having all the powers of resistance which they possess.

In the larger vessels of the human subject, where there is less muscular and more elastic tissue, the new muscular tissue is not so evident, but the connective tissue is greatly increased in quantity, and extends for a long distance into the lumen of the vessel. This was seen in a ligatured carotid artery of a man who died four years after the operation.

To summarize briefly, the ligatured artery is invested by a protective layer of new tissue formed from the periadventitial tissue, which, if well developed, gives great security against hæmorrhage until the permanent cicatrix has grown sufficiently strong. This may be likened to the provisional callus of bone. There is also an internal growth or callus formed from several sources, namely, the intima to a slight extent, the media more largely, also from cells finding their way from the periadventitia at a late stage through the retracted ends of the vessel. The thrombus is a mere passive structure, takes no part in the growth, but is protective, and affords an excellent medium for the new tissue to germinate in. When the provisional part of the internal callus has disappeared we find remaining a cicatrix closely resembling the three coats of the artery, and affording by virtue of its peculiar structures an equally effective resistance to the pressure of the blood column. The ligament which unites the two ends of the vessel represents in part the residue of the external callus, but also a portion of the walls of the vessel which have been absorbed during the inflammatory process. A vessel successfully ligatured in its continuity cannot, therefore, be said to have been "ulcerated" into two separate portions, but must be conceived of as a hollow tube which has solidified into a solid columnar mass of tissue a considerable portion of which subsequently shrinks into a cord.

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NEW YORK ACADEMY OF MEDICINE.

At a stated meeting of the Academy, held April 17th, Dr. Robert Abbe read a paper on

DUPUYTREN'S FINGER-CONTRACTION.

This was the affection, he said, which Dupuytren described after making his dissection of the hand of a subject of deformity of the fingers who died in 1831, which demonstrated conclusively that the tendons, articulations, ligaments, synovial membranes, and bones remained entirely unaffected, and that the trouble was located in the palmar aponeurosis. A dozen dissections made since then had confirmed the correctness of the results of his investigations. Mr. Adams, of London, he continued, had given to the profession the best résumé of the subject which had yet appeared, and in it he said that the anatomical conditions presented in Dupuytren's contraction all agreed in negativing the supposition that the tendons or sheaths of the tendons were involved. This was also confirmed by his own clinical experience, as he had invariably found that, after dividing subcutaneously a tense and prominent cord, which had generally been mistaken for a tendon, in the palm of the hand, the patient was immediately able to flex the finger as strongly as before the operation, at once disproving the opinion often expressed by surgeons that such fingers would remain stiff and inflexible after the operation. Of the course of the disease Mr. Adams says: The commencement of this form of contraction is sometimes to be traced in one hand in patients in whom the contraction exists in a severe form in the other, and I have watched its commencement from a flattened nodular induration in the palmar fascia in or just above the transverse crease in the palm of the hand corresponding to the metacarpophalangeal articulations. In the beginning the skin is not adherent to this flattened induration; but in the second stage the skin becomes adherent to the thickened fascia, and a puckered dimple is produced, extending from which towards the finger a thickened band of fascia can be distinctly felt. The third stage consists of an increased thickening of the palmar fascia and the band leading to the finger; and also the formation of a thick cord-like band of fascia, leading from the central thickening towards the annular ligament of the wrist, accompanied with a gradually increasing drawing down of the finger or fingers towards the palm of the hand.

This affection, Dr. Abbe went on to say, rarely occurred before middle life, and in a paper published by Dr. W. W. Keen, of Philadelphia, two years ago, in which he collected the statistics of all the cases that had then been reported, 105 in number, the average age of the patient at the time of the commencement of the trouble was found to be forty years. It was comparatively rare in women, occurring in only one case in twelve, and the ring and little fingers were the ones by far the most frequently affected. These statistics showed that the ring finger was implicated in eighty-eight cases, the little finger in seventy-seven, the index finger in thirteen, and the thumb in nine.

In the course of the paper Dr. Abbe gave a detailed description of the clinical history of the disease, dwelling particularly upon the associated pains and nervous disturbances which often characterized it, and suggested a "working hypothesis" for it somewhat as follows: —

The primary cause of trouble is a slight traumatism, which not infrequently escapes observation, and a spinal impression is produced by this peripheral irritation. A reflex impression is then conveyed to the part originally affected, resulting in the production of insensible hyperæmia and nutritive changes, which cause a permanent thickening of the palmar fascia and the formation of contraction bands binding down one or more of the fingers. Finally, through the tissue-contraction, there results a secondary series of neuralgic and other disturbances of sensation. The latter, he said, resembled to a considerable degree the manifestations of rheumatism; and in this connection he alluded to the nerve theory of acute rheumatism propounded a number of years ago by Dr. J. K. Mitchell, of Philadelphia, and the assertions of Weir Mitchell, Brown-Sequard, and others in regard to arthropathy. Mr. Adams's opinion was that Dupuytren's contraction nearly always depended upon a constitutional rather than any local cause, and essentially he regarded it as depending upon a gouty diathesis; but the hypothesis of a primary traumatism and reflex nervous irritation which he had suggested offered, he believed, a more satisfactory explanation of the peculiar phenomena of the disease. The not infrequent symmetry in the complaint had been regarded as a strong argument for its constitutional origin, but the production of sympathetic ophthalmia through the action of the ciliary nerves showed how a symmetrical affection could be produced by a purely local cause. In Keen's 105 cases the presence or absence of gouty trouble was noted in only forty-eight; but in no less than forty-two of these it was stated to be present. It could not be doubted, however, that in by far the larger proportion of the remaining cases there was no such complication, as it would have been mentioned in the histories given. When, therefore, the presence of the gouty diathesis was found he believed it to be simply a coincidence; but as gout was exceedingly prevalent among the upper classes of English society to which Mr. Adams's practice was, as a rule, confined, he could not wonder that that authority had been led to the conclusion which he had adopted. In this country, on the other hand, true gout was comparatively rare, and yet Dupuytren's contraction, as far as he was aware, was as frequently met with here as in England. In this disease he had little doubt also that traumatic trouble was responsible for results which were frequently attributed simply to rheumatism.

By way of illustration Dr. Abbe related, in more or less detail, the histories of ten cases of Dupuytren's contraction which had come under his observation, and upon the most of which he had operated. In connection with the histories he exhibited drawings and casts of the deformity existing prior to operation, and also presented two of the patients in person. The most remarkable of these cases was that of a German cloth-cutter, fifty-eight years old, in whom the ring and little fingers of the right hand, and the ring finger alone of the left hand, were affected. He had been a cutter for twenty years, and fifteen years previously the contraction of the left ring finger commenced. Soon afterwards the right ring finger also became affected, and some time after he began to suffer from a "lame back." The pain in the back at length became so constant and severe that he was obliged to give up work. This was three years before he was seen by Dr. Abbe. In the meanwhile he had consulted Dr. Seguin, who believed him to be suffering from organic spinal trouble, and in connection with Drs. Gibney and Amidon applied the actual cautery, the ice-pack, and electricity, both galvanic and static, without producing any appreciable result. At length, on account of the presence of the contractions of the fingers, Dr. Seguin referred the patient to Dr. Abbe, who had already published his first operation, with its successful results, and on the 24th of June, 1882, he performed Adams's operation, making six subcutaneous divisions in one hand and four in the other, dressing antiseptically, and applying straight splints. Even within ten days the man experienced the greatest possible relief from suffering. This patient had now been under observation for nearly two years, and the trouble in the back, as well as the hands, was entirely cured. He was then presented to the Academy, and it was seen that flexion in the fingers was absolutely perfect, while extension was nearly, though not quite, complete. The other patient presented for examination was a gentleman sixty years of age, who, fifteen years before, had met with a slight cutaneous laceration of the palm of one hand. Within two months afterwards he noticed that a flattened bunch had formed, and subsequently the ring and little fingers of both hands became permanently contracted. About the first of February last Dr. Abbe made twenty subcutaneous cuts in each palm, applied antiseptic dressings, and made pretty full extension for two weeks. In consequence of the nerve irritation thus set up an attack resembling subacute rheumatism had been induced, but this had soon subsided, and very considerable improvement in the condition of the fingers had resulted. It was now eleven weeks since the operation, and on comparing the patient's hands with the plaster casts taken before the latter it was seen that while the fingers could be flexed to a much greater extent than before the cutting, the result was not as yet by any means complete. The trouble, Dr. Abbe explained, was not in the flexing at all, but in the hyperplastic condition generally of the fibrous tissues of the part, which could only be overcome after the lapse of a considerable period of time. The treatment by subcutaneous section and immediate extension, which Mr. Adams had devised, left nothing, he thought, to be desired. He had one suggestion to make, however, and that was, to avoid keeping up too forced extension, as this was liable to set up a considerable amount of irritation, thus illustrating the old aphorism, *ubi irritatio, ibi fluxus.* In concluding the paper he alluded to the treatment adopted by Professor Busch, of Bonn, as described by Madeling, but said he had had no personal experience with it. This operation belongs to the class of open wounds, and consists in dissecting up a triangular flap of skin from the contracted cord in the palm of the hand, and then dividing all the bands of the contracted fascia which can be reached; as the flap thus raised contracts the lower points of the wound may be united with sutures. A light bandage closes the wound; the hand is then kept by the patient in a sling, without the slightest attempt to preserve the extension. Extension-movements with the fingers are only made when the wound has entirely granulated, and then only in a gentle way. At first wood cylinders of various sizes are laid in the hand; later the hand is stretched on a back-splint. Active and passive movements are now to be made in and during the time the hand bath is used for cleansing the wound. The healing of the latter, accelerated perhaps by skin grafting, is accomplished in three or four weeks.

Dr. Alfred C. Post said he believed that he was the first American surgeon to direct attention to this subject, although of late years he had met with but few cases of Dupuytren's contraction. It was a matter of surprise to him that before the time of that surgeon the complaint should have been mistaken for contraction of the tendons, since in the former it made no difference with the fingers whether or not there was a flexed condition of the wrist or elbow, while this was not the case if the tendons themselves were contracted. He had been accustomed to operate by open section, and while he had had no difficulty in extending the fingers, he had found that a considerable interval of time must elapse before flexion could be well restored. All his cases had been of traumatic origin, and had, as a rule, occurred in those who, unaccustomed to manual labor, and with soft hands, had taken up gardening, rowing, or other kind of work in which the palm was exposed to blows or pressure, for purposes of recreation or exercise. The bruising of the palmar fascia, he believed, had always been the essential ætiological factor, and in no instance, so far as he remembered, had the patient been the subject of gout or rheumatism. The reason that the ring and little finger were so frequently affected, he thought, was because the thenar eminence, as it was called, was especially exposed to pressure in the handling of tools, walking with a cane, rowing, etc. In one of his cases he had found it necessary to divide the sheath of a tendon, but the tendon itself he had found entirely unaffected.

Dr. Frank H. Hamilton was of the opinion that in this disease there was a process of atrophy of the areolar tissue, resulting in a condition analogous to that known as *contracture* in tendons rather than an inflammatory one, and this, he believed, explained why such a long time must intervene before the power of flexion could be regained. There was some little doubt in his mind, he continued, whether the origin of the disease was traumatic in all cases. It had been observed that it was especially met with among coachmen in England, and it had occurred to him that the reason of this comparative frequency was that in their occupation this class of men kept their ring and little fingers (which, as had been shown, were almost invariably the seat of the contractions) almost constantly at rest, while they moved their other fingers freely. The persistent disease resulted, therefore, in this condition of atrophy of which he had spoken. On the whole, however, he thought the theory suggested by Dr. Abbe (which certainly did him great credit) was a sound one, and he also remarked that the possible neurotic origin of this affection was a subject which had occupied his own thoughts for a considerable time.

Dr. Sayre expressed similar sentiments, and went on to say that in all the cases that he had ever known of, pain, tingling, or other sensation of discomfort had preceded the deformity, the contraction, as a rule, not coming on until several months after this was first noticed. All the cases were traceable to a traumatism. Dr. Hamilton's suggestion in regard to the atrophy of the parts he thought an important one, and it was on account of this atrophic condition, he believed, that massage and similar manipulations were of so much service in this affection. They ought to be skillfully practiced for half an hour twice each day to restore the vitality and nutrition of the tissues, and in two cases he had by this means secured excellent results without resorting to any operative procedure whatever. The Adams operation in his hands had proved perfectly satisfactory, and it was the only one that he advised. Dr. Sayre also presented a plaster cast of one of his cases.

Remarks were also made by Drs. Weir, Gibney, Amidon, and A. L. Ranney, after which Dr. Abbe closed the discussion. He had no doubt that a great number of cases of Dupuytren's contraction were to be found all over the country, which were supposed to be cases of contracted tendons, and, therefore, irremediable, and said he believed that when the true nature of the affection and the benefit to be derived from the Adams operation came to be more generally understood, the most gratifying results might be anticipated.

After Dr. Post had published his cases, a number of years ago, the subject had in a great measure been allowed to drop out of notice until its recent revival by the English surgeons, and the appearance of Dr. Keen's paper, to which allusion had been made. The slow return of flexion of which Dr. Post and others had spoken this evening was a very noticeable feature of the cases, the fibrous tissues having gradually become so hardened and thickened that it required one or two years after the performance of the operation to restore them to their normal condition. He could not agree with Dr. Hamilton that the process was one of atrophy, but thought it was one of positive inflammation, the neurotic disturbances producing a continued hyperæmia, which finally resulted in hyperplastic thickening of the aponeurotic tissues and the formation of new bands of fascia. He thought that Dr. Sayre was inclined to attach too much importance to massage, which sometimes produced no benefit whatever, as in the case of the patient upon whom he operated eleven weeks ago, where it had been given a thorough trial. At the same time he considered it much better than stretching.

PHILADELPHIA CLINICAL SOCIETY.

Stated meeting, March 28, 1884. The President, Dr. Henry Beates, Jr., in the chair.

Dr. Daniel Longaker reported a case of

SUDDEN DEATH IN DIPHTHERIA.

The patient, Mary F., aged six years, was seen first on the afternoon of the second day of the disease. Her temperature was 104.25° F., and the general symptoms were of a decidedly adynamic type. She complained of pain and difficulty in deglutition, and a nasal tone of the voice was noticed. On inspection of the throat congestion and swelling were evident, and a small patch of false membrane was found on the right tonsil. The local trouble continued to grow worse until the fourth day, and was associated with a diminished secretion of urine, in which albumen was found to be present. The membrane was detached on the sixth day, and by the tenth convalescence was established. On the thirteenth day she was seen for the last time. Her pulse was a little accelerated in frequency and still weak. Her appetite was good, and she was sitting up and going down-stairs. Two days later, the fifteenth of the disease, after rising in the morning and feeling quite well, she suddenly fell from the chair from which she was attempting to rise, and expired.

Dr. Jos. S. Gibb read a paper on

UMBILICAL HÆMORRHAGE.

In the preliminary remarks he spoke of the neglect of medical writers in omitting this important topic from their works, in spite of the oft-repeated mention of this negligence by individual observers, who, while investigating, have sought in vain in most of the standard works of the day for some account of this accident. Notable exceptions to this are the works of Simpson, Condie, and more particularly Dr. Bedford, of New York. The author spoke of the rarity of the accident, and proved the same by reference to the records of maternity hospitals and foundling asylums, and also by the experience of the older members of the profession, and finally presented a collection of 241 cases, which represented those which have been published since 1752.

The author's case was a female child of a "bleeder" mother. Hæmorrhage began on third day from birth; no single bleeding point was observed; the hæmorrhage was simply a continuous oozing from the bottom of umbilical depression. Several ligatures were applied directly to the cord, and then the ligature en masse, all of which failed to control the hæmorrhage. This was finally accomplished by a solution of the subsulphate of iron painted over umbilicus, and a pledget of cotton saturated with same solution bound fast over umbilicus.

The child suffered considerably from the profuse bleeding, though soon rallied after its cessation. Was strong and healthy when last seen, one month from date of accident.

There were no premonitory or accompanying symptoms. It was simply a spontaneous umbilical hæmorrhage.

The author makes three divisions of the subject: (1.) Hæmorrhage from improper ligation of cord. (2.) Hæmorrhage, the result of traumatism. (3.) Spontaneous hæmorrhage.

The first two received but cursory attention, the cause and remedy being apparent.

The third variety formed the true basis of the paper. He did not believe that any of the so-called premonitory symptoms, namely, colicky pains, jaundice, etc., can be relied on as such, but thought they may occur in otherwise healthy infants, or precede other affections. However, he laid stress on the fact of a hæmorrhagic diathesis existing in either parent, and believed this should make us watchful. He regarded the subjects of umbilical hæmorrhage as those suffering from a general disease, and hæmorrhage the first symptom of this disease. This symptom may occur at any time from a few hours to eight weeks after birth. The next most important symptom is jaundice. Both of these symptoms occur in an equal number of cases.

As regarded the ætiology, the author believed there is a direct relationship between the hæmorrhage and some constitutional condition of infant, which condition may be either hereditary or congenital. The hæmorrhagic diathesis was given a first place in the list of causes. It is not considered absolutely necessary to invoke the aid of the hæmorrhagic diathesis in the parent to establish the existence of this condition in the offspring; in other words, it may be congenital. Attention was drawn to the hæmorrhagic symptoms in these cases, namely, hæmorrhage from bowels, gums, and penis, as proof of this peculiar condition being a strong ætiological factor.

Jaundice was mentioned as forming the favorite ground of most writers on the subject as a causation of umbilical hæmorrhage, but the theories on which this is based were not regarded as substantiated by post-mortem examinations. In but few of the recorded cases were there any indication of a syphilitic or scrofulous taint. Various other minor causative influences were noted, namely, excessive use of alkalies by pregnant women, insufficient food, etc.

In conclusion it was admitted that in the present crude state of our knowledge of umbilical hæmorrhage we are obliged to admit several ætiological factors.

In an analysis of the reported cases there is found to be a strong predisposition on the part of the male to the occurrence of this accident. In 115 cases collected where the sex is mentioned sixty-seven per cent. were males.

The morbid anatomy of the subject is very incomplete, being made up of statistics as to the patency or non-patency of the fœtal openings and vessels, the condition of the liver, and the character of the blood, from all of which no satisfactory conclusions can be drawn. The prognosis of umbilical hæmorrhage was stated as excessively grave. A mortality of eighty-three per cent. in 230 cases. The fatal termination may occur at any period from one hour to eight weeks from commencement of bleeding. In ninety-four cases where the time of death has been stated forty-seven, or fifty per cent., occurred within first forty-eight hours, twenty-five in the first, and twenty-two in the second, twenty-four hours.

The success of therapeutical measures the author believed lies in a proper appreciation of the nature and causes of the disease, and until this is accurately determined umbilical hæmorrhage will continue to resist all well-meant therapeutical resources.

In the present state of our knowledge the author believed that that treatment will be the most successful which consists of local styptics, ligature, etc., combined with such internal hæmostatics and tonics as experience has proven of value in kindred hæmorrhagic affections of adults.

Dr. Charles K. Mills. I have had one very interesting case of umbilical hæmorrhage, which recovered. The subject was the fourth child of perfectly healthy parents, the other three children being healthy. There was no trouble until the third day after birth, when an oozing was found at umbilicus, and the child vomited blood. The cord was examined, and found not bleeding at the extremity. Subsequently styptics were applied without result. The hæmatemesis occurred on three occasions during the following twenty-four hours of occasional hæmorrhage. The bleeding was finally controlled by transfixion with needles, and a half drop of aromatic sulphuric acid administered every two hours. The child recovered, and is now perfectly healthy.

Dr. Hannah T. Croasdale. I have had the opportunity of seeing but two cases of umbilical hæmorrhage. The first was from shrinkage of the cord and great amount of gelatinous material. After the ligature was closely reapplied the bleeding began again from the cut extremity. I then applied Pean's hæmostatic forceps and left them in position twenty hours. In the other case the hæmorrhage was controlled by tightening the ligatures.

Dr. Mary Willits. To the cases mentioned I would add one seen by myself in hospital. The child was a week or ten days old. After considerable hæmorrhage the bleeding was successfully checked by styptics and a compress.

Dr. Henry Beates, Jr. In connection with the hæmatemesis noticed by Dr. Mills, a case seen by myself showed at the autopsy gangrene of the ileum. There was also sloughing at the extremity of the cord.

Dr. Jos. S. Gibb. I am grateful to the members for the relation of their experience with this troublesome affection. The relation of the hæmorrhagic diathesis to it is yet a question. There seem, however, to be two things intimately connected with it, — the hæmorrhagic diathesis and jaundice. The case reported by Dr. Mills would rather support the former theory.

Dr. Albert H. Smith, in closing the discussion, said: I have seen two cases of the kind referred to by the reader of the paper. The first occurred at the end of twenty-four hours after birth in a healthy child. On attention being called to it the ligature was found loose; this was reapplied carefully. On the following morning the nurse again discovered hæmorrhage, and the child died before I could reach the house. This was not a case of neglect or traumatism. The other instance occurred also in a perfectly healthy child forty-eight hours old. The cord was ligated by myself, but I soon found hæmorrhage occurring freely from the tissue around the cord; a large compress of absorbent cotton was applied by means of Seabury & Johnston's plaster, and a teaspoonful of magnesia given internally. The child was saved. In these two cases there were no hereditary tendencies to this form of trouble; no jaundice; no purpura hæmorrhagica in either the mothers or the infants themselves. We have not, so far, reached any reasonable theory of its ætiology. Jaundice seems a coincidence. Great stress has been laid on hæmophylia, but my experience does not bear it out. In a family under my care four out of five died of hæmorrhage, but none showed any tendency to umbilical hæmorrhage. In the autopsies of fatal cases no uniform nor persistent conditions have been found. My cases are somewhat remarkable from the fact that recoveries are rare.

In the treatment we could hardly expect a compress to do much, yet I think this application the best that can be made. A laxative would contribute to lessen blood pressure and act as a revulsive.

I would suggest that hæmorrhage from non-application of a ligature would rarely occur in health if we are to judge by the fact that in Germany they seldom tie the cord. Difficulty may certainly arise from too early ligation. My practice is not to ligate until the cut extremity has ceased bleeding. It is evident that loosening the ligature would be a dangerous experiment in some of these cases.

Dr. Collins exhibited a bullet that had been removed from the anterior nares of a man. It had remained imbedded in the turbinated bones since 1865. An opening in nasal septum remains, produced at time of reception of wound.

Recent Literature.

Illustrations of the Influence of Mind upon the Body in Health and Disease, Designed to Elucidate the Action of the Imagination. By Daniel Hack Tuke, M. D., F. R. C. P., LL. D. Second American from the second English edition. Philadelphia: Henry C. Lea's Son & Co. 1884.

The mind acts upon the body through its threefold states of intellect, emotion, volition. The condition of the mind comprising these states exerts an enormous influence, for good or evil, upon the body with which it is associated — including in this term all sensations, movements, and organic functions.

Physiologically considered, the illustrations range over the effects produced by the action of the nerve corpuscles of the encephalic centres concerned in intellectual, emotional, and violitional states of mind, upon the sensory and motor ganglia, the centre of the sympathetic, and through the outgoing nerves, upon the whole body. The cases brought together in this volume illustrate the importance of the truth that the mind or brain influences — excites, perverts, or depresses — the sensory, motor, vaso-motor, and trophic nerves, and through them causes changes in sensation, muscular contraction, nutrition, and secretion.

In these words, extracted from the "Introductory" portion, is comprehended the scope of Dr. Tuke's book. That the task he has assigned himself is not an easy one may be readily seen, but he faithfully fulfills his promises, as even a cursory glance at the succeeding chapters will show.

In the first chapter, which deals with General Psychological and Physiological Principles in reference to the intellect, Dr. Tuke shows that Muzer and Hunter a hundred years ago considered the subject of expectant attention, and later (1838) Johannes Müller. The latter, who agreed with John Hunter in regard to the influence of expectation, said: "It may be stated, as a general fact, that any state of the body, which is conceived to be approaching, and which is expected with certain confidence and certainty of its occurrence, will be very prone to ensue as the mere result of that idea."

Elliotson, Laycock, and others investigated the subject of magnetism, and Braid, so familiar to us all of the present day, systematized and repeated on a large scale the experiments which Hunter had previously performed on himself. Dr. Tuke speaks of the importance of Braid's conclusions, and frequently refers to them further on. Dr. Carpenter's exposition of the rationale of the phenomena of mesmerism, so far as they are due to the influence of expectant attention or dominant ideas, is also very valuable.

In section three of the second chapter (which is on the Influence of the Mind on Sensation) some interesting cases of what Dr. Tuke calls *psychical anæsthesia* are given. It is strange, he says (in a foot-note on page 61), "that in all, or nearly all, histories of anæsthetics, *psychical* anæsthetics are not even mentioned. Yet they preceded drug anæsthesia, and to a large extent suggested it. Cloquet removed a woman's breast during the mesmeric sleep, she being able to converse, but insensible to pain, so far back as 1829."

The most interesting cases of operation under the influence of magnetism were those of Dr. Esdaile, who in his book called Introduction of Mesmerism (with the sanction of the Government) into the Public Hospitals of India (second edition, 1856), records 261 rendered painless by this influence. Two hundred of the operations were for the removal of large tumors. There were also eighty-four capital operations in another hospital. Out of the 261 there were fourteen deaths, not dependent, however, on the operation.

On page 114 the Influence of the Intellect on the Blood-vessels is discussed with special reference to stigmata. The singular phenomena of stigmata, when genuine, arise from the mind's influence on the capillary circulation through the vaso-motor nerves. M. Alfred Maury has treated the subject of stigmatization in the most able manner. He mentions cases in which persons have dreamed that they received blows or wounds, and in the morning have found marks of inflammation on the body; "just so with visionaries," he says, "in them, under the power of the imagination, by the concentration of the attention, the blood is directed to the place where they fancy they are affected." M. Maury regards St. Francis d'Assisi as the ancestor of the stigmatized.

The stigmata of Louise Lateau are described, and the conclusions already arrived at in regard to their causation are said to be reaffirmed by M. Warlomont who carefully studied them. "The periodicity of the stigmata is rationally accounted for by the ideas with which they originated having been associated with certain days; and by the weekly direction of thought and feeling in the same channel. The profane are not now allowed to study the case of Louise."

These few extracts from the book of Dr. Tuke give an idea, in a limited manner, of the interesting matters discussed. They fail, however, to give even a faint idea of the strength of treatment, the rich coloring and clearness and skill of style, with which every subject is elaborated.

Dr. Tuke has been known for many years as an able writer, and has of late especially interested himself in trance conditions. The book before us is valuable for what it contains on this subject, which has lately assumed such importance.

As physicians we should constantly bear in mind the importance of the expectant treatment of disease. We probably all suppose that we know almost everything about this treatment now, but Dr. Tuke's book, which we should all own and read, will make the modest among us hang our heads.

The bibliography and general index at the end of the book are excellent.

A Manual of Obstetrics. By A. F. A. King, M. D. Second Edition; 12mo, 338 pages. Philadelphia: H. C. Lea's Son & Co. 1884.

This manual was designed by the author "to present, in an easily intelligible form, such an outline of the rudiments and essentials of obstetric science as may constitute a good ground-work for the student at the beginning of his obstetric studies." The book is confessedly a compilation, in great part, from the more extensive and classical treatises, such as those of Lusk, Playfair and Leishman. The author has succeeded in producing an epitome, which, if at times concise at the expense of graceful expression, is a reliable and sufficiently comprehensive outline of the subject. Our fear is, however, that manuals like this one will to a great extent displace the large treatises from the student's library: if the knowledge of a manual will enable a student to pass for his degree, he will only exceptionally buy and study the larger works, and will therefore enter his profession with crude and chiefly empirical knowledge, ill-prepared to deal rationally with the problems of medical practice. C. M. G.

Ninth Report of the State Board of Health of Minnesota. Minneapolis: 1883.

The Reports of Local Boards and officers relative to the prevalence of small-pox in 1881 and 1882 occupy a large portion of the report, and show that the disease was generally prevalent throughout the State in those years.

Brief reports follow upon Meteorology, Sanitary Water Survey, Typhoid Fever, Diphtheria, Trichinosis, and Vaccination.

An account of the proceedings of a two days' Sanitary Conference at Minneapolis, in which it is notable that seven out of twenty papers presented on sanitary subjects were written by clergymen.

Medical and Surgical Journal.

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THE MEETINGS OF THE AMERICAN MEDICAL AND OTHER ASSOCIATIONS AT WASHINGTON.

Washington is to be this week and next the great centre of medical interest, and no other place in the country to-day offers nearly the same advantages and inducements for the annual gatherings of the National Associations. It is easy of access by various lines of railways from all directions; it is central for a very large proportion of the population of the Union; it contains almost unrivaled collections both of books and specimens of general, scientific, and strictly professional interest; it has grown to be a very beautiful city, with environs many of which are charming and replete with historical associations; and in it all American citizens are at home. Moreover, it offers, with the vicinity of Baltimore, in common with places otherwise less favored and more distracting though less diverting, sufficient comfortable accommodation for all who choose to resort to it. If more inducements were needed the easy and rapid escape from a climate still harsh and uncertain, and the pleasing anticipation of a tardy spring, should be a temptation hard to resist for the medical fraternity of New England. There is the choice between going all the way from Boston by water in a little over forty-eight hours, or directly through by rail in about seventeen hours; the dweller in the interior is likely to wisely choose the former, but we can sympathize with a resident on the coast who might think he had had of late enough east wind.

The last days of this week will be occupied by the American Surgical Association, which offers a very large number of papers on a great variety of subjects, and by the new Climatological Association, for which a vast amount of material is waiting over our many degrees of latitude and longitude. Massachusetts Bay alone offers climate enough for a vigorous Association's attention. Next week will be fully occupied by the American Medical Association's meeting, and those of the Medical Editors, of the Council of the Public Health Association, and of the representatives of the State Boards of Health.

We do not doubt these bodies would all find it for their advantage to meet more frequently in Washington than they now do, every fourth year being at present the rule with the American Medical Association.

There is one regrettable feature this year, which threatens to mar the otherwise fair prospects of the meeting of the Medical Association; we refer to the exclusion, not merely from the business meetings but from participation in the Sections as well, of those opposed to the Association's Ethical Code. It is understood that such men are neither to be allowed to read papers, nor to take part in the discussions of other's papers; whether or not this exclusion is to be extended to those also who merely decline to take an oath to support a code is not clear. In either case it is to be feared that what might have been a serene and scientific atmosphere will be disturbed if not poisoned and stifling.

THE DOCTRINE OF EVOLUTION AS APPLIED TO PATHOLOGICAL STATES OF THE NERVOUS SYSTEM.

In Dr. Hughlings Jackson the Spencerian philosophy has found a strong supporter. The recent Croonian lectures on the Evolution and Dissolution of the Nervous System are a rigid application of Mr. Spencer's principles to the explanation of nervous pathology.

The nervous system in its development is a striking illustration of the general law of evolution, which it is sought to apply to all orders of natural phenomena. This is seen whether we study the nervous system as an ascending development in the animal kingdom, or in the light of human embryology. It is an advance from the simple to the complex, from the relatively undifferentiated to the relatively differentiated, or as Hughlings Jackson expresses it in the lectures above alluded to, from the most to the least organized — that is to say, from the lowest well organized centres up to the highest least organized centres, the latter being the most complex, the most heterogeneous, and the most unstable. The triple conclusion, then, to which Jackson arrives is, "that the highest centres which are the climax of nervous evolution and which make up the organ of mind are the least organized, the most complex, and the most voluntary."

One of the most interesting chapters in Dr. Maudsley's recent work, Body and Will, treats of the future probable disintegration and decline of will power in the human race by a reversal of the solar conditions which have evolved it. Without, however, speculating as to any such possible contingencies, we are continually meeting instances of disintegrations in the delicate nervous plexuses which form the substratum of mind by causes which produce local failures of nutrition. Dissolution is treated of by Dr. Jackson as a process of *undevelopment*, a "taking to pieces" in the order from the least organized, the most complex, and the most voluntary toward the most organized, the most simple, and most automatic. Such "dissolution" (which of course is only partial) is equivalent to the statement, "reduced to a lower level of evolution." Dr. Jackson applies this thought to the elucidation of the phenomena of insanity: "Starting with health, the assertion is that each person's normal thought and conduct are or signify survivals of the fittest states of what we may call the topmost layer of his highest centres, the normal highest level of evolution. Now suppose that from disease the normal highest level of evolution — the topmost layer — is rendered functionless. This is the dissolution, to which answer the negative symptoms of the patient's insanity. His positive mental symptoms are still the survival of his fittest states, — are survivals on the lower but then highest level of evolution. The most extravagant actions and the most absurd mentation in insane people are the survival of their fittest states. We need not then wonder that an insane person believes in what we call his illusions, they are his perceptions. His illusions are not caused by disease, but are the outcome of activity of what is left of him; his illusions are his mind."

The above view of abnormal mental action — as being a result of suspension or inhibition of the supreme centres and the unchecked activity of the lower — is now a favorite view with mental pathologists.

Dr. Jackson gives interesting illustrations of his meaning, of which one of the simplest is the effect of alcohol on the brain (and here we take occasion to remark that a similar conception was presented by John Fiske in a work published fifteen years ago): "An injurious agency, say alcohol, taken into the system flows to all parts of it, but the highest centres being least organized 'give out' first and most, the middle centres being more organized resist longer, and the lowest centres being most organized resist longest. Did not the lowest centres for respiration and circulation resist more than the highest do, death by alcohol would be a very common occurrence."

After stating that in the progress of chronic alcoholism gradual involvement of the lower centres takes place, he speaks of local dissolution. Disease may occur in any evolutionary level on one side or on both sides; it may affect the sensory elements chiefly, or the motor elements chiefly. There are local dissolutions of the lowest centres and of the highest centres. In every case of insanity the highest centres are affected, and different divisions of these highest centres are affected, corresponding to different kinds and degrees of insanity.

As examples of local dissolution, Dr. Jackson cites first progressive muscular atrophy. This is dissolution commencing at the bottom of the central nervous system. Here atrophy begins in the most voluntary limb, the arm, affecting first the most voluntary part of the limb, the hand, and spreading to the trunk (the more automatic parts). The wasting of the muscles of the hand has its causal counterpart in atrophy of the first or second dorsal anterior horn, an atrophy which, as its name intimates, is progressive.

He next refers to hemiplegia resulting from destruction of a plexus in mid region of the brain. The arm, the most voluntary limb, suffers the more and longer, and the most voluntary part of the face suffers more than the rest of the face. Although unilateral movements (the voluntary) are lost, the bilateral, which are more automatic, are retained. "Hemiplegia is a clear case of dissolution, — loss of the most voluntary movements of one side of the body, with persistence of the more automatic movements."

His next illustration is paralysis agitans. Here the tremor begins in the hand, affecting the whole arm, finally becoming bilateral. "In an advanced stage paralysis agitans is double hemiplegia with rigidity; is a two-sided dissolution." The same conception is applied to hemilateral epileptiform seizures and to chorea, the great elaborateness of whose movements "points to disease high up, to disease on a high level of evolution."

Dr. Jackson's next example is aphasia, which in many ways illustrates the doctrine of dissolution. In complete aphasia, for instance, there is loss of intellectual (the more voluntary) language, with persistence of emotional (the more automatic) language. In other cases the patient has lost all speech with the exception of "yes" and "no," "the most automatic of all verbal utterances."

Speaking of uniform dissolution, dissolution affecting all divisions of the highest centres, Dr. Jackson chooses as an example delirium in acute non-cerebral disease. This, scientifically considered, he says, is a case of insanity. "The patient's condition is partly negative and partly positive. Negatively he ceases to know that he is in the hospital, and ceases to recognize persons about him. In other words, he is lost to his surroundings; he is defectively conscious. We must not say that he does not know where he is because he is defectively conscious; his not knowing where he is is itself defect of consciousness. The negative mental state signifies, on the physical side, exhaustion or loss of function, somehow caused, of some highest nervous arrangements of the highest centres. We may conveniently say it shows loss of function of the topmost layer of his highest centres. The other half of his condition is positive. Besides his not knowings there are his wrong knowings. He imagines himself to be at home or at work, and acts as far as practicable as if he were; ceasing to recognize his nurse as a nurse he takes her to be his wife. This, the positive part of his condition, shows activity of the second layer of his highest centres, but which, now that the normal topmost layer is out of function, is the then highest layer. His delirium is the 'survival of the fittest' states on his then highest evolutionary level. Plainly he is reduced to a more automatic condition. Being (negatively) lost from loss of function of the highest, latest developed, and least organized, to his present 'real' surroundings, he (positively) talks and acts as if adjusted to some former 'ideal' surroundings, necessarily the more organized."

These lectures will be read with interest by all who desire to investigate the great questions of neuro-psychology.

— The use of mullein as a palliative for the cough of phthisis seems to be meeting with favor in various quarters. The customary form of administration has been a milk decoction of the plant. More recently the smoking of the leaves has been recommended as a more agreeable and effective method of administration.

THE SUBCUTANEOUS USE OF MORPHINE IN ELDERLY PERSONS.

The fact is generally recognized and taught that the very young and the very old are peculiarly susceptible to the toxic effects of anodynes, especially opium. In the case of children, particularly, we have learned the necessity of reducing materially the dose of opium beyond the proportion to the adult dose which the age of the child would indicate for other drugs. We think, however, that many practitioners do not attach sufficient importance to the necessity for caution in the administration of opium to the aged; and in particular that the hypodermic method, useful as it is under certain circumstances, is capable of greatly increasing the risk of an overdose in such cases. One eighth of a grain of morphia given under the skin has caused alarming symptoms in an elderly subject, and we have seen a similar dose apparently cause death in a hospital patient suffering from pneumonia. Instances have occurred within the knowledge of many where a dose as small as one sixth of a grain repeated once in the course of an hour has proved fatal to a feeble and aged subject. What enhances this danger is the fact that symptoms indicative of narcosis are often entirely wanting until the repetition of the dose has been made, when they supervene with alarming suddenness. It is just here that the risk of the hypodermic method is seen. If the drug is in the stomach and symptoms of an alarming nature present themselves there is at least an opportunity to evacuate the residue of the drug before it becomes absorbed. But with the narcotic circulating within the blood-vessels it is beyond our reach. The very elements which have made the hypodermic syringe such a favorite in the hands of the medical profession are those which constitute its chief danger.

True it is that Magendie's solution is convenient to carry about; but so would be morphia granules if we were as accustomed to them. The taste of the latter is no great obstacle to their use; the nausea and other bad after-effects are hardly more frequent after the administration of the drug per os. The desideratum of concealing the dose from the patient is as readily attained by the use of the pill as by that of Magendie's solution. Many physicians finding difficulty in preserving the solution without some antiferment are in the habit of dissolving a weighed powder each time; and surely this is no more convenient than to carry and administer a small pill.

The indications which are especially met by the hypodermic method are quickness of action and the retention of the drug against vomiting. When either of these requirements must be met the subcutaneous injection should be practiced. But for a routine method, and above all in that class of patients who are especially liable to suffer from an overdose of the drug, it seems to us unjustifiable to employ a channel of administration which takes it out of our power to evacuate what may prove an excess of the medicament. Some over-conservative physicians of our acquaintance have gone so far as to throw aside the hypodermic syringe altogether in view of the risks which they have observed in its use. But while this extreme ground seems to us untenable, and while we recognize the great advantages which in certain special cases may accrue from hypodermic medication, we yet feel impelled to protest against making the subcutaneous tissue a regular channel for the administration of morphia, especially in the debilitated and aged.

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DR. WILLARD PARKER.

The name of Dr. Willard Parker, who died at his residence in New York on the 25th of April, has long been a household word, and not only in the city where the last forty-five years of his life were spent, but also throughout the country. For eighteen months past he has been suffering from pyelitis and other troubles, but the immediate cause of death was an attack of apoplexy, with aphasia, which occurred April 13th. He was born on the 2d of September, 1800, at Hillsborough, New Hampshire, but when he was five years old his father, who was a farmer of Puritan stock, removed to the family homestead at Chelmsford, Massachusetts; which remained in Dr. Parker's possession up to within a short time before his death. When he was eighteen he began teaching school in order to get the funds necessary to secure a collegiate education, which his parents were unable to provide for him, and four years afterward he entered Harvard; from which he was graduated in 1826. It is related that when he entered college he expected to study for the ministry, but that an incident which occurred in his Freshman year led to a change in his choice of a profession. His room-mate had an attack of strangulated hernia, and he was so much impressed with the skill with which the late Dr. John C. Warren reduced it, thereby affording complete and instantaneous relief, after a local practitioner had failed in the attempt, that he decided to study medicine himself. After graduation he became a student under Dr. Warren, and in 1830 received the degree of M. D. from Harvard; in the meanwhile having served for some time as an interne at the Chelsea United States Marine Hospital. He immediately received the appointment of Professor of Anatomy in the Vermont Medical College, and in the same year (1830) accepted a similar appointment in the Berkshire Medical College, Pittsfield, to which the professorship of surgery was added in 1833. He became Professor of Surgery in the Cincinnati Medical College in 1836, and while still holding this position made a trip abroad, and studied for some time in the London and Paris hospitals. For a period of thirty years, beginning in 1839, he was Professor of Surgery in the College of Physicians and Surgeons in New York; at the expiration of which he resigned this position, and accepted the chair of Clinical Surgery. His success in that city was immediate, both as a teacher and a practical surgeon, and his brilliant operations and distinguished talent as a lecturer soon placed him in the foremost rank of the profession and carried his fame even across the Atlantic.

His exalted character also won the esteem and veneration of the entire community, and, a public-spirited citizen of the noblest type, he always took an active part in all projects to promote the general welfare. Thus he was scarcely less prominent than the late Dr. James R. Wood in the reorganization of the city almshouse and hospital system in 1845, which resulted in the foundation of Bellevue Hospital, and he was also instrumental, to a large extent, in securing the reorganization of the Health Department, which was previously altogether inefficient. He was closely identified with the temperance movement, and in 1865 he was appointed to succeed Dr. Valentine Mott as president of the State Inebriate Asylum at Binghampton, the first establishment ever founded for the treatment of drunkenness as a disease. In 1870 the degree of LL. D. was conferred upon him by Princeton College. Among his contributions to surgical science were the operation of cystotomy in chronic cystitis, an operation for the repair of rupture of the perinæum and sphincter ani, which involved the division of the coccygeal attachments of the sphincter, and an operation for the cure of abscess of the appendix vermiformis, while he was also the first to direct attention to concussion of the nerves as distinguished from concussion of the nerve centres.

The funeral services were held April 28th at the University Place Presbyterian Church, and, in accordance with Dr. Parker's expressed wish, were of a very simple nature. The church was filled with his medical and other friends, all the various societies to which he belonged being represented, and the pall-bearers were eight grandchildren of the deceased. On the day following the remains were taken for interment to New Canaan, Conn., where for a number of years Dr. Parker had owned a country residence and farm, and spent a considerable portion of his time.

MEDICAL NOTES.

— Etherization by the rectum has been tried with success at the Boston City Hospital in several cases.

— The Senate of Massachusetts has passed a bill requiring life insurance companies within the State to remove the discrimination in tariff which they have heretofore maintained against negroes. It seems improbable that legislation of this sort can effect any good object. The former rules of the insurance companies were in no sense an oppression of the colored race. If the rates were higher to them it was because experience had shown that their expectation of life was not so good as that of whites, and all that remains now for the companies is to decline to accept risks on negroes at all, which is no great gain to the latter. Such laws, if not mere political buncombe, are examples of legislation undertaking to fix the price of commodities, and are not likely to prove particularly successful.

— A case of delirium tremens is reported in the British journals occurring in a boy in Dublin at the age of eight. He stole a quantity of whiskey and drank it, thereby acquiring an attack of delirium tremens, which nearly killed him. He had been a dipsomaniac from the time he was able to imbibe alcohol in any form.

NEW YORK.

— The governors of the New York Hospital Society, which has under its charge the Chambers Street branch, and the Bloomingdale Insane Asylum, as well as the main hospital on Fifteenth Street, have presented their one hundred and thirteenth annual report to the Legislature. From the insane department thirty-six patients, fifteen men and twenty-one women, were discharged during the year cured, and thirty-eight improved, ten of whom bade fair to recover under sufficiently protracted treatment. During the summer and autumn months excursion parties of patients, varying in number from ten to forty, of both sexes, were taken semi-weekly, either to one of the more retired sea-side resorts or to the asylum farm at White Plains, and with the exception of the drowning of a young man while in bathing, which was an unavoidable accident, no untoward event occurred; while the amount of pleasure and healthful benefit derived by the participants was undoubtedly very considerable. Twelve patients, four men and eight women, accompanied by their attendants, were boarded in private families in the country for periods varying from a few weeks to three months, and this also proved beneficial to them. It is stated that ten of the twelve, although well satisfied with their accommodations while away, were glad to return to the institution. Dr. Nichols, the medical superintendent, advises that as there is a great want of available skill in the personal care of the insane during the periods when they are from necessity or choice treated at their homes, a course of from three to six months in institutions for the insane should be added to the curriculum of the training schools for nurses. In furtherance of this idea he offers to give the graduating nurses of the New York Hospital school this extra course, which he thinks would be of benefit to the asylum as well as the nurses. No mechanical restraint was used during the whole year; although it was found necessary to keep one patient, a man of powerful frame suffering from acute mania, secluded most of the time, as the best means to husband his strength and secure the safety of others.

— At a meeting of the Board of Estimate and Apportionment held April 21st $138,710, from the excise fund, was distributed among various charitable institutions in the city. Of this sum the St. John's Guild and Floating Hospital received $2300; the New York Diet Kitchen Association, $1175; the House of Rest for Consumptives, $1094; St. Luke's Hospital, $4312; St. Francis' Hospital, $7656; Mount Sinai Hospital, $4250; the German Hospital, $4541; St. Vincent's Hospital, $1975; the Presbyterian Hospital, $2687; St. Mary's Free Hospital for Children, $1531; the Woman's Hospital, $1852; St. Joseph's Hospital, $1500; the New York Eye and Ear Infirmary, $2208; the New York Ophthalmic Hospital, $1439; the New York Orthopædic Dispensary, $2220; and six of the other dispensaries $1000 each. The Purim ball, which was given a few weeks since at the new Metropolitan Opera House in aid of the Hebrew Orphan Asylum, netted the very handsome sum of $14,150.

— In the early part of April one of those pretentious and "thoroughly fire-proof" apartment-houses, of unnumbered stories in height, which have recently sprung up like mushrooms all over New York, was almost completely burned up, and although the fire occurred at midday several of the occupants barely escaped with their lives. If it had taken place in the night the loss of life would undoubtedly have been considerable, and as it was the new life-saving scaling ladders (in the use of which a corps of the Fire Department has been specially drilled, and the efficiency of which were on this occasion practically tested for the first time) had to be employed for the rescue of the elevator boy, who was at the top of the house, and whose escape was cut off by the dense smoke. Since then a bill has been passed by the State Senate, entitled An Act to Regulate the Height of Dwelling-Houses in the City of New York, and for the better Preservation of Health in said Houses, which provides that the height of dwellings shall be proportionate to the width of the streets in which they are built, as is the case in Paris, and as Dr. Van der Poel suggested as a requirement by law in a recent report of the Committee on Hygiene of the County Medical Society. A resolution has also been introduced into the New York Board of Aldermen providing that on streets and avenues not exceeding sixty feet in width the houses shall not exceed sixty feet in height, and in streets and avenues exceeding sixty feet in width they shall not be more than seventy feet in height.

Correspondence.

A NEW ANTISEPTIC DRESSING.

Worcester, Mass., *April* 23, 1884.

Mr. Editor, — Since the first week of February last I have been treating compound fractures and operation wounds at our City Hospital with what I suppose to be a new form of dressing. It is certainly simple, its essential elements being but two in number, the "absorbent sheet lint," supplied by Dennison & Co., and a glycerine jelly containing bichloride of mercury. An ounce of gelatine is softened in cold water enough to cover it, then a pound of glycerine is added, and the mixture kept hot until it becomes homogeneous; meanwhile twelve grains of the sublimate is added, and promptly dissolves. This jelly is quite fluid at 110° F., but is firm at ordinary temperatures. Once prepared it can be kept indefinitely in a glass jar.

I closely cover the wound with one or more layers of the absorbent lint dampened with one five-thousandth solution of the sublimate, and over this brush or pour the warm fluid jelly. This instantly fills the meshes of the lint, and makes an air-tight and germ-tight seal to the wound. Outside of this I bind a thick layer of dry sublimated absorbent lint or cotton.

I have found it convenient to prepare, in advance, broad strips of the lint by passing them through the hot jelly; the lint comes out quite heavily charged, and for convenience of handling is laid at once upon a broader strip of dry sublimated lint to which it adheres as it cools. This keeps very well in a tight jar, and for any fairly even surface this makes an excellent dressing, not requiring to be warmed.

The cases reported show that under either form of this dressing a wound may remain aseptic, and heal as well as under the Lister dressing. Under it I have not yet found it necessary to use drainage tubes, as there has been no exudation or suppuration.

I think this will be found a convenient and useful dressing in hospital and private practice. It is simple, light, clean, odorless, comfortable, and, so far as my experience has gone, it is thoroughly antiseptic.

George E. Francis, M. D.

Miscellany.

A CASE OF PUSTULA MALIGNA.

Dr. A. C. Griffin, in the *New York Medical Journal* (April 12th), describes a case of septic poisoning which, in his opinion, was malignant pustule, caused by the bite of a green-bottle fly which had been feeding on a heap of offal. The fly bit the patient on his cheek sufficiently to draw blood, and was killed by a friend. The following day the patient presented himself with a swelling on the cheek at a point corresponding with the bite, the appearances of which are thus described: —

On examination the swelling was found to be of a somewhat circular form, about twenty-five mm. in diameter, and extending through the whole thickness of the cheek, implicating the skin and mucous membrane, to which it was firmly adherent. The swelling was indurated to such an extent as to greatly resemble the ivory hardness of carcinoma. It was extremely sensitive to pressure, and the patient complained of very severe lancinating pains radiating through it. In the centre of this swelling, fifteen mm. above and twenty mm. external to the ala of the nose, was situated a small ulcer, which was covered by a closely adherent layer of pus of a grayish, unhealthy appearance. Surrounding the ulcer was a wide areola of an angry red, erysipelatous hue. The cervical and submaxillary lymphatics were enlarged and tender to pressure. Pulse 120, temperature 103.2° F., tongue slightly coated, violent headache, and complete anorexia. The patient complained of great prostration, excessive nervousness, and an extreme fear of impending death. The ulcer was cauterized with pure carbolic acid, cooling lotions applied, and quinine and alcohol freely administered, with sufficient morphia to relieve pain. On the following day the condition of the patient was much worse, the induration had greatly enlarged in size, extending from the upper lip to the orbital cavity, also implicating the nose, being fully sixty mm. in diameter. The ulcer had also increased by a process of sloughing to a diameter of twenty mm.; the destruction of tissue was quite extensive, as the ulcer extended nearly through the thickness of the cheek. The edges of the ulcer were composed of exuberant granulations, quite protuberant, and bled quite freely from the slightest contact, and from the cavity thus formed there was a profuse discharge of a thin, ichorous fluid of a peculiarly offensive odor. Delirium now supervened. Pulse 140, temperature 104.8° F., tongue heavily coated with a brownish-yellow fur, the bowels were constipated, the cervical lymphatics were very much enlarged, quite tender to pressure, and threatening suppuration; the patient meanwhile complained constantly of severe pain. Pure carbolic acid was again applied to the ulcer to destroy the exuberant granulations, and to prevent, if possible, further septic absorption. Poultices were applied over the swelling, morphine, quinine, and alcohol were given in increased doses; a mild cathartic was also administered. The patient grew progressively worse until the sixth day from the receipt of the bite, when his condition was one of extreme prostration, with very little hopes of recovery. The treatment had consisted of thorough cauterization of the ulcer each day, poultices to the swelling, and the free use of alcohol and quinine, with sufficient morphine to allay the pain. By the aid of this free stimulation the patient was enabled to overcome the virulence of the septic inoculation, and on the seventh day his condition had slightly improved. The induration became somewhat softer and slightly diminished in size, the ulcer began to assume a healthy appearance, normal granulations sprang up covered with laudable pus, and the areola had become less vivid in color. From this time on the case progressed favorably, the induration of the cheek and the swelling of the glands subsided, the cavity left by the ulcer filled up and healed, leaving a moderate-sized cicatrix, and the patient's general condition advanced steadily toward its normal standard.

Though the clinical evidence in this case seems to point to malignant pustule, no examination was made for the presence of the bacillus, nor was any experiment made by inoculation. In view of the comparative infrequency of this disease in this country it is to be regretted that this confirmatory evidence was not obtainable.

A similar case, also resulting from the bite of a fly upon the cheek, was reported in the *Gazette des Hôpitaux*, No. 102, having occurred in the service of M. Mollière at the Hôtel Dieu at Lyons. Energetic treatment by thermo-cautery and the injection of the swollen parts with twenty per cent. solution of carbolic acid caused a slough which was complete in a week and was followed by rapid healing. Here the blood and serum in the vicinity of the pustule showed a few filaments of the bacillus anthracis, and an inoculation practiced therewith produced death in a few hours with signs of specific gangrenous infection.

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THE MORAL BEARINGS OF ARTIFICIAL IMPREGNATION.

The French journals have been commenting freely during the past few weeks on a decision rendered by the Tribunal of Bordeaux in regard to a case of artificial impregnation. A physician had employed this device with the consent of a childless couple, but unsuccessfully. Not being paid, he brought suit for the amount of his fee, and detailed in court the steps of the treatment. This evidence the court held to be in contravention of the requirements of professional secrecy, and at the same time went a step further and pronounced against the performance of artificial fecundation as being repugnant to natural law, and capable in cases of abuse of causing a real social danger. On the former point, the violation of professional confidence, the general opinion seemed to support the decision (which was confirmed on appeal by the Tribunal of the Seine), but on the latter point the Society of Legal Medicine appointed a committee to prepare a report. This report was presented by Dr. Leblonde, and while condemning the attempts of irregular practitioners to attract sterile women by means of advertisements of an operation for their relief, it indorses the operation when performed by an honorable physician who resorts to it only under well-determined conditions, and with discretion, as a perfectly acceptable device, which, instead of creating a social danger, may conduce to the extension of the family without in the least offending modesty.

Reviewing the conditions essential to, impregnation, the report says that when the two necessary elements are both existent and of normal quality a mechanical obstacle may interfere with their contact, due to malformations of the male or female organs of generation, such as hypospadias, uterine deviations, atresia cervicis, etc., and that in such cases artificial impregnation is equally legitimate with other surgical measures for the overcoming of the obstacle. For this operation he quotes as authority Courty, Pajot, De Sinéty, Lutaud, Eustache, Marion Sims, Gaillard Thomas. The method of Pajot, in the opinion of the reporter, is preferable on the ground of simplicity and decency. Of the success of the manœuvre nothing is said in the report, but the implication is made that the accomplishment of the desired result is an easier matter than we are inclined to think has been the experience of American gynæcologists.

The conclusion of the report was as follows: "So far from condemning artificial fecundation, as does the Tribunal of Bordeaux, we are disposed to encourage it as tending to perpetuate the species and furnishing to the family joys which it could not otherwise experience. However, we are of the opinion that the operation ought not to be attempted except at the express request of the persons interested, and after assurance of the quality of the seminal fluid furnished by the husband."

To this the Society added by unanimous vote this amendment: "An honorable physician ought not to take the initiative in proposing the operation of artificial impregnation, but neither ought he to refuse to practice it at the request of the interested persons."

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THE CRYPTA SYPHILITICA.

We wonder how Professor Hayem will feel when in *Gaillard's Monthly*, in an article by Ephraim Cutter (reprinted in the *Therapeutic Gazette*, and in pamphlet form by a prominent pharmacist), he sees his *hæmatoblasts* depicted as "embryonal forms of vegetative spores" of the "crypta syphilitica!" It is added that "in the diagram they are immovable, but in the blood just removed from the stream of a syphilitic, and viewed under a one-sixteenth-inch first-class Tolles' immersion objective they appear as auto-mobile globes, active with life, skurrying hither and thither with the ceaseless, playing motions of protoplasmic life." Marvelous are the powers of Stillingia! Professor Hayem will be pleased to learn that these little highly refractive bodies, so well described in his treatise on the blood, can be entirely removed by a course of McDade's syrup!

— "Doctor," said the grateful patient, seizing the physician's hand, "I shall never forget that to you I owe my life." "You exaggerate," said the doctor mildly, "you only owe me for fifteen visits; that is the point which I hope you will not fail to remember."

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 19, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	618	231	13.44	14.88	2.08	4.00	2.88
Philadelphia	927,995	426	147	10.81	15.64	—	4.14	4.37
Brooklyn	644,526	254	104	15.21	14 81	1.95	3.92	2.73
Chicago	632,100	236	127	19.74	10.50	4.62	6.72	2.52
Boston	423,800	189	53	9.54	14.31	.50	3.71	.53
Baltimore	408,520	142	48	16.89	10.56	2.11	1.41	1.41
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	121	—	11.62	12.45	2.49	.83	2.49
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	79	28	15.12	18.90	1.26	—	6.30
Pittsburg	180,000	65	28	13 86	15.38	—	10.78	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	35	—	14.30	11.44	11.44	—	2.86
Nashville	54,400	21	9	19.04	9.52	—	4.76	—
Charleston	52,286	—	—	—	—	—	—	—
Lowell	71,447	18	4	5.55	11.11	—	—	—
Worcester	69,442	26	17	19.25	3.85	—	15.40	—
Fall River	62,674	19	7	10.32	15.78	—	—	5.26
Cambridge	60,995	17	6	17.66	11.77	—	11.77	—
Lawrence	45,516	17	7	5.88	5.88	—	—	5.88
Lynn	44,895	6	4	16.66	16.66	—	16.66	—
Springfield	38,090	7	1	28.56	14.28	—	14.28	—
Somerville	31,350	9	3	—	11.11	—	—	—
Holyoke	30,515	—	—	—	—	—	—	—
New Bedford	30,144	7	2	28.56	14.28	—	14.28	—
Salem	29,503	—	—	—	—	—	—	—
Chelsea	24,347	7	4	14.28	14.28	—	14.28	—
Taunton	22,693	8	0	—	12.50	—	—	—
Gloucester	21,400	3	2	33.33	—	—	33.33	—
Haverhill	20,905	4	1	—	25.00	—	—	—
Newton	19,421	4	3	12.50	—	—	—	—
Brockton	18,323	6	0	—	16.66	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	5	0	—	60.00	—	—	—
Fitchburg	13,433	6	0	—	50.00	—	—	—
Seventy-nine Massachusetts towns	315,596	69	12	5.80	11.60	—	4.35	—

Deaths reported 2424 (no reports from St. Louis, New Orleans, Buffalo, Milwaukee, and Providence): under five years of age, 848; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 368, lung diseases 371, consumption 352, diphtheria and croup 101, scarlet fever 64, diarrhœal diseases 41, typhoid fever 36, measles 24, whooping-cough 23, erysipelas 16, malarial fevers 11, cerebro-spinal meningitis 10, puerperal fever eight, typhus fever one. From *typhoid fever*, Philadelphia 12, Chicago and Boston four each, New York, Baltimore, and Cincinnati three each, Brooklyn two, Pittsburg, Nashville, Lowell, Springfield, and New Bedford one each. From *measles*, Philadelphia five, Baltimore eight, New York and Chicago four each, Brooklyn three. From *whooping-cough*, New York seven, District of Columbia three, Brooklyn, Chicago, Boston, Baltimore, and Cincinnati two each, Pittsburg, Worcester, and Brookline one each. From *erysipelas*, New York seven, Brooklyn four, Boston two, Philadelphia, Baltimore, and Newton one each. From *puerperal fever*, Brooklyn and District of Columbia two each, Philadelphia, Chicago, Boston, and Nashville one each. From *malarial fevers*, New York five, Brooklyn four, Baltimore two. From *cerebro-spinal meningitis*, Chicago two, New York, Baltimore, Cincinnati, District of Columbia, Nashville, Fall River, Cambridge, and Fitchburg one each. From *small-pox*, Philadelphia, Chicago, and Cincinnati one each. From *typhus fever*, New York one.

One case of small-pox was reported in Cincinnati; scarlet fever 58, diphtheria 19, typhoid fever two, and measles one.

In — cities and towns of Massachusetts, with an estimated population of — (estimated population of the State 1,955,104), the total death-rate for the week was — against — and — for the previous two weeks.

In the 28 great towns of England and Wales, with an estimated population of 8,762,354, for the week ending April 5th, the death-rate was 22.7. Deaths reported 3809: acute diseases of the respiratory organs (London) 357, whooping-cough 184, measles 143, scarlet fever 75, fever 41, diarrhœa 37, diphtheria 28, small-pox (London 13, Birmingham three, Liverpool and Sunderland two each, Newcastle one) 21. The death-rates ranged from 14.3 in Brighton to 36.2 in Oldham; Leicester 16.5; Birkenhead 17.8; Bradford 18.9; London 21.9; Sheffield 22.4; Birmingham 23.3; Liverpool 23.6; Newcastle-on-Tyne 24.5; Nottingham 26.9; Leeds 28.1; Manchester 30.4. In Edinburgh 23.7; Glasgow 26.2; Dublin 29.6.

For the week ending April 5th, in the Swiss towns, there were 36 deaths from lung diseases, consumption 33, typhoid fever 25, diphtheria and croup 18, diarrhœal diseases 13, whooping-cough eight, scarlet fever two, erysipelas two, measles one. The death-rates were, at Geneva 20.4; Zurich 19.7; Basle 21.7; Berne 33.3.

The meteorological record for the week ending April 19th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
April, 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 13	30.091	42	55	38	65	52	76	64	NW	E	W	11	12	6	C	C	C	—	—
Mon., 14	30.116	43	62	36	71	78	77	75	NW	E	SW	3	8	6	C	C	C	—	—
Tues., 15	29.931	46	55	39	90	100	100	97	SE	E	S	4	14	13	F	R	R	—	—
Wed., 16	29.671	57	69	49	100	60	96	85	SW	S	W	6	10	7	O	C	O	—	—
Thurs., 17	29.821	48	58	45	98	85	100	94	E	NE	NW	4	12	10	O	O	R	—	—
Fri., 18	29.908	42	48	40	99	100	99	99	N	NE	N	11	17	4	O	R	O	—	—
Sat., 19	29.969	42	44	41	100	97	100	99	NE	NE	NW	13	9	6	R	O	O	—	—
Mean, the Week.	29.938	46	56	41				83										49.48	1.69

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM APRIL 19, 1884, TO APRIL 25, 1884.

Hoff, John Van R., captain and assistant surgeon. To be relieved from duty at Alcatraz Island, Cal., and to report to the commanding officer at Fort Mason, Cal., for duty as post surgeon. Paragraph 3, S. O. 45, headquarters Department of California, April 16, 1884.

Porter, Joseph Y., captain and assistant surgeon. Granted leave of absence for two months, to take effect about May 5, 1884. Per S. O. 38, headquarters Division of the Missouri, April 19, 1884.

Biart, Victor, captain and assistant surgeon. Granted leave of absence for one year on surgeon's certificate of disability, with permission to leave the Division of the Missouri. Paragraph 2, S. O. 91, A. G. O., April 19, 1884.

La Garde, Louis A., captain and assistant surgeon. Granted leave of absence for one month, with permission to apply for two months' extension. Paragraph 1, S. O. 91, A. G. O., April 19, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS UNITED STATES NAVY FOR THE WEEK ENDING APRIL 26, 1884.

Hibbett, C. T., passed assistant surgeon, ordered to United States Iron Clads, James River, Va.

Aulick, H., passed assistant surgeon, detached from Iron Clads and ordered to the New Hampshire.

Dixon, W. S., passed assistant surgeon, detached from the Hartford and ordered to the Coast Survey Steamer Hassler.

Terrill, F. H., passed assistant surgeon, detached from the Hassler and ordered to the Hartford.

Wise, J. C., surgeon, detached from the New Hampshire and placed on waiting orders.

Schofield, W. K., medical inspector, appointed medical inspector on active list.

Nash, F. S., passed assistant surgeon, detached from Laboratory and ordered to the Alert (Greely Relief Expedition).

Hall, J. H., passed assistant surgeon, ordered before Retiring Board.

Nelson, H. C., medical inspector, placed on retired list.

Battle, S. W., passed assistant surgeon, placed on retired list.

Terrill, F. H., passed assistant surgeon, resigned.

Murray, J. M., passed assistant surgeon, ordered to the Minnesota.

American Climatological Association. — The first annual congress of the American Climatological Association will meet at the hall, northwest corner of Sixth and F Streets, Washington, D. C., May 3 and 5, 1884. Sessions ten A. M. and three P. M. Papers: (1.) Opening Address, F. I. Knight, M. D., Boston, Mass. (2.) The Etiology of Pulmonary Phthisis, B. F. Westbrook, M. D., Brooklyn, N. Y. (3.) Dryness and Elevation the most Important Elements in Climatic Treatment of Phthisis, Charles Denison, M. D., Denver, Col. (4.) Some Observations on the Diagnosis of Pulmonary Diseases, D. N. Kinsman, M. D., Columbus, Ohio. (5.) The Effects of Humidity on the Cause and Course of Diseases, W. H. Geddings, M. D., Aiken, S. C. (6.) The Effects of Sea-Air on Diseases of the Respiratory Organs, Boardman Reed, M. D., Atlantic City, N. J. (7.) The Use of Compressed and Rarefied Air, as a Substitute for Change of Climate, in the Treatment of Pulmonary Diseases, J. Solis Cohen, M. D., Philadelphia, Penn. (8.) The Constituents of Climate and their Relation to Disease, J. Hilgard Tyndale, M. D., New York. (9.) The Relation of Laryngeal to Pulmonary Diseases, F. H. Bosworth, M. D., New York. (10.) The Climate of Large Cities Dangerous to Consumptives, Frank Donaldson, M. D., Baltimore, Md. The above is a list of the papers already reported to the Committee. Others have been promised, but the titles have not been sent in.

American Surgical Association. — The exercises of the annual meeting of the American Surgical Association will be held in the lecture hall of the National Museum (Smithsonian Grounds), Washington, D. C., Wednesday, Thursday, Friday, Saturday, April 30, May 1, 2, and 3, 1884, from eleven A. M. to four P. M. The profession is cordially invited to attend the sessions.

Suffolk District Medical Society. Surgical Section. — The last regular meeting of the Season will be held at 19 Boylston Place on Wednesday evening, May 7th, at 7.45 o'clock. Communications: —

Cases of Strangulated Hernia, Inguinal and Umbilical. Dr. A. T. Cabot.

Cases of Unilateral Atrophy, and

A Case of Strangulated Umbilical Hernia. Dr. H. L. Burrell.

S. J. Mixter, *Secretary*, 180 Marlborough Street.

Appointment. — William H. Welch, of New York, has been appointed Professor of Pathology in Johns Hopkins University.

Death. — In Roxbury, Mass., April 24, 1884, William Henry Campbell, M. D., M. M. S. S., aged fifty-two years.

Books and Pamphlets Received. — Post Nasal Catarrh and Diseases of the Nose causing Deafness. By Edward Woakes, M. D. Illustrated with Wood Engravings. Philadelphia: P. Blakiston & Co. 1884.

A Course of Instruction in Zootomy (Vertebrata). By T. Jeffery Parker, B. Sc. Lond., Professor of Biology in the University of Otago, New Zealand. With seventy-four Illustrations. London, Macmillan & Co. 1884.

National Board of Health. Remarks before the Committee on Public Health of the House of Representatives . . . in Refutation of Charges made against the Board by Supervising Surgeon-General of the Marine Hospital Service. Washington, D. C.

Original Articles.

MALIGNANT PUSTULE.[1]

BY W. S. JANNEY, M. D.

My remarks to-night will be on the clinical history of four cases of malignant pustule, which have come under my observation at various times during thirty years of practice.

The synonyms of malignant pustule, as given by various authors, are: Contagious carbuncle, malignant carbuncle, anthrax, and charbon; other names are used to designate the more diffused and general forms of the disease.

It is defined to be a specific contagious disease, communicated to man from disease of horned cattle, horses, sheep, and other herbivora, and known as splenic fever, and due to the presence in the system of the bacillus anthracis of Cohen, or bacteridium of Davaine. The local or external form of the affection, malignant pustule proper, is a carbunculous swelling having specific characters, attended with more or less intense surrounding inflammatory œdema; constitutional symptoms may be slight or severe, and the disease is often fatal.

The symptoms and course of malignant pustule vary greatly with the form of disease. Authors describe at least three distinct forms: —

First, malignant pustule or carbuncle proper, the form from which the names of charbon and anthrax are derived; usually it occurs as a primary lesion due to direct inoculation; the seat is either on the face, neck, hands, or arms, those parts most exposed to inoculation.

Second, malignant anthrax, œdema, without definite pustule, corresponds in the main with malignant pustule proper. The eyelids are the parts most frequently affected, but it may occur elsewere.

Third, internal anthrax; differs greatly from external, and may be general, having no special lesion or accompanied by local affection; usually pulmonary or gastro-intestinal.

The cases that I wish to report to-night come under the form of malignant pustule proper.

Mr. H., residing in Hopewell township, Mercer County, N. J., a farmer, aged sixty; previous to the attack general health good. On the morning of September 20, 1866, Mr. H. noticed a small pimple on his right cheek, immediately over the infra-orbital foramen. During the day it was slightly painful, and during the night the apex became vesicular, with great itching and burning, which continued to increase until the following morning, when I first saw him. The face presented the following appearance: a small pustule, one eighth inch in diameter, situated as above stated, with a denuded apex of a dark-brown color, and an areola of one half an inch in diameter, of a dark red color, surrounding the base of the pustule, and not sensitive to touch; pulse 78, respiration 20, tongue slightly coated, and bowels constipated. During the day the temperature increased. Pulse in the evening 100, respiration 22. Side of face up to this time had become very much swollen, with red streaks extending to the neck; slightly delirious; tongue dry. Free crucial incisions were made in the pustule. Delirious through the night of the 21st. On the morning of the 23d respiration was 30, pulse 130, tongue brown and dry; the cheek was of dark gangrenous color, extending to the lower margin of lower jaw, and also backward, involving the parotid region and right ear, to near the posterior median line of the neck; dark-red streaks extending over the shoulder to the right arm; patient becoming rapidly comatose, and died at two P. M. on the 23d, being fifty-eight hours after first noticing pimple on his face. The inflammation and œdema did not extend over the median line of the face or back of the neck.

The second case that came under my care was: —

Mrs. R., residing at her country seat in the suburbs of this city, thirty-two years of age, married, the mother of three healthy children, and of previous good health. She noticed September 17, 1876, a small pimple on the right side of the face, one half inch below the lower lip, and slightly to the right of the median line. From her description of how it commenced, she informed me that her first intimation of anything being the matter was a persistent itching sensation, and on rubbing it she felt a small circumscribed induration, which was in the skin, and was not noticeable. She continued rubbing it to allay the itching; in a few hours she noticed a slight elevation of the skin, conical in form, and the size of an ordinary pin-head, which increased during the day. Slept well during the night, and on the following morning, the 18th, she noticed the papule had increased in size, and was vesicular, containing a dark-colored fluid. The itching continued, and on rubbing it she ruptured the vesicle, and from that time she had a burning, itching pain in the pustule. I saw Mrs. R. on the morning of the 18th of September; she was sitting in her room and did not consider herself sick; had slight headache; was nervous, and spoke of a premonition of impending sickness or calamity. She had an anxious expression; retraction of the eyelids, giving her a staring expression. Tongue slightly coated with a light yellow coat; temperature 99°, respiration normal, pulse 80; constipated, and urine scanty; on her face, half an inch below the right side of the lower lip, and half an inch to the right of the median line, was a pustule of the size of a split pea, with an indurated base half an inch in diameter, of a dark-red color. The apex of the pustule was denuded of cuticle, and of a dark-brown color, not sensitive to pressure; no lines or streaks of inflammation extending from the pustule; no œdema of face. On the evening of the 18th temperature was 100, pulse 110, respiration 22; tongue coated and dry; streaks or lines of a dark red color, extending from the right side of pustule in a line of the inferior maxilla, curving upwards towards the right ear; right half of lower lip swollen, and of a dark-red color, which, on pressure, imparted a nodulated condition; dark-red streaks extending from the lip, curving upwards to the integument over the malar process. The skin and underlying tissues between the base of the pustule and the indurated lip retained their normal color and consistence.

Complained of severe lancinating pain over right half of face and shoulder. Morning of the 19th, temperature 101½, pulse 124, respiration 24; tongue dry; sordes on teeth; the areola around the pustule not so red; no discharge from pustule; dry and dark in color. The lower right half of lip showing dark gangrenous patches; right half of upper lip swollen, of a dark purple color, hard and nodulated. The right half of the face, forehead, and right ear swollen, œdematous, and of a mahogany color. The right side of neck swollen, with red streaks extending to the shoulder and arm. Complains of lancinating pains in right arm, fore-arm, and hand; also of scalp.

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[1] Read before the Philadelphia County Medical Society, April 9, 1884.

I saw her again on the evening of the 19th, when all of the above symptoms were aggravated. The right half of the face and right half of forehead, scalp, neck, and arm presented the appearance of rapid extension of gangrene. The lower half of right lip completely gangrenous; upper lip also. The fauces, tonsils, and pharynx not affected; lancinating pains in right mammary region, abdomen, and lower extremities. There was no redness, œdema, or other indications of the disease extending to the mammary region, abdomen, or right lower extremity. Skin normal in color; the slightest touch of the integument over the right side of the thorax, thigh, and leg produced the most excruciating pain, and not upon the left; became comatose during the night of the 19th. On the morning of the 20th, gangrene had extended during the night to the shoulder and arm, as far as the elbow, and to the median line of the neck posteriorly; had stertorous breathing; temperature 108, respiration 30; died at twelve o'clock, seventy-two hours after she had first noticed the papule.

The third case: —

Mrs. H., residing in this city; was called to see her October 20, 1878; thirty years of age, and of previous good health; mother of five children. Found her dying. She had been under the treatment of another physician. The history of the case was obtained from her husband. Four days previous to her death she noticed a small papule on the right side of her chin; on the following night the lower lip began to swell, extending to the median line, and next day involving the right half of the upper lip and extending over the left side of the face; complained of lancinating pain over right side of face, head, and neck; was five months pregnant, aborted on the third day, became comatose on the night of the third day, and died on the morning of the fourth day. When I saw the case, the lower and upper right half of the lips were gangrenous; between the pustule and lower lip an area of healthy tissue intervened, similar to case second.

The fourth case occurred in this city: —

Mr. P., residing at 2140 Park Avenue, a wool merchant, aged twenty-four, and of previous good health, who had been in Colorado, purchasing wool, returned from Colorado, October, consulted me October 3, 1883, for a cough, the result of a cold. On examination I observed on the face, one inch below the right half of the lower lip, near the median line, a small papule, not larger than a small pea, with an areola half an inch in diameter, of a pale pink color. I directed his attention to it, and he remarked that it was nothing but an ordinary pimple. My experience with the cases reported led me to suspect that it might be the beginning of a malignant pustule. As he had been handling wool in Colorado I stated my suspicions, and asked him to call next morning, incised the papule, and applied a fly-blister. He attended to his usual business on the 3d of October, and called at my office on the morning of the 4th. The papule had not increased in size. The areola was of a much darker color, but not increased in area. I removed the vesicated skin from the papule, and applied another blister. Had headache, temperature 99, and respiration 20. I felt almost convinced that I had to encounter another case of this dreadful disease. By much persuasion he permitted me to incise the pustule freely; was requested to go home, and told that I would see him in the evening.

On the evening of the 4th temperature 100°, pulse 95, respiration 20; no perceptible change in the pustule; red lines extending outward from left side of pustule, curving upwards over the face; lower right half of lip swollen and hard, with a band of hardened tissue extending from the left angle of the mouth outward for two inches; the face œdematous.

Incised the lower lip transversely from the median line to the angle on the line of junction of the skin and mucous membrane to the depth of one inch, and applied pure carbolic acid to the wound; also injected pure carbolic acid into the pustule; applied a poultice of flaxseed, tar, and tinct. iodine — three parts of meal, one part of tar, two dr. of tinct. iodine.

Morning of the 5th, inflammation around pustule less; lower lip more swollen, and presenting a gangrenous slough; left half of upper lip swollen and presenting the same appearance as lower lip twelve hours previous. Temperature 101, pulse 115, respiration 22; face more œdematous, and dark-red lines extending from the lips upwards and backwards to the zygoma and left orbit. I incised upper lip, and applied carbolic acid and poultice; injected carbolic acid into the tissues near the angle of the mouth; applied lint wet with sol. act. lead to the face. Evening of the 5th, temperature $102\frac{1}{2}$, pulse 124, respiration 24; the œdema of the face has not extended beyond the limits in the morning; tissues of upper lip of darker color; lower lip sloughing; pustule and surrounding areola improving in color; slight discharge of pus from pustule.

Morning of the 6th. Passed a very restless night. Temperature 102, pulse 120, respiration 20. Tissues of lower and upper lip sloughing; removed with forceps and scissors a great portion of the slough of the lower lip; continued to apply carbolic acid. The œdema and color of the face remained in much the same condition of previous day. Evening of the 6th, temperature 103, pulse 130, respiration 24. No perceptible change in the pustule, lips, or face since morning.

Morning of the 7th, temperature $102\frac{1}{3}$, pulse 128, respiration 22; œdema of face diminished; pustule and lips discharging pus. Evening of the 7th, temperature $103\frac{2}{3}$, pulse 135, respiration 26; has been chilly during the day, and is in a profuse sweat at six P. M.

Morning of the 8th, temperature $102\frac{2}{3}$, pulse 126, respiration 22; sloughing of upper lip profuse. Evening, temperature 104, pulse 140, respiration 30.

Morning of the 9th, temperature 103, pulse 138, respiration 28; entire slough of lower lip removed, presenting a healthy granulating surface. Upper lip sloughing; removed from angle of mouth a large slough; face less swollen and less discoloration. Slightly delirious during the previous night. Evening, temperature 105, pulse 142, respiration 30.

Morning of the 10th, temperature 102, pulse 130, respiration 28. Night, temperature 103, pulse 130, respiration 34. Condition of face improved; slough removed from upper lip.

Morning of the 11th. Passed a restless night; had slight chill followed by a profuse perspiration; temperature $103\frac{1}{3}$, pulse 140, respiration 28; tongue dry, and sordes on teeth; bowels loose; redness and œdema of face rapidly disappearing; the lips presenting healthy granulating surfaces; swelling and fluctuations below the symphysis of lower jaw; punctured, and half ounce of pus evacuated. Evening, temperature $105\frac{1}{5}$, pulse 130, respiration 30.

Morning of the 12th, temperature 102, pulse 130, respiration 28; profuse perspiration through the previous night. Evening, temperature $103\frac{2}{5}$, pulse 140, respiration 28.

Morning of the 13th, temperature 100, pulse 106, respiration 24. Swelling with fluctuation over infra-orbital foramen. Punctured, and evacuated one ounce of pus. Evening, temperature 103, pulse 140, respiration 30.

Morning of the 14th, temperature 99, pulse 110, respiration 22. Profuse perspiration, alternating with chilliness during the previous night and day, and complains of pain and soreness of right leg. On examination found an area of dark-red color, one inch wide and two inches long, situated on the outside of the anterior border of the tibia, at the junction of the middle with the upper third of the bone. Introduced bistoury to the depth of one inch and a half, without reaching pus.

Morning of the 15th, temperature $100\frac{4}{5}$, pulse 132, respiration 24; passed an uncomfortable night; had profuse perspiration; wounds of lips improving. Evening, temperature 104, pulse 140, respiration 32.

Morning of the 16th, temperature 103, pulse 140, respiration 30. Severe chill during the night, followed by severe lancinating pain in lower right pleura. The swelling in the leg continued, and a deeper incision, extending between the tibia and fibula, gave exit to three ounces of dark-colored pus. Evening, temperature 105, pulse 160, respiration 36.

Morning of the 17th, temperature $102\frac{3}{10}$, pulse 128, respiration 30; had alternate chilliness and perspiration during the night. The acute pain in the side relieved, with a dull aching pain ensuing; slight cough on full inspiration. Percussion revealed dullness over the lower lobe of right lung. Evening, temperature $104\frac{3}{5}$, pulse 140, respiration 36.

Morning of the 18th, temperature $104\frac{4}{5}$, pulse 128, respiration 30; expectorates frothy mucus, tinged with blood; continues to have profuse perspiration several times a day, so that his clothing is continually wet.

Morning of the 19th, temperature 101, pulse 126, respiration 28. Expectoration of bloody sputa increased. Perspiration continuing. Abscess in leg discharging unhealthy dark-colored pus. Evening, temperature 103, pulse 132, respiration 32.

Morning of the 20th, temperature 101, pulse 124, respiration 28. Expectoration of a dark-brown color. Less dullness on percussion. Abscess still discharging pus of a lighter color. Evening, temperature $103\frac{2}{5}$, pulse 132, respiration 30.

Morning of the 21st, temperature 100, pulse 120, respiration 22. Expectoration less and of lighter color. Urine examined; quantity thirty ounces daily, and slightly albuminous. Evening, temperature $102\frac{2}{5}$, pulse 128, respiration 26.

Morning of the 22d, temperature 101, pulse 124, respiration 26. Expectoration less. Less dullness over lung. Evening, temperature 103, pulse 130, respiration 30. . . .

Morning of the 25th, temperature 99, pulse 120, respiration 22. More air entering right lung. Less cough and expectoration. Otherwise no improvement. Evening, temperature $102\frac{2}{5}$, pulse 128, respiration 30. . . .

Morning of the 28th, temperature $99\frac{2}{5}$, pulse 124, respiration 24. Less cough and expectoration, and profuse perspiration at intervals of four to six hours. Evening, temperature 103, pulse 132, respiration 30.

Morning of the 29th, temperature $99\frac{1}{5}$, pulse 120, respiration 22. With the exception of temperature, the patient appears to be improving. Evening, temperature 103, pulse 130, respiration 24. . . .

On the night of November 1st he had a severe chill, after which the temperature rose to 106°, followed by severe pain in left thorax, which proved to be the beginning of another attack of pleuro-pneumonia, which passed through all the stages that I have just related in the attack on the right side, with temperature, pulse, and respiration during the course of the disease a counterpart of the first attack.

On the morning of the 10th of November, temperature $102\frac{1}{5}$. pulse 130, respiration 28. Patient continued to improve from this date. A slight cough with expectoration of light-colored sputa continued until December 28th, with occasional attacks of perspiration; the temperature was taken until the 28th of December.

The characteristic symptoms of two of these cases were alike in several respects. The locations of the pustules were both on the right side of the face, and located at the same place. The intermediate integument between the pustules and lips was not affected by the disease in either case. The inflammation or extension of the disease appeared to be from the right side of the pustules along the integument covering the basilar portion of the inferior maxilla, to near the angle of the jaw, and then curving upwards over the face along the anterior border of the masseter muscle.

On the second night, or twenty-four hours after pustules were noticed, and twelve hours after red streaks or lines extended along the lower margin of jaw, and then the lower half of the lips became affected, and twelve hours after the upper lip became affected in both cases, and then the right half of the face, forehead, and scalp in the case of Mrs. R., and the face of Mr. P. became œdematous.

From the observation of these cases it appears that the disease may be divided into four periods or stages: first, the period of incubation, which may be from a few hours to fourteen days, with no prodromes; second period, the formation of pimple, papule, and pustule, lasting from twelve to twenty-four hours; third stage, the extension of the œdema and inflammation, occurring twelve hours after the formation of the pustule; fourth, the stage of gangrene, occurring in from twelve to twenty-four hours later. The disease extended by the poison being carried by the superficial lymphatics only. I am led to this conclusion from the fact that in three of the cases the disease extended from the right side of the pustule, curving upwards over the face; and not until the lines of inflammation or œdema had reached above the line of Wharton's duct did the lips show evidence of disease. Again, the disease in all of the cases was confined to one side of the face, head, neck, and scalp, and did not pass over the median line of the face or the median line of neck posteriorly. The treatment of all of the cases was similar in most respects.

In the second case, Mrs. R., the treatment was free crucial incision of the pustule; injection of pure carbolic acid into the pustule; quinia in large doses, carbonate ammonia, tinct. ferri chloridi, and whiskey punch internally; free incision of the lips, and injection of pure carbolic acid, with local application of alcohol to the face.

The third case, Mrs. H., I did not treat.

The fourth case, Mr. P., was under my care from the time the papule was formed; free crucial incision was practiced at once, and pure carbolic acid was injected into the tissues around the pustule; he was put upon quinia, four grains every three hours; tinct. ferri chloridi, thirty drops every three hours, and whiskey punch. As soon as the lips showed indications of the disease free incisions were made, and carbolic acid was injected into them, and also into the angle of the mouth; lead-water and laudanum applied to the face, which appeared to act better than alcohol; used as a poultice, linseed meal, tar, and tinct. iodine; when indications of septic poisoning occurred he was given aqua chlorinata in drachm doses every four hours, which was continued until December 20th. The attacks of pleuro-pneumonia were treated by counter-irritation of the thorax, and quinia, carbonate of ammonia, with the addition of morphine.

The immediate cause of death in the three cases was, I believe, by thrombus of the cerebral veins or sinuses, the intimate connection of the pterygoid plexus with the facial vein, also the connection of the ophthalmic vein with the angular vein, a continuation of the facial, and the vein passing from the internal surface of the nasal cavities up through the foramen cæcum to the longitudinal sinus, the pterygoid veins and ophthalmic veins emptying into the cavernous sinus. Mr. H., Mr. R., and Mrs. H. became rapidly comatose, had stertorous breathing, and complete paralysis before death, all symptoms of compression of the brain. Billroth reports a case of death from malignant pustule, in which the post-mortem examination showed thrombus of the temporal veins, which was traced to the ophthalmic, and through the ophthalmic to the brain. Bartholow gives as the most frequent cause of sudden death in erysipelas of the face and head thrombus of either the longitudinal, cavernous, or lateral sinus.

"In cases of malignant pustules rigor mortis usually sets in early and passes off quickly; the body is often cyanosed; the face may be swollen; petechiæ on chest and abdomen are not uncommon; decomposition usually sets in early. The blood is generally dark, lake, and tarry, and in the heart often uncoagulated; the subcutaneous cellular tissue of the parts affected is hæmorrhagic, and hæmorrhagic patches radiate into the surrounding tissues, which are extensively infiltrated with a semi-gelatinous blood-stained fluid. In the pulmonary and gastro-intestinal form other anatomical characters are observed.

"The most important point in the microscopic anatomy is the presence of the bacillus anthracis in the blood and tissues, either diffused or forming masses in the lymphatics and vessels; the bacillus anthracis, as seen in the blood, consists of a motionless, short, apparently homogeneous rod or filament, rarely less than $\frac{1}{2000}$ of an inch long, either straight, curved, or bent at an acute angle. The usual mode of multiplication in the blood is by transverse fission. The bacillus anthracis requires for its growth the presence of a nitrogenized pabulum and a supply of oxygen; its vitality is destroyed by a temperature of 60° C.; when dry the rods themselves can be preserved but a short time, while the spores retain their vitality for years and are unaffected by ordinary changes of climate or temperature."[1]

The bacillus anthracis is a bacterium, first discovered by Pollender in 1849. All parts of the bodies of animals dying of the disease are actively poisonous, and may convey the disease by direct or mediate contagion; it may arise from eating the flesh, though the poison is said to be destroyed by cooking; contagion may also be conveyed by butter or milk. The bites of flies may also convey the poison. Contagion occurs in those who have to deal with the wool or hair of animals which have died of the disease, such as wool packers and sorters, horse-hair cleaners, farriers, tanners. The poison may enter the system either by local inoculation or by inhalation of the dust containing it. The diffusion of the poison by water and its distribution by means of wool-waste and bone-dust, used as manure, especially deserve notice, as capable of spreading the contagion.

"In the earlier stages diagnosis is very difficult, except in persons who are known to be exposed to contagion. At a later stage the characteristic features of the pustule render the recognition comparatively easy, and microscopical examination of the serum contained in the vesicles shows the presence of the bacillus anthracis. Inoculation experiments on guinea-pigs or mice will, if successful, readily decide it, but no absolute conclusion can be drawn from failure to inoculate.

"The prognosis is extremely unfavorable."

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RETAINED PLACENTA.[2]

BY O. W. DOE, M. D.

IN 1861 Mr. Priestley communicated to the Obstetrical Society of London a paper on the Treatment of Cases of Abortion with Retained Placenta, urging manual interference if the placenta be retained longer than six hours, and earlier should hæmorrhage occur to any unusual extent. In this opinion he was seconded by such men as Dr. Tanner, Dr. Hall Davis, Dr. Tyler Smith, and others.

Since that time this question has been very much discussed, and recently as great a diversity of opinion regarding the treatment to be followed has existed in those cases where the placenta and membranes are not expelled with the fœtus as has lately been shown in the New York Academy of Medicine regarding the nature and cause of puerperal fever.

Drs. Mundé and Alloway advise either manual or instrumental removal of the secundines immediately after the expulsion of the fœtus in every case where the cervical canal is sufficiently patulous to permit the introduction of the finger, curette, or placental forceps, while Dr. Sweringen, with others prominent in the Indiana State Medical Society, prefer to leave its expulsion to the forces of nature, excepting in cases where some emergency demands its immediate removal.

Two years ago Dr. Warren, of Portland, read a paper upon this subject, in which he urged immediate removal of the placenta and membranes, as recommended by Dr. Mundé, and produced, in substantiation of this method of treatment, letters from Drs. T. G. Thomas, Lusk, Mary Putnam Jacobi, and others equally prominent, who strongly advised this procedure. In the discussion which followed Dr. Gordon expressed himself as decidedly opposed to the advisability of forcible extraction, and reported a case where attempts to remove the placenta failed, and six weeks later it was expelled without any trouble resulting from its retention excepting an occasional slight hæmorrhage.

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[1] Greenfield.

[2] Read before the Boston Society for Medical Improvement, April 28, 1884.

Dr. Coles, of St. Louis, has recently read a paper before the Obstetrical Society of that city purposely to controvert the views of Drs. Mundé and Alloway, and styles the doctrines inculcated by them as "dangerous in their tendencies" and "too dogmatic and sweeping in character." The tone of the discussion which followed favored a more conservative method of treatment, in so far as instrumental interference was concerned.

The treatment which I follow in my own practice is to attempt its manual, though not forcible, removal at once, as soon as the fœtus is expelled; if unsuccessful to tampon and wait from twenty-four to forty-eight hours. If retention still exists, to etherize and remove it manually, or instrumentally if necessary, as the danger of septicæmia seems to me much greater than that arising from its forcible removal carefully performed, and followed by antiseptic injections.

While this subject is at present so openly disputed by the most prominent members of the profession, I thought it might be interesting to the Society to hear the report of a case which was left entirely to nature, this conservative action arising from an error of judgment rather than from being an intentional act.

Mrs. G., aged twenty-seven, a lady of delicate and rather nervous organization, was last unwell from the 18th to the 22d of September, 1882. The catamenia began at the age of fourteen, and had always been regular. On the second and third Sunday in October she fainted in church, and during the third week of that month first began to suffer from nausea.

Her husband was taken ill on the 15th of January, and she was not only very anxious about him, but overexerted herself in going up and down stairs.

On the 17th the catamenia appeared, as she supposed, but the flow was very slight, hardly sufficient to soil one napkin, and the only pain attending it was an occasional sharp pain above the pubes, producing a sensation as if something in the back passage was pressing against the front. She remained in bed ten days, and was positive that nothing passed away from her during that time. Two days after getting up and going down stairs the flow began again, and continued at intervals for five weeks. At times it was quite profuse, but no clots passed away, and there was no pain, with this exception, that four days after the hæmorrhage commenced she was quite constipated, and took a large hot enema, and when this operated the pain low down in her back was so severe that she asked the nurse to press firmly against it. She was not conscious of anything having passed from the vagina.

I saw her in consultation on the 15th of March. At that time there had been no flowing for a week. She complained of feeling continually as if there was a heavy weight in the pelvis, and said she could not lie on her abdomen, as was her custom when well. This weight she could feel move when turning from one side to the other.

From external examination there was nothing abnormal to be detected in the hypogastric region. On vaginal examination the os was very small, and did not appear as if it had been previously dilated; the cervix was of usual length, and directed more anteriorly than normal; in the posterior cul-de-sac was felt a small body which I took to be a retroverted uterus, very sensitive on pressure, and quite freely movable. As she was very nervous and debilitated from her long confinement to the house, I thought it best to defer any attempt at replacement until her general condition was improved by tonics, and the sensitive congested body of the uterus relieved by hot vaginal douches. She steadily improved under this treatment, and was soon out driving. On June 23d she was taken unwell, as she supposed; the flow continued for a week, though very scanty, being dark and slightly offensive in character. Examination a week later showed the body of the uterus to be very much less sensitive and less easily reached, and though the patient was feeling quite strong, and had come by rail twenty miles to my office, she yet complained of this heavy weight in the pelvis. On the 11th of July she went to Concord, N. H., and there drove about almost daily, and improved greatly. On the 8th of August she was again taken unwell, and returned to Boston during the day. During the afternoon of the 9th she began to suffer from severe paroxysmal attacks of pain in the hypogastric region, which continued until evening, when they became expulsive in character, and at eleven P. M. a placenta was expelled, in size corresponding to at least three and a half months of pregnancy. There was but little hæmorrhage, and her convalescence was rapid and uninterrupted.

In summing up the facts in this case we find that she was last unwell on September 22d. She must have conceived soon after, as she fainted on the 8th of October, and began to suffer from nausea soon after the 15th. Her flow first began on the 17th of January, but she had no pain whatever until the 2d of February, when she had a severe pain in her back, while having a very constipated movement of the bowels. She was not conscious at the time of anything passing from the vagina, and the flow was not materially increased. With this exception she had no pain until August 9, 1883, when the placenta was expelled, being ten months and nine days from her probable conception, and one hundred and eighty-eight days from the date when there was the only possible chance of the fœtus having passed away.

The questionable mistake made, as subsequent results proved, was in not dilating the cervix and exploring the uterus at the time I first saw her in March. As it was then doubtful whether she had really been pregnant, and the uterus being so extremely sensitive, I thought it best to defer operative interference. The possibility of a retained placenta seemed hardly tenable, as we could get no history of a fœtus having been expelled, and we were positive in our convictions that pregnancy did not then exist, it being nearly seven months since the catamenia appeared regularly in September. Evidently at the time the abortion took place the placenta was adherent throughout, otherwise there would have ensued decomposition of the detached portion with possible septic poisoning and a more profuse hæmorrhage, and consequently any operative interference at that time would have been necessarily hazardous.

Dr. Mundé, among other indications which should induce the practitioner to forcibly remove the placenta, mentions hæmorrhage (without qualifying its extent). The case I have reported, as also that of Dr. Gordon, shows it may not be necessary excepting when when the hæmorrhage is profuse.

The degenerative changes which lessens the placental attachment to the uterus nature was slowly and safely instituting, and consequently even had I been cognizant of the placental retention I should not have considered myself justified, in view of the very sensitive condition of the parts, in dilating the cervix and curetting the uterus at the time I first saw her, as the danger thereby, it seems to me, would have exceeded that which the more conservative method followed subjected her to.

Dr. S. L. Jepson, of Wheeling, Virginia, in the *Journal of Obstetrics* for 1883, reports two cases of retained placenta, one of sixty-six days and the other of one hundred and fifteen days. He remarks that this latter period was the longest he had been able to find recorded. In each of these cases the placenta was removed instrumentally at these times, interference being necessitated by alarming hæmorrhage. In the case of longest retention the placenta was removed by forceps and curette after great difficulty. Eighteen months later she died twenty minutes after being delivered at full term, by turning.

Although there was no autopsy, Dr. Jepson thought it possible that death was caused by a rupture of the uterus due possibly to damage inflicted at the time of the removal of the placenta, as there was sudden collapse, after long continued violent uterine contraction, and immediate recession of the head followed.

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RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

THE MICROCOCCUS OF PNEUMONIA.

MENDELSOHN[1] has brought together the principal facts which have gradually accumulated, and which point towards the infectious nature of pneumonia. These show that the disease appears with a certain typical frequency at different seasons of the year, just as intermittent fever, typhoid, or other infectious diseases. This distribution does not correspond with a more frequent occurrence during the colder and less frequent during the warmer seasons; further, some localities are attacked at times with the greatest virulence, while neighboring places having the same climatic conditions are exempt; and finally, hot and cold regions are visited equally. "Catching cold" as an exciting cause can almost always be excluded when the histories of the cases are carefully considered, and is an ætiological factor of the patient's own assumption. The method of onset and close are entirely different from those observed after taking cold. While these last begin gradually, pneumonia sets in suddenly with a severe chill. The termination differs still more markedly. The high fever drops within a few hours to under the normal, and the patient, who has been very sick up to this time, rejoices in a feeling of well being.

The direct proof of this suspicion, aroused by clinical observation, is given by the discovery of the constant presence of a form of micrococcus in the lungs.

Klebs was the first to characterize this as a parasitic affection, and he described as monas pulmonalis a micrococcus which he found in the hepatized lung, carefully freed from bronchial mucus, of a person recently dead. These were often to be seen in great numbers, and often so infrequent that they were only to be distinguished by other granular masses by being arranged in rows. In fresh preparations a quick movement was noticed. The same organisms were also found in the fluid in the ventricles of the brain. This author likewise called attention to the epidemic character of the disease.

Eberth next demonstrated the parasite in a case of pneumonia complicated with meningitis. Small, slightly oval or round bodies were found in the richly cellular and fibrinous exudation of the gray hepatized portions of the lungs, as well as in the purulent and fibrinous layer on the pleural surface. In part these were single balls, but the greater number were united in pairs, and had a gentle movement among themselves. Long chains or columns were never seen.

Koch has published the appearance found in a case of fatal pneumonia, which, however, is not to be regarded perhaps as of a pure type, as it occurred as a sequel to recurrent fever. The distribution of the parasites in this case recalled that of those found in erysipelas. The micrococci were only found in the alveoli adjoining the hepatized portion, and most abundantly in such as were only partially filled with an exudation. As in erysipelas, the living organisms surrounded the centre of disease by only a narrow zone. Similar bacteria were also found in this case in the capillaries of the kidney. They lay in the vessels united together in chains, but clearly showing their oval form.

The clearest description, and the most convincing proof of the connection of these organisms with the disease, has been furnished by C. Friedlander.[2] The cocci are of ellipsoidal forms, their length equals almost a micro-millemetre, their breadth about one third less; they are usually joined together in pairs (diplococci), but often form longer chains. In the fibrinous coagulations in the bronchi they are spread over a considerable surface in a flat layer. They are most abundant in the reddish-gray infiltration, less so in the yellowish-gray and gray hepatization. In one case the lymph channels of the interstitial connective tissue which lay on the boundary of the hepatized territory were filled to such an extent as to cause varicose swelling of the walls. The vessels thus filled could be distinguished by the eye in preparations cleared up by acetic acid, as silver-colored lines.

The method which he has used to show the presence of the parasites is as follows: Small portions of the hepatized lung are hardened in alcohol, and thin section made. These are colored by staining deeply in an aniline water solution of gentian violet. (Gentian violet, one gramme, aniline water (made by simply shaking aniline oil in water and then filtering) fifty grammes.) Afterwards the sections are placed for a short time in a weak watery solution of liq. iodinii comp. Upon placing in oil of cloves the blue color is discharged from the ground substance and nuclei of the tissue, while the micrococci appear in contrast, intensely colored. The author lays great stress upon the presence of a "capsule" as characteristic of this particular parasite. This presents itself as a feebly-colored belt of the same form, and from two to four times as broad as the micrococcus itself, and sharply bounded on its outer edge. Diplococci and chains of three or four are inclosed in a common capsule, which then has an elongated form. Different micro-chemical tests warrant the conclusion that this capsule consists of mucin or a closely allied substance. The search for analogous capsules in micro-organisms of other origin has been for the most part negative. On the other hand, similar micrococci with capsules have been found in the pleuritic and pericardial exudation occurring in pneumonia, in the serous infiltrated adhesions, and in the simply œdematous parts of hepatized lungs. These were not found in the blood and other organs, and at times in inflamed lungs, where the process had existed longer than six days. The formation of the capsule appears then to be an attribute of the pneumonia coccus when it has reached the height of its development.

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[1] Zeitschrift f. klin. Med., Band xvii., s. 178.

[2] Fortschritte der Medicin, November, 1883.

For purposes of cultivation outside of the body a preparation of gelatine, to which an infusion of meat with peptone and salt had been added, furnished the best nutritive material. A minute amount obtained from a fresh lung, inoculated on such a soil with strict precautions, soon developed at ordinary temperature into a little button-like eminence of a dull white color; this penetrated downwards with a sharp point into the gelatine, giving a peculiar "nail-shaped" culture. Microscopic examination showed this to be composed of elliptical micrococci thickly laid together. Capsules were only found surrounding a few of the single cocci. The gelatine did not become fluid with the older growth. The parasites could be made to grow on blood serum and potato, and their infective properties were proved by the inoculation of animals.

A portion of one of the cultures on gelatine was emulsified with water and injected by means of a syringe through the thoracic wall of nine rabbits, thirty-two mice, eleven guinea-pigs, and five dogs. The rabbits were entirely refractory, as were four of the dogs. On the other hand, thirty-one mice died in from eighteen to twenty-eight hours, one mouse in forty hours. At the autopsy in all these cases there was found a typical picture: a dirty red slimy fluid in the pleural cavity, the lungs almost entirely without air, with numerous foci of reddish infiltration. Micrococci were found in the pleuritic fluid, as well as in the blood even while circulating, which presented all the characteristics, especially the capsule formation, of the microbia of pneumonia. In the control experiments made with indifferent fluids injected in the same manner either the mice remained unharmed or died from other accidental causes. Six of the eleven guinea-pigs died, three in from twenty-four to forty-eight hours, three after a somewhat longer interval. In these there was found a double purulent pleurisy reddening and œdema of the lungs (three times red, reddish-gray, or gray infiltration).

In the lungs, and the foci of infiltration in them, at times only very few or no micrococci were to be met with. On the other hand, these were very numerous in the fluid from the pleural cavity, and could easily be cultivated. The micrococci with capsules were found very sparingly in the blood of two guinea-pigs. The five animals that remained unharmed showed themselves as entirely free from the micro-organism.

Experimentation by means of inhalation was made upon mice, and of these some were attacked by a typical pneumonia or pleurisy. In regard to the identity of the pneumonia coccus in the different kinds of animals, the size of many of the parasites in the mice greatly exceeded that from man. The cocci of the guinea-pig are smaller, but marked by an exceedingly broad capsule. In the dog they are hardly larger than in man, the capsule being but little broader than the organism itself.

Emmerich [1] has traced the cause of an epidemic of pneumonia which occurred in the prison for males at Amberg to a local infection of the dormitories. He was led to suspect that the refuse building material used to fill between the floors might harbor the parasite. He accordingly sowed minute fragments of this on gelatinized beef extract with peptone, after the method of Koch and Loeffler, spread upon glass slides.

After three or four days different kinds of fungi could be distinguished springing up. The gelatine was then rendered fluid by melting, and small quantities (one fourth to two cubic centimetres) were injected through the thoracic walls into various animals (rabbits, guinea-pigs, and mice), also into the blood of the first named. The animals died in from twelve to thirty hours. In the guinea-pigs the lungs were dark red; in the rabbits clear red; the spleen much enlarged. On the gelatine cultures as well as in the blood and organs of the animals there were found, besides various septic bacteria (especially the bacillus of malignant œdema), the peculiar encapsulated micrococci of pneumonia.

The cultivation on sterilized slices of potato seemed to this author to give a most characteristic growth. On this they developed in a yellow, slimy layer several millimetres thick, which had the peculiar property of always remaining moist. The capsules were found upon the cocci grown upon gelatine, while they were wanting where blood serum was used.

The anatomical appearances of the infected animals were characteristic.

All the mice and one half the number of guinea-pigs (in all about fifteen and twenty-five respectively) died in from twelve to thirty hours after the injection. Within two hours the breathing became deeper, and dyspnœa set in, which increased with the weakness until death.

Control experiments were made by using other pathogenic fungi in the same way. Circumscribed infiltrations of the lung were observed, but never well marked lobar pneumonia.

These experiments show the identity of the micrococcus of pneumonia and that found in the filling between the floors, where they must have existed in great numbers. The cracks between the boards gave exit to them, and thus they were widely distributed about the room.

In ordinary soil a similar coccus is found, but which grows differently on the prepared gelatine. In the space between the floors of houses where there had never been an epidemic of pneumonia the parasites could not be detected.

Should future investigations confirm these facts they will go far towards clearing up the ætiology of this disease in one of its essential points, namely, its occurrence as a house epidemic.

THE IDENTITY OF THE MICROCOCCI OF THE PNEUMONIA OF MAN AND OF THE CONTAGIOUS PLEURO-PNEUMONIA OF CATTLE.

Poels and Nolen [2] have examined the lungs of animals who have died from the above disease, and found numerous micrococci with the characteristic capsules.

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[1] Allgemein. med. Central. Zeit., 1884.

[2] Centralblatt f. d. med. Wissensch., 1884, No. 9.

These presented themselves as mono- or diplococci, or as longer chains composed of several individuals.

Culture experiments were started at the same time on blood serum, material from human lungs and from animals being sowed. The result showed that the micrococci which came from these two sources developed into the characteristic "nail-shaped" growth when kept at the same temperature. Further inoculations were made from these pure cultures. Here, also, the results were identical. From these facts the authors believe in the identity of the organism which causes the disease.

THE ÆTIOLOGY OF ASIATIC CHOLERA.

During the past year a commission has been appointed by the German government to investigate the causation of cholera, and the results are embodied in letters written by Dr. R. Koch,[1] the head of the Commission. The first investigations were made in Egypt, but as the epidemic had almost subsided there the scene of their labors was shortly afterwards transferred to India, where the pest still raged.

On account of the great number of bacteria normally present in the intestine, it was very difficult at first to determine whether there was only one which was to be considered as associated exclusively with cholera. In the majority of cases death does not occur at the height of the process, but in the stage of reaction. At this time such marked changes appear in the condition of the intestine and its contents that it is impossible to obtain a clear idea of the lesions of the disease. It was not until a series of uncomplicated cases had been studied at autopsies that the real pathological relations could be determined, and then the greatest care had to be exercised in regard to the causal connections.

As the result of such examinations there has been found in the walls of the intestine of cholera patients a bacillus which can certainly be differentiated from all others by the following characteristics: The rods are never entirely straight, but curved a little like a comma, and can even assume a half-circular form. In the pure culture these curved rods often combined into S-shaped figures, and more or less slightly wavy lines. They possessed independent motion, which was very lively, and could be best seen in a drop of salt solution suspended from a cover glass. In a preparation of this sort the bacteria are to be seen swimming in all directions in the field of the microscope.

Their relation to nutritive gelatine is also very remarkable. At first they form colorless, transparent colonies, resembling small bits of broken glass. Gradually these liquefy the gelatine, and then spread out to a moderate degree. In this way they can be readily distinguished and isolated from the other bacterian growths. They can also be cultivated in hollowed object glasses, and accumulate on the edge of the drop of nutritive fluid, where they are clearly marked by their comma-like shape and rapid movements.

Up to the present time opportunity has been afforded for the examination of twenty two bodies and seventeen cholera patients. In all of these the peculiar-shaped bacilli could be found both in the microscopic preparations from the subject and from the gelatine cultures.

This result, taken in connection with that obtained in Egypt, justifies the conclusion that these bacilli regularly occur in the cholera intestine.

In order to control this, twenty-eight other bodies were examined, eleven of which were of patients who had died from dysentery, the discharges from simple diarrhœa as well as from a person who had recovered from cholera, also the intestines of healthy and diseased animals, and finally water rendered foul by putrid masses, stagnant water from swamps, and scum from the surface. In not a single instance could the bacillus of cholera be found.

Since poisoning with arsenic gives rise to analogous symptoms a series of experiments on animals were instituted, but with negative results as far as finding the comma-shaped parasite.

The question then arises, In what relation do these peculiar organisms stand to the disease? Either these specific bacteria are favored by the cholera process, and are associated in such a remarkable way with its progress, or they are the cause, and the malady can only arise when these specific bacilli have found their way into the human intestine. The following grounds render the first supposition improbable: It must first be premised that a man who is ill with cholera must already have this particular form of parasite. But the bacilli are wanting even in intestinal affections like dysentery and diarrhœa, to which cholera is so often added. And it is hardly possible if they are normally present in every body, as the fact of their being found both in Egypt and India would tend to show, that they could have escaped observation up to the present time. Since, then, the growth of these bacteria cannot be produced by cholera, the second hypothesis alone remains, namely, that they are its cause. A number of other facts speak also for this assumption in a way not to be denied. Above all the relation during the progress of the disease. Their occurrence is entirely restricted to the organ which is the seat of the affection, namely, the intestine. In the vomitus they were but twice found, and then this had an alkaline reaction, showing that the intestinal contents, and with this the bacteria, had found their way into the stomach. In the intestine itself they deport themselves in the following manner: —

As long as the stools remain fæcal in the early stage of the disease only a few bacilli are to be found. On the other hand, the succeeding watery, odorless evacuations contain the specific bacteria in large numbers, while all the others have entirely disappeared, so that it almost amounts to a pure culture. As soon as the attack decreases and the stools again become fæcal the comma-shaped bacilli disappear gradually, and are not to be found after the restoration to health. The appearances after death correspond entirely with this. In the stomach nothing is found. The condition differs in the intestine, according as the patient has died during the proper attack or after it has ended. In the recent cases, in which the intestine is of a light red color, the mucosa free from extravasations, and the canals contain a whitish, odorless fluid, the parasites are found in enormous masses and entirely pure. Their distribution corresponds with the seat of inflammation, being most abundant at the lowest part of the small intestine. When death has taken place at a later period of the disease signs of marked reaction are manifest. The mucosa of the lower part of the gut is marked by dark-red extravasations, and often with a slight necrosis of the superficial portions. The contents are more or less colored with blood, and putrid and offensive from the reappearance of the bacteria of decomposition. The specific bacilli are quite abundant in the tubular glands and the surrounding tissue, but not in the free contents. They are only entirely wanting in cases which have died from other diseases after the attack had passed off.

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[1] Allgemein med. Central. Zeit., March 15, 1884.

The cholera bacillus deports itself in the same manner as any other pathogenic bacterium. They occur exclusively in the disease to which they belong; their first appearance coincides with the beginning; they increase in number with the progress, and decrease with its decline. Their seat corresponds with the extent of the lesions, and their numbers become so great that the deleterious working on the mucous membrane can be explained by them.

It was greatly to be wished that an analogous disease could be artificially produced in animals. This has, however, not succeeded as yet, and to all appearances it is doubtful if it ever does. Yet the proof of the abovementioned facts is not weakened by the failure of the experiments upon animals. In two other diseases, namely, typhoid fever and leprosy, specific bacteria occur which it is impossible to inoculate upon animals.

Moreover, the further study of the bacilli has brought out other characteristics which are of importance in this regard. One of the most remarkable is the repeated observation that the cholera bacilli increase in a remarkable manner upon the linen which has been soiled by the dejections of the patients and kept in a moist place for twenty-four hours. And in close connection with this is the clinical fact that persons who have to handle this soiled linen are especially subject to infection. Experiments were instituted by spreading some of the cholera dejections upon damp linen, filter paper, and earth. After twenty-four hours the slimy layer had regularly increased to a thick mass of characteristic bacilli.

This organism dies much more quickly upon drying than any other bacteria, three hours being sufficient to deprive it of all vitality. Further, the presence of an alkali is always necessary for their growth. Even a little free acid which did not markedly hinder other bacteria kept these back in their development. In a stomach which acts normally they are killed, and this is further borne out by the fact that neither in the stomach nor intestinal tract of animals which had been fed on cholera dejections could these organisms ever be detected. This last peculiarity, together with the readiness with which they are killed upon drying, gives a clew to the fact that infection so seldom occurs from immediate contact with cholera patients. Especial circumstances must be brought up to enable the parasite to pass the stomach and set up the cholera process in the intestine. Perhaps it could do so if the digestion was disturbed. And it is a well-known fact that men who have digestive disturbances are the most apt to sicken during an epidemic. Perhaps, also, there is a condition of the bacillus analogous to that of the reproductive spores of anthrax, but which up to the present time has not been discovered.

Still further proof of the rôle which the specific bacillus plays has been presented by Koch[1] in an account of a local epidemic of the disease which occurred near Calcutta, and which could be directly associated with the presence of the parasite in a contaminated tank.

It is the custom of the country for a number of families to use a common tank (which is merely a little pond or swamp-hole) for all the domestic purposes of washing and drinking water. The edges of the tank are often lined by privies, the contents of which are not prevented from contaminating the basin.

A local epidemic was reported to the Commission as having broken out in the neighborhood of one of these places. Samples of the water were immediately collected and sown upon nutritive gelatine; a development of bacilli corresponding in character with the specific organisms was developed, but with the decline of the epidemic such cultures were not to be obtained. Investigation showed that the tank had been used for washing the linen of a cholera patient, and the water had been contaminated in this way. Koch regards this in the light of an accidental experiment upon man, which is to be considered of the greatest value, especially since other animals have been found refractory to the disease.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

APRIL 28, 1884. The President, DR. CHARLES D. HOMANS, in the chair.

PSEUDO-MEMBRANOUS ENTERITIS.

DR. O. W. DOE showed a specimen of membrane which was passed by a patient suffering from pseudo-membranous enteritis, one portion being twenty-seven inches in length. This case, which is still under treatment, will be reported at a subsequent meeting of the Society. It appears similar to those reported here by Dr. Goss three years ago.

REMOVAL OF FŒTAL BONES BY RECTUM.

DR. DOE also showed a collection of cranial bones of a fœtus at about the seventh month, which he had removed through the rectum three days before. The patient was last pregnant ten years ago, and had supposed that she miscarried at that time. The case will be reported in full later.

DR. J. P. REYNOLDS inquired if the anus was lacerated in removing these bones.

DR. DOE said that it was not. On the contrary it was very dilatable, and, being stretched by the fingers, the bones were worked from side to side with the forceps.

DR. S. G. WEBBER read a paper on

MULTIPLE NEURITIS,

showing microscopic sections. The report of the debate is delayed by request of Dr. Webber.

DR. O. W. DOE read a paper[2] on

RETAINED PLACENTA.

DR. C. ELLERY STEDMAN said that the treatment of retained placenta after abortion had to be left to each physician's judgment. His own experience left him in no doubt that as the placenta had to come away with more or less hæmorrhage, sooner or later, the proper plan was to avoid danger by removing it from the uterus as early as possible. The risks were from septicæmia and bleeding. He had seen two deaths after abortion from the former cause, though he did not recollect any fatal cases from loss of blood, yet patients were often much reduced, and long in convalescing. Books tell us the finger is the best instrument for removal of the placenta, but do not instruct that for this purpose the hand has generally to be introduced into the vagina, which often necessitates ether. Sometimes a stiff wire doubled into a blunt hook was a help. The use of tents after abortion was to be avoided if possible, as it is fraught with danger, and, if for this reason only, he liked to empty the uterus as early as it could be done.

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[1] Allgemein. med. Central. Zeit., April 5, 1884.

[2] Vide page 436 of this number of the JOURNAL.

DR. FRANCIS MINOT thought the proper treatment of retained placenta after abortion would vary according to circumstances. In recent cases it was sometimes difficult to determine whether the placenta or portions of the ovum were really retained or not because the clots were not preserved for inspection. In case of doubt it is best to wait for a day or two before exploring the interior of the uterus. But in case of continuous hæmorrhage, and especially in that occurring at intervals for weeks or months, no time should be lost in emptying the womb. He had rarely had any difficulty in doing this with the finger if the woman be etherized and placed on her left side, close to the edge of the bed, with the knees drawn upwards. Then the physician, pressing the fundus downward with the left hand over the pubes, and introducing the right hand into the vagina, can make the forefinger or the middle finger of the same hand meet the fingers of the left with only the uterine and abdominal walls between. In very fat women we sometimes fail to reach the fundus, and then the only resource is to fish for the placenta with long forceps, a tedious and difficult operation.

ETHERIZATION BY THE RECTUM.

DR. ABNER POST reported three cases at the Boston City Hospital. The *Boston Medical and Surgical Journal* of April 17th had a short account of etherization by the rectum as done at Lyons. Its administration in that manner has been tried at the City Hospital since that publication.

The ether has been given from a small bottle with a perforated cork, to which is attached a rubber tube, to the other end of which is fastened a catheter. The bottle of ether is placed in a vessel of warm water, and the catheter passed into the rectum. The ether is seen to boil in the bottle, and its vapor is conveyed through the tube into the bowel. The hot water used was drawn from the hot-water pipes, and was so hot as to be uncomfortable to the hands.

The first case was a patient of Dr. Homans, a man with cellulitis of the arm, who had been vomiting before etherization. After the tube was introduced he first complained of the taste of ether in the mouth. It was then noticeable to the by-standers in his breath. His pulse grew rapid, the pupils dilated, he partially stiffened out, put his hand to his mouth, vomited, and anæsthesia was complete at the end of thirteen and a half minutes. The ether was discontinued almost as soon as he was insensible, but the anæsthesia continued for nearly thirty minutes, probably not so complete as to allow surgical interference without shrinking during all that time, but so complete that he lay without motion. During the afternoon he had two or three loose discharges, mostly gas, for which he received a starch and opium enema, and which soon ceased.

The second case was a woman of large size, who had eaten a hearty breakfast before coming to the hospital. She took an ounce and three quarters of ether, and was insensible for thirty-four minutes. During the etherization the ether was administered evidently faster than absorption took place, as her abdomen became sufficiently distended to embarrass respiration; but a little pressure on the abdominal walls caused the gas to issue from both ends of the abdominal tube, and all difficulty ceased.

On recovering this woman vomited perhaps an ounce of thin, yellowish fluid. Within an hour had a natural movement of the bowels, and afterwards two slight loose operations, one of which was tinged with blood.

The third case was in every way a most favorable one except in length of time required to produce insensibility. The ether was given more slowly to avoid the distention of the bowels that had occurred in the previous case. A little less than two ounces was given, and etherization was complete in fifteen minutes. The stage of excitement was marked by a laugh and a comical remark or two, but no struggle. Insensibility continued nearly thirty minutes, and no unpleasant symptoms occurred during recovery. This patient was operated on for piles, and her rectum was packed with sponges to provide against hæmorrhage. Slight meteorism occurred, but no more than might well follow the closure of the anus. The sponges were removed after a few hours, but no diarrhœa showed itself.

So far as it is possible to draw conclusions from present experience, etherization by the rectum differs from inhalation principally by the absence, or rather the diminution, of the stage of excitement.

If vomiting occurs during the etherization it does not interrupt the administration of the anæsthetic.

The unpleasant after effects seem less marked. Vomiting, if it occurs at all, is slight.

The secretion of mucus, which so frequently fills the mouth and air passages, has not occurred so far. The spasm of the glottis which sometimes occurs at the commencement of inhalation, and which is the result apparently of the local effects of ether vapor, is not to be expected by this method.

The feeling of suffocation which is so common when ether is given by inhalation, and which is the cause of most or at least a large number of the struggles which patients sometimes indulge in, is wanting.

Of course the constitutional effects of ether, however given, are the same. The use of a much smaller quantity is sufficient to induce anæsthesia when given by the rectum, where all is absorbed, than when given by inhalation; at the same time the effect is slower in most cases. After complete anæsthesia is reached it is apt to grow more profound after the supply of ether has been removed — so that its administration should cease when once the patient is asleep.

The effect of ether upon different individuals varies very widely. It cannot be supposed that no patient will ever struggle if etherized by the rectum. Of course the man who makes a row whenever he is drunk will probably show his ugly disposition when ether is the cause of his excitement, but so far the excitement shown has been very small. The disagreeable effects seem to consist in the possibility of blowing up the rectum. Evidently the power of absorption differs in different individuals; probably the rate at which the vapor is poured into the rectum differs, as it ought to do, where the heat applied is indefinite and variable. It is necessary to watch the abdomen somewhat to see that it does not become ballooned.

An irritation of the rectum is set up in some cases which, perhaps, corresponds to occasional effects on the air passages when the ether is inhaled, but nothing so far has transpired to cause alarm or anything more than a temporary inconvenience.[1]

Dr. Webber quoted the account of rectal etherization at Lyons, given in the *New York Medical Journal*, as stating that the process was finished by the mouth in some of the cases. He asked the experience of Dr. Post.

Dr. Post thought the French surgeon must have been impatient. Etherization was profound.

Dr. Charles D. Homans said that etherization was slower than in the common way. There was also much less ether used.

Dr. Post said that there was less excitement as well.

Dr. H. K. Sabine inquired if this method was used for the first time at Lyons, or had the Swedish surgeon who proposed it there seen it elsewhere.

Dr. Post said that it was to be inferred from the published account that it had been done at Copenhagen.

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NEW YORK ACADEMY OF MEDICINE.

THE TREATMENT OF MEMBRANOUS CROUP.

At a meeting of the Obstetric Section of the Academy held Thursday evening, April 24th, **Dr. A. Jacobi** read a paper on the medicinal treatment of membranous croup. Having repeated his assertion, made in 1868, that there ought to be no contra-indication to the performance of tracheotomy whenever, no matter how young the child or what complication might be present, there was danger of death from suffocation, and having stated that he had himself now performed it more than four hundred times, he said that he could hardly be accused of underrating the value of that operation (which had, indeed, already been discussed at a previous meeting) if he confined himself on this occasion entirely to the medical side of the treatment of croup.

He spoke first of the use of pilocarpine, and said that he had not modified the opinion which he had expressed in regard to it at the meeting of the American Medical Association in 1881, when he stated that in severe cases of septic pharyngeal and laryngeal disease he had found that this remedy actually hastened the fatal termination by inducing cardiac failure. He then mentioned two cases which had been under his care at the Mount Sinai Hospital, in which one of the children was a little over, and the other a little under, two years of age. Neither case was very severe, and the treatment consisted of the inhalation of steam with the vapor of turpentine, under a tent, and the use of pilocarpine muriate in one-thirtieth-grain doses after the manner of Guttmann. Under this treatment one of the cases got well, but in the other the pilocarpine had to be withdrawn after two days on account of its depressing effect, notwithstanding the fact that alcohol was freely used to counteract this. The final recovery in this instance was attributed, first, to the macerating effect of the pilocarpine on the mucous membrane, and, secondly, to the timely discontinuance of the drug. Dr. Jacobi also mentioned another case, three years ago, which recovered with a fair amount of strength after taking it for four days, and said that his final opinion in regard to it was that it was a powerful remedy, which was of considerable service in certain cases, but which, on account of its debilitating effect, had to be watched with great care, while at the same time its depressing influence was counteracted as far as possible.

In regard to the use of steam inhalations, his views, as expressed in his treatise on diphtheria published in 1880 (page 168), had not changed. In employing them it was not to be forgotten that by this agency the underlying tissues were also softened, and that the poison was thus sometimes enabled to penetrate more deeply. The results were not always satisfactory, and he had seen cases which became distinctly less cyanotic on being taken out of an atmosphere filled with steam. At the same time in many instances the steam was of great service, the benefit depending to a large extent on the special locality affected. Thus wherever there was pavement epithelium beneath the membranes it could not be employed successfully. He therefore again insisted that steam will improve; steam will impair. It was a matter of vital importance where steam inhalations were resorted to that the patient should also have plenty of fresh air.

He also repeated his conviction of the utility of the inhalation of turpentine, which he had first employed many years ago in cases of pneumonia where resolution and expectoration had not commenced. He recommended that about a tablespoonful of the rectified spirits or oil should be poured into water that was being heated over an alcohol lamp or stove or the gas every hour or oftener, and mentioned one case at the Mount Sinai Hospital in which a child two years old was kept, with its nurse, under a tent filled with steam charged with turpentine for four successive days and nights. No other treatment was used except the internal administration of chlorate of potassium and tincture of chloride of iron, and he believed that by this means the case was kept from being a severe one.

Dr. Jacobi then said he would select one topic for discussion in this connection which was not a new one, but which, in the light of recent developments, had excited renewed interest, and that was the treatment of croup by mercurials. In order that the subject might be discussed intelligently he first gave a very careful and complete review of the opinions of various authorities in regard to it from the time that Dr. Samuel Bard wrote, in 1771, down to the present. In regard to his own opinion concerning the use of mercury, in the treatise on diphtheria before referred to he had expressed himself as more favorably disposed towards it at that time (1880) than he had been in former years, and since then he had still further modified his views in the same direction. At the meeting of the American Medical Association in 1881 he had been particularly impressed by the remarks of Dr. William Pepper, of Philadelphia, in favor of the bichloride of mercury treatment. The latter, in the course of his address in medicine, said that his attention had been called to the matter by a paper read by Dr. G. A. Linn before the Pennsylvania State Medical Society, in which he reported a number of cases of pharyngeal and laryngeal diphtheria treated with eminent success with the bichloride, and that he had first used it himself in a case of diphtheritic croup which he saw in consultation with Dr. Yarrow, of Philadelphia.

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[1] Further experience leads me to modify somewhat the favorable opinion here expressed. Certain feeble individuals have taken an unusually long time to recover, insensibility has been occasionally so profound as to cause anxiety, and bloody discharges have been more frequent than is desirable. A. P.

The child, at the time the remedy was commenced, seemed actually at the point of death, and the recovery appeared to him nothing less than miraculous. Dr. Jacobi then went on to say that although he did not claim to be one of those "who never lost a case," he had found the treatment by bichloride of mercury very satisfactory as a rule. He recommended that it should be given very largely diluted (about one grain to the quart of water) in order that gastric and intestinal disturbances might be avoided. Having mentioned the great superiority as an antiseptic of this agent to all others that had yet been discovered, he referred to a paper published by Dr. William Thallon, of Brooklyn, in the *New York Medical Journal* for April 12 and 19, 1884, in which he reported ten cases successfully treated with the bichloride.

The last part of the paper was devoted to the treatment of the patient after tracheotomy had been performed, after which he summed up his conclusions as follows: —

(1.) The mercurial treatment of membranous croup is promising of good results.

(2.) Corrosive sublimate is, as a rule, the best of the preparations of mercury for this purpose.

(3.) It should be given early, and the dose frequently repeated.

(4.) It should always be given largely diluted (about one to three thousand).

(5.) To infants half a grain should be given in the twenty-four hours, and this quantity may, as a rule, be kept up for a considerable number of days without any evil results.

(6.) Salivation and stomatitis are very rarely observed, and gastro-intestinal disturbances are not frequent from its use.

(7.) If any such disturbances should result mercurial inunction, preferably by the oleate of mercury, may be instituted for the bichloride.

(8.) If the case is taken in time the treatment for croup itself may frequently be prevented by the use of the bichloride when the croup is the result of descending pharyngeal diphtheria.

After the conclusion of the paper he referred to the details of three cases successfully treated with bichloride of mercury, which he said he had selected as samples out of a large number of others. The first was one which he saw in consultation with Dr. E. J. Hogan, in which the child was apparently dying from increasing obstruction after tracheotomy had been performed. The second, which was seen in consultation with Dr. Hanks, was a case of croup resulting from pharyngeal diphtheria, and the third, a desperate case of fibrous tracheo-bronchitis in an infant of five months, was seen with Dr. T. Herring Burchard, who read a minute history of it. In a few supplementary remarks Dr. Jacobi then said that within the last fourteen years he had never met with so many successful results in croup, either before or after the performance of tracheotomy, as during the past year, when he had largely depended on the bichloride of mercury.

Dr. Forest stated that two years ago he had a case of croup which grew worse steadily for four days, and was suffering from complete aphonia, when Dr. Jacobi, who had been called in consultation, recommended the use of one twentieth of a grain of bichloride of mercury every hour. Three doses of the drug, however, produced such marked tenesmus that the dose was reduced to one fiftieth of a grain, but the latter quantity was well borne, and the case resulted successfully. Since then he had tried the bichloride extensively, and, as a rule, had found that it acted surprisingly well. When he used steam inhalations he always employed Codman and Shurtleff's atomizer, which he thought was decidedly preferable to filling the whole room (the air of which should be kept fresh and at a temperature of about 70° F.) with steam, and he was in the habit of ordering a teaspoonful of listerine to be put in the water of the atomizer every half hour. Whether the antiseptic had any special effect or not on the disease he was unable to say.

After some remarks by Dr. John C. Peters, who stated that he was a strict localist (believing that in diphtheria the systemic infection originated by absorption from the diseased throat), and principally advocated the topical use of astringents and chlorate of potassium, Dr. J. Lewis Smith spoke at considerable length on the mercurial treatment of croup. The seniors present, he said, would recall that a number of years ago calomel was in common use in this disease, and some of them would, perhaps, remember quite a noted case that occurred at the Astor House before 1858, when diphtheria was first recognized in New York. A child staying at that house was so seriously ill with membranous croup that several eminent physicians of the city said that it was impossible for it to live, when a practitioner from Albany, where the family resided, as a last resort, gave it twenty grains of calomel dry upon the tongue, after which, to the surprise of everybody, the case began to recover. A prominent medical man in New York at the present day believed that if a large dose of calomel were given at the onset of the attack it would favorably modify the course of the disease; but when diphtheria made its appearance in 1858 the profession were certainly disappointed in the effect of calomel, both in large and small doses, and it was found to produce so much prostration that the mercurial treatment was soon altogether abandoned here, except by a very few physicians. Now, however, there had commenced a revival of the use of mercury. As to the views expressed by Dr. Walton in the paper referred to, he must say that he failed to be convinced of their force. The cases that he reported had been cured by the supposed germicide effect of the bichloride of mercury, which was recognized to be the most powerful agent of this class known to science; but he doubted very much whether it was entirely safe to give corrosive sublimate in sufficient quantities to have a germicide effect upon diphtheritic poison in the system. It was believed that these antiseptic agents acted by being taken into the blood and destroying the disease germs which had found a lodgment there; but he could not but think that if this were the case they would have a destructive effect upon the economy itself, since these minute organisms were as tenacious of life as the corpuscles of the blood, and hence the latter would be destroyed at the same time.

Wherever the pseudo-membranes of croup were formed there was first the exudation from the blood (the fibrine), and, in addition, a collection of altered epithelial cells, as held by Rindfleisch and other authorities. Now as to the fibrine, it was acknowledged by all that it could be dissolved by alkalies, and in a series of experiments in which he had participated together with several other physicians connected with the New York Foundling Asylum it had been demonstrated that a two per cent. solution of liquor potassæ was sufficiently strong for this purpose. With regard to the solubility of the epithelial cells entering into the composition of the pseudo-membranes by alkalies there was at present considerable difference of opinion, but this epithelial element was supposed to be analogous to *mucine*, and the latter was undoubtedly soluble in a weak alkaline liquid. He felt constrained, therefore, to adhere to his confidence in inhalations of medicated steam as a principal factor in the treatment of membranous croup, and the alkaline formula which he had found of the greatest service was a two per cent. solution of liquor potassæ in lime water to which a sufficient additional quantity of lime had been added to render it somewhat turbid. When in any case he found huskiness coming on he felt it his duty to resort at once to such inhalations, and if there was but a slight deposit of pseudo-membrane he believed it would be promptly dissolved by them. Another important advantage which he thought they possessed was that when there was an accumulation of muco-pus in the respiratory tract below the level of the membranes (which was a frequent additional cause of dyspnœa in croup), the mucus was dissolved by the alkaline vapor, and consequently the pus became thinner and more easily expectorated.

At one of the recent discussions on croup in the Section he had expressed the opinion that nothing of an irritant nature should be used by inhalation or in any other topical way. Since then he had noticed that a writer in one of the journals had advised the employment of such a caustic as nitrate of silver, and he thought it was the duty of the Academy of Medicine to protest strenuously against any procedure of this kind. This was the objection which he had to the bromine treatment which had been so highly lauded in diphtheria by one authority in this city, — it was too irritating. He had been more and more impressed all the time with the great importance of alcohol in the treatment, and said it was surprising to find what large quantities of it were often tolerated. Thus, it was not uncommon to see a child one year old taking with advantage as much as a teaspoonful of brandy or whiskey every hour. He stated, in conclusion, that he should be glad to make trial of Dr. Pepper's treatment with the bichloride of mercury, as indorsed here on this occasion; but so far as its advantages were shown in the cases reported by Dr. Thallon he did not feel altogether convinced of its efficacy. This was on account of the character of some of the cases, which the writer designated as croup when there was simple huskiness, without dyspnœa, present. If he (Dr. Smith) were to classify his own cases in the same way he would be able to report that fully one half of his cases of croup recovered under the use of alkaline steam inhalations. Again, in one of Dr. Thallon's cases inhalations of chloride of ammonium were resorted to, and he thought that possibly some of the good effects noted might have been due to this remedy, which was an alkali.

Dr. Jacobi said, in reply, that he thought it was not fair to confuse the calomel treatment with that by bichloride of mercury. The latter produced salivation less frequently than any other preparation of mercury. As to the destruction of the blood-cells, in addition to the bacteria in the blood, this was doubtless true of most antiseptic agents, if used in sufficient concentration to be efficient as germicides; but it had been demonstrated conclusively that it was not true in regard to bichloride of mercury. It had such an extraordinary antiseptic effect that a single grain of it was sufficient to destroy all disease-germs in the blood of a child of five years, which weighed about two and a half pounds. The poison could thus be completely eliminated without affecting the blood itself, since it had no injurious effects upon the corpuscles; and it was furthermore believed to be the only germicide which could get into the blood in an unchanged condition. It was at present undecided whether diphtheria depended on a micrococcus or not, but he would not discuss that question now. He looked on the bichloride simply as an antifermentative, and he had seen it produce some remarkable practical results. That was sufficient to encourage him to go on with its use, and he was content to wait for a theoretical explanation of its *modus operandi* that could be found correct.

In closing, he said he wished to lay stress again on the fact that when the bichloride was employed it should be given as early as possible and in frequently repeated doses. There were, as a rule, no bad results from it whatever, and in one or two cases he had given as much as a grain in the twenty-four hours. A child of five months should have at least half a grain in that time. Since he had heard of the tenesmus produced by it in the case which he saw with Dr. Forest, however, he had been careful not to have the dose too large, and he was always particular about having it very freely diluted.

NEW YORK COUNTY MEDICAL ASSOCIATION.

SCARLET FEVER IN THE FŒTUS IN UTERO AND IN THE MOTHER AT THE NINTH MONTH OF PREGNANCY.

This was the title of a paper read by **Dr. Charles A. Leah** at a stated meeting of the Society held April 21st. Scarlatina was so seldom met with in the fœtus in utero, he said, that several authorities of experience have denied that the disease occurred under such circumstances. Thus, J. Lewis Smith, in his work on diseases of children, stated that, while cases had been reported of scarlet fever occurring in the fœtus, and manifesting itself by the usual signs at birth, a clear diagnosis in such instances was necessarily difficult on account of the character of the scarlatinous eruption on the one hand and the nature of the cutaneous circulation in the newly-born on the other. In his opinion, therefore, in the cases alluded to there was probably an error of diagnosis. Prof. Theophilus Parvin, at a meeting of the Obstetrical Society of Philadelphia, held April 3, 1884, after giving an account of an outbreak of measles and scarlet fever in the obstetric wards of the Philadelphia Hospital, stated that while children had been born with measles, he did not know of such an experience with scarlet fever.

It had been his sad experience, however, to see an undoubted case of it in a child at birth during the time of an invasion by the disease of a young family, every member of which, with one exception, was attacked, and in which the wife and mother quickly succumbed before the violence of the onset in her case. The family consisted of the father, twenty-five years old, the mother, twenty-four years old, a son, four years old, and the monthly nurse, sixty years old, and the infection was introduced by a relative who came directly from a household where scarlet fever was raging, and who, although she did not have the disease herself, was at the time suffering from the form of pharyngitis so often met with during the prevalence of scarlatina among those not attacked. At the time of her arrival also the little boy was affected with the ordinary tonsillitis of childhood. The father, who was the only one of the family known to have had scarlatina before, escaped; but all the others, including the aged monthly nurse, took the disease. The family until a short time previously had lived in the country, and, without exception, had always been remarkably healthy, living in a salubrious neighborhood, and being surrounded by the best sanitary conditions. When they came to New York, however, they occupied a dark and badly-ventilated French flat.

The mother, who was now at the end of the ninth month of utero-gestation, when seized with the scarlatina at once became alarmingly ill. In a few hours the eruption extended over her entire body, and at the same time she felt the most violent motions on the part of the fœtus, so that it seemed probable that it was in convulsions. The mother soon became delirious, and the whole situation appeared so critical that Dr. Leah decided to bring on active labor at once. The cervix readily yielded to digital dilatation, and in four hours he delivered with the forceps a male child weighing nine and one half pounds. He was gratified to find that the hæmorrhage incident to parturition was sufficient to relieve the existing cerebral congestion, so that the mother returned to consciousness, while the febrile and other symptoms were less urgent than before the birth of the child. The improvement continued for twenty-four hours, when the temperature began to increase again, and the skin assumed a dark purple hue. She then continued to grow steadily worse, and died fifty-six hours after labor. After death the body quickly underwent such changes as to render it unrecognizable.

The child, which was well-developed, was found to be unquestionably in the midst of the eruptive stage of scarlet fever. It made no effort at respiration, and rubbing it along the spine, placing it upon the side, and making alternate applications of hot and cold water to its body, had no effect in establishing this function until after the cerebral and hepatic stasis from which the infant was suffering was relieved by allowing about an ounce of blood to escape from the umbilical cord. In addition, the thickened mucus, which was clogging up the air passages and interfering with respiration, was removed by the finger and by suction; pressure was made intermittingly upon the abdomen, and flagellation of the nates was practiced. Notwithstanding all these efforts, however, it was fully fifteen minutes before the child breathed regularly, and it was so excessively weak it was wrapped in warm flannels for a considerable time before any attempt was made to wash it. For some days the whole surface of the body was covered with the eruption, the color of which was often very dark, and it then began to fade. At the same time the throat symptoms, which had been well marked (the mucous membrane of the mouth and fauces presenting the typical appearance, with the characteristic raspberry tongue, of scarlet fever), also commenced to subside. Desquamation began about the tenth day, and some of the masses of epidermis thrown off were an inch square. This continued actively for the next week, and during this period desquamative nephritis set in, as indicated by the condition of the urine, which contained about one tenth part albumen. General anasarca also resulted, and was first noticed on the fourteenth day. By the end of the fourth week, however, the infant had entirely recovered from the attack.

On account of the unfortunate results following the exposure of this family to the risk of contracting scarlatina, Dr. Leah thought it his duty to utter a solemn note of warning about the danger to parturient women from the contagion of this disease, and the urgent necessity for preventing the exposure of such patients to it in every possible way. He felt it the more important to do this from the fact that from time to time communications were published in which this danger was entirely underrated, and it was only that very day that he had read an article in the *Journal of the American Medical Association* for April 19, 1884, condensed from one in the *Practitioner*, which he thought likely to be productive of much mischief. In it the writer advanced the following points: —

"(1.) Cases have over and over again been reported where there have been cases of scarlatina, not only in the same house, but in the same room, and even in the same bed, with the parturient woman, without the occurrence of any ill effects.

"(2.) I have been credibly informed by a medical man that he was once called away from a case of scarlatina he was watching to attend two cases of midwifery, and that neither of the lying-in women had any unfavorable symptoms afterwards.

"(3.) I have also been told, and my informant is willing to swear to the fact, that one medical man attended three cases of confinement when his hands were freely peeling from scarlatina, and that not one of these cases had anything the matter subsequent to their confinement."

In connection with the above, Dr. Leah related an account of a soldier he had known of in the late war, who, during a battle, was left exposed between the fires of both armies, and yet who, although he actually received twenty-six bullet wounds, did not die. As well might one argue from this that the man was in a safe position, he said, as contend from the instances mentioned that there was no danger to the parturient woman from scarlatina. He maintained, however, that the cases of puerperal septicæmia in which there was a more or less well-developed eruption resembling that of this disease were not instances of true scarlatina.

As to the occurrence of scarlatina in the fœtus in utero there were now a number of well authenticated cases on record, both in this country and in Europe, in which the most strongly marked characteristics of the disease were found present upon the child at birth. At the same time many medical men of the largest experience had stated that they had never met with a single instance of it. Thus, Meigs and Pepper mentioned that the earliest age at which they had seen a perfectly well marked case of scarlet fever was twenty-one days. Vogel stated that very young children were not subject to the disease, but the statistics of Murchison showed that of 148,829 deaths from scarlatina in England and Wales in 1847, and from 1855 to 1861, no less than 9999, or about seven per cent., were in children under one year. In the city of New York, again, there were 734 deaths from the disease in the year 1883, and of these 67 were in children under one year. Voit reported the case of a child, born on October 3, 1856, who was taken sick with scarlatina on the

17th, after the brother, eleven years old, had been attacked with the disease on the 1st of October. Meynet told of a woman who, three weeks after the convalescence of her husband, and three months after the death of her child, from scarlatina, was delivered of a girl who was somewhat red when born; the redness becoming more intense on the following day, and the skin feeling very hot. These symptoms diminished after a few days, but again became more intense on the thirteenth day. On the fifteenth day Meynet noticed the well-developed redness of scarlatina on the whole body, the tongue and the palate; the tonsils were swollen, and there was fever and apparent difficulty of deglutition. On the seventeenth day the redness had almost entirely disappeared, and the general condition was good; but during the subsequent fortnight there seemed to be no desquamation, and this made the case somewhat doubtful. A case reported by Asmus was also doubtful, as desquamation frequently appeared even in healthy new-born children in whom there was no suspicion of scarlatina. It was as follows: A mother had lost two children towards the end of her pregnancy from scarlatina, and soon after her confinement became dropsical. In her new-born child, who was very much emaciated, the epidermis over the whole body separated in large sheets, and from the hands it came off like gloves; the infant afterwards recovering completely. Potier observed that a woman took scarlatina on the day of her confinement and died a fortnight afterward, and that her child, though isolated immediately after birth, became affected with intense scarlatina. Küpfer met with a scarlatinous patient two months old, Voit one two and one half months old, and Haller one five months old, while Fleischmann saw none under six, and Eulenburg none under eight, months old.

Prof. Louis Thomas, after stating that he had himself never met with the disease under the age of five months, went on to say that it was difficult to ascertain whether children were born with scarlatina, because the majority were born with a red or yellowish-red skin, which resembled the eruption of scarlatina, and was followed by desquamation; but as children were born of variolous mothers, or of women who during pregnancy had been exposed to the contagion of small-pox, and at birth had been found affected with the disease, he could not see why this should not also happen in the case of scarlatina. According to Noirot, Baillou, as early as 1574, established the occurrence of such cases, and Farrario had also published an undoubted case. According to Naumann, the latter saw several cases. Tortual reported the case of a woman, thirty years old, who had never had scarlatina, and who, after nursing her husband and son, who were sick with the disease during the eighth month of her pregnancy and up to shortly before her confinement, was delivered of a male child on the 19th of September, 1823, which could not swallow and had an uncommon redness of the skin. This Tortual did not hesitate to regard as the characteristic eruption of scarlatina, especially as the tongue and mucous membrane of the mouth, in addition, were of a glistening red color. The difficulty of deglutition continued until the fifth day, when the child drank eagerly, and on the ninth day abundant desquamation commenced, just as in older children. Later, also, a separation of the nails of the fingers and toes took place, but the child recovered completely. During an epidemic of scarlatina a son was born to Gregory on April 23, 1839, who was evidently suffering from some form of fever, and on the following day the child had a decided angina maligna, without an exanthem, as a result of which it emaciated and died on May 1st. Stiebel related that a woman, twenty-five years old, manifested a very abundant eruption of scarlatina towards the close of her pregnancy, and that after birth the child could not swallow, while its skin was of a scarlet-red color and desquamated in larger scales than usual. Hüter mentioned the case of a woman who, during an epidemic of puerperal fever, gave birth to a child affected with the most clearly marked scarlatina in the stage of eruption, the woman herself dying four days afterward of metrophlebitis. In the year 1828 Trousseau was appointed at the head of a commission to investigate a serious outbreak of scarlet fever in a rural district of France, which was especially fatal to puerperal women. In thirty-six cases the women were attacked within forty-eight hours after labor, and died in a few days, and one practitioner lost no less than nine of his lying-in patients. Ernst Wagner, of Leipsic, had expressed the opinion that the fœtus might be ill with such diseases as scarlatina and small-pox without the mother being affected.

Of late years, Dr. Leah went on to say, scarlatina had been increasingly prevalent and fatal in New York. During the twenty-five years before 1829 there were only 111 deaths reported from it altogether; but in the last three months of 1829 alone there were 124 deaths from it, an increase which caused much alarm among the citizens. During the last eighty years there had been 37,271 deaths from scarlatina in New York; but the slowness of increase in their number for a time was worthy of notice. In 1804 there were 14 deaths, but in the twenty years following there were never more than five deaths *per annum*. In 1824 there were but three deaths from it. During the past twelve years, however, there had been several severe epidemics of the disease, and in 1882 the mortality from it reached 2066. Hillier's statistics showed a mortality of 52,464 during the years from 1848 to 1866, and Meigs and Pepper stated that the number of deaths from it from 1809 to 1868 in Philadelphia was 13,116.

Although Dr. Leah had met with three cases of undoubted scarlatina in puerperal women, he had seen but one case of it in the fœtus, the one whose history he had related in detail. Two of the cases of puerperal scarlatina had occurred in his own practice, and the third in a patient of the late Dr. Peaslee, whom he had been called to see on account of the sudden onset of convulsions. The child died two minutes after birth from the accumulation of mucus in the air-passages, and the mother died on the third day afterward. He then stated that he had endeavored in vain to find at the New York Health Department any records of scarlatina occurring in pregnant and puerperal women or in the child at birth; but Dr. Naegle, the registrar of vital statistics, had informed him that during the year 1883 sixty-seven deaths from the disease were reported in children under one year old, and nineteen cases in females in the child-bearing period of life. Between the ages of fifteen and twenty years there were six cases; between twenty and twenty-five, four cases; between twenty-five and thirty, six cases; between thirty and thirty-five, two cases; and between thirty-five and forty, one case.

At a meeting of the Obstetrical Society of Philadelphia held April 3, 1884, Dr. W. T. Taylor stated that he had had a case of scarlet fever in a mother which came on two days after labor, and proved fatal, though the child escaped. As a rule, however, Dr. Leah said, the disease was not nearly so fatal when it occurred after, as when it commenced before or during, labor. In one of the three cases to which he had referred the attack came on one week after the birth of the child (which escaped), and the mother recovered.

DRS. WILLIAM DETMOLD and **J. W. S. GOULEY** spoke of the condition of the kidneys in scarlet fever as rendering the disease peculiarly dangerous to the parturient woman (in whom there was usually considerable renal congestion and interference with the abdominal circulation), and, therefore, of immense interest to the obstetrician.

DR. DWYER said he had met with one case of puerperal scarlatina, in which the woman was seized with eclampsia and died at the moment that the child was born. He had also met with three cases in which pregnant women nursed children suffering from scarlet fever, but were not taken with it themselves, while the infants afterward born to them also escaped.

DR. W. T. LUSK thought it was a matter of great interest that women if exposed to the contagion of scarlet fever while pregnant rarely developed the eruption and other characteristic signs of the disease until the approach of labor or after the birth of the child; the period of incubation being unusually long, or the scarlatina poison remaining dormant in the system until the termination of utero-gestation. In scarlatina in parturient women the symptoms also generally differed in a marked degree from the ordinary type. Thus, the eruption and the fever often made their appearance simultaneously, and in a large proportion of cases there were no throat-symptoms; while many of the cases died before the manifestation of any kidney-trouble. That there was a scarlatinous rash due to septicæmia, and independent of exposure to the contagion of scarlatina, he had his doubts; and he had certainly never observed such a phenomenon himself, although he had had an unusually extensive experience with puerperal fever of various forms. As a rule, he had found that puerperal scarlatina was not associated with peritonitis or cellulitis. This disease was usually regarded as peculiarly fatal; but he was inclined to think that, as in the case of scarlet fever in children, the result depended a good deal on the general character of the epidemic prevailing at the time and the special circumstances of the individual case. Dr. Lusk then alluded to the investigations of Braxton Hicks, who had found that many of the cases of puerperal scarlatina closely resembled ordinary puerperal septicæmia, having none of the characteristic features of scarlet fever in general; and stated that in England instances had been reported in which children had contracted ordinary scarlet fever from such cases. No case of this kind, so far as he was aware, had as yet been reported in this country; and the records of the New York Health Department for nine years showed no proportionate relation between the number of deaths from puerperal fever and those from scarlet fever. Matthews Duncan had found the same thing true in London; but at the same time Braxton Hicks might still be correct in his views, the matter as yet not being definitely settled. Under any circumstances, however, he thought the practitioner of midwifery could not be too cautious, and that if in any case where he had gone from a scarlet fever patient to attend a confinement the result proved bad, the physician could not but reproach himself, whatever the woman died of. Any one who was skeptical about this matter would be likely to be very severely punished sooner or later, and there had been one or two cases in the earlier part of his own practice which had taught him a lesson that he would not be apt to forget soon.

DR. S. T. HUBBARD said he had had but one case of puerperal scarlatina in his practice. The disease, which was perfectly characteristic in its manifestations, did not come on till the third day after labor, and the patient died on the third day following the appearance of the eruption. The child also died when four or five days old. He was not able to trace the origin of the disease in this case. He had always made it a special point to refrain from attending lying-in cases when treating scarlet fever patients, and thought this was the duty of every practitioner of midwifery.

DR. C. S. WOOD was inclined to doubt the extreme danger to the puerperal woman of the contagion of scarlet fever. When the disease occurred in families of pregnant women who had never had it, he had formerly been accustomed to await the approach of labor with much anxiety, but his experience had convinced him that the danger had been exaggerated. Thus, a mother who had nursed a child suffering from scarlet fever for twenty-one days was confined ten days after the expiration of the twenty-one days, and passed through the puerperal period in a perfectly natural manner, while the new-born child also escaped contracting the disease. He had been engaged in the practice of medicine for thirty-five years, during which he had had a large experience with scarlet fever; but he had never seen a case in which the contagion was carried by himself.

Remarks were also made by several other members; after which **DR. LEAH** said that he thought there was a plain distinction between puerperal scarlatina and ordinary septicæmia; the evidence showing positively that scarlatina was not due to septicæmia. Thus, in the case of the family whose history was reported in the paper, the mother had scarlet fever before the child was born, the child was affected with the disease when delivered, and the monthly nurse contracted it. As to the susceptibility of puerperal women to get scarlet fever, he did not think this was very great, and this was due to their age, as well as to the fact that many of them had had the disease in childhood. But although it did not occur very frequently, the point which he wished particularly to impress was, the extreme danger of scarlatina when it was contracted during the puerperal state, and hence the great importance of preventing all exposure.

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PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

OCTOBER 13, 1883.

SEA VOYAGES AND AMENORRHŒA.

DR. CHADWICK reported cases.

DR. INGALLS suggested that the functions of other organs were equally liable to be disturbed by the voyage, which might, therefore, reasonably be expected to exert some influence upon the menstrual function, the regularity of which, he had reason to believe, was also not infrequently disturbed by long journeys by rail.

Dr. Brown said that he had seen at the City Hospital several cases of the kind cited by Dr. Chadwick, occurring mostly in the grade of newly arrived known as "assisted emigrants." He had learned to recognize, in the emigrant, the facies indicative of menstrual deficiency. The majority of these cases had been those in which the catamenia had been arrested during the voyage and had not returned, usually accompanied by constipation, anæmia, and general malaise.

Dr. Richardson said he could add his testimony to that of Dr. Chadwick, and that it was very common at the Massachusetts General Hospital to see young women with amenorrhœa which had apparently resulted from the voyage, as often when they had not been unwell on the voyage as when occurring and arrested during the journey. There were no symptoms of pregnancy; a few have had headaches and backaches, as in suppressed menstruation.

Dr. Lyman observed that a distinction should be made between those cases in which the function was normally performed and those habitually irregular before the voyage. In the former, if menstruation occurred during the voyage, the flow was apt, as a rule, to be excessive, but without any subsequent irregularity, while in the latter the subsequent irregularity was likely to be well marked, in one case menorrhagia for months afterward, while in another amenorrhœa, persisting for some months even, was not an unusual result, the cases of amenorrhœa being those in whom the menstruation was missed at its regular period during the voyage. These were generally young unmarried women. Such cases are quite commonly occurring in hospital practice among recently-arrived emigrants.

Dr. Sinclair inquired as to the effect of sea voyages upon Americans, going and coming.

Dr. Sinclair expressed his belief that in the case of the emigrants there was a strong element of nervous disturbance, due to leaving home. He had known such girls to go six months without menstruating. It was not exactly home-sickness, although there was a trace of this in the mental condition. The cause, he believed, was often to be sought beyond the sea voyage.

A MOTHER THIRTEEN YEARS OF AGE.

Dr. Cushing reported the case of a girl thirteen years and seven months old who had never menstruated but once, and had only once had connection, as she declared, who gave birth at term to a healthy child weighing seven pounds. She had an easy labor and a good getting up.

PODALIC VERSION, AND ABDOMINAL PRESSURE UPON THE AFTER-COMING HEAD.

Dr. Green reported a case which was of interest as illustrating, first, the advantage of version over the high-forceps operation in certain cases, and, second, the value of abdominal pressure as an aid in the delivery of the after-coming head. A multipara had been in labor some fifteen hours; the os was dilated, the membranes unruptured. The pelvis was found to be slightly flattened; the head had not engaged, but had extended and presented the brow; occiput left anterior; the child was large; fœtal heart not heard. The membranes were then ruptured, the head flexed, and forceps applied. Two efforts to extract were then made, when it was found that the head had again extended. Podalic version was then determined upon, and performed without difficulty; extraction was easily effected until the head reached the superior strait, from which the usual methods did not succeed in dislodging it. The student, whose case it was, was then directed to apply both hands over the fundus and to exert strong, evenly distributed pressure downward; thus aided by the powerful *vis a tergo* Dr. Green was enabled to accomplish extraction. The fœtus was partially asphyxiated, but was resuscitated after half an hour's effort; it weighed eleven and one quarter pounds. Both mother and child did well.

Dr. Blake said that his experience, which had been large, had been exactly opposite. In the case as reported by Dr. Green he would have spent an hour with the forceps trying to deliver the child in order to save it. In version is the risk, especially in the delivery of the head, where the pressure upon the neck or the head is often extreme. He had had, recently, a similar case, in which the head did not enter, and he concluded to try forceps, — Elliot's. The patient was placed first upon her back, then upon the side, when, after a tremendous amount of exertion, Dr. Blake succeeded in delivering a living child. Is there not danger to the uterine tissues, suggested Dr. Blake, from the pressure made externally? In one such case the woman died, and there was some doubt whether external pressure and consequent injury to the wall of the uterus might not have contributed to the fatal result. He would certainly never think of trying version until having given forceps a fair trial.

Dr. Green said he intended to restrict the question to pressure upon the after-coming head, the body being born, when two hands will clasp the head with a uniform, even pressure.

Dr. Richardson said he would side with Dr. Green in this question. Formerly having favored forceps against version in such cases, during the past four or five years his opinion had been gradually but surely undergoing a change, so that now he would rarely try forceps in a narrowed brim; he would do version in place of the high application of the forceps. His reason was that version is easy till the head is reached, and this is manageable if controlled during the process. Dr. Richardson reported a case to which he was called to do craniotomy, and version was performed in ten minutes, aided by steady, uniform pressure upon the head, so directed as not to compress the uterus. The child's life was thus saved. In the lying-in hospital he had not done high forceps for four or five years, and did not remember a still-birth from version during that time.

Dr. Green said that one great advantage of version over long forceps lay in the fact that the after-coming head entered the pelvis by a smaller diameter than the first-coming head, owing to its wedge-shaped conformation. He believed that a careful, tenative use of the forceps was permissible in slightly flattened pelves, but thought that version was a safer operation for both the mother and child when one or two well-directed efforts with forceps had been unsuccessful.

Dr. Richardson remarked that there was a scientific objection to the use of forceps high up, inasmuch as the difficulty lies antero-posteriorly, while the application of the blades is lateral, and these cannot exert so much power nor to the best advantage in that position.

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THE CÆSAREAN SECTION AS PERFORMED BY SAVAGES.

The tendency of late years to study the natural history of disease has extended itself to the phenomena of labor, and an attempt has been made to gather hints for rational obstetric practice from cases where nature has her most perfect work. Numerous descriptions have been published by various observers. Especially much of ethnological as well as medical interest is embodied in the recent compilations of Dr. Engelmann, of St. Louis. The latest contributor in this field is Mr. R. W. Felkin, who read a paper on Labor in Central Africa before the Obstetrical Society of Edinburgh, in January, which is published in the *Edinburgh Medical Journal* for April.

The usages in the various tribes differ widely. In one the woman sits on a fur spread over deep sand, which "supports" at once her perinæum and her back. In several a semi-erect position is taken, with the feet raised on a sort of stirrup, while attendant men or women compress the abdomen more or less energetically by swathes or by direct pressure. Sometimes the woman kneads her abdomen over the blunt end of a post fixed in the earth. In some tribes when the labor is delayed the patient sits over a pot with boiling herbs, which in turn is over a fire in the earth. The rising vapor is supposed to soften the unyielding passages, and conduce to an easy labor. In other tribes the women support themselves from a high horizontal bar by the hands, and bring forth their child while in a standing posture. In short, all sorts of positions are adopted, many of which are similar to those which have been made familiar to us by descriptions from other sources. It is interesting to note that this writer does not find that labor is, as a rule, the easy and painless matter among these women that some have supposed.

In a few of the tribes the writer found abdominal section to be practiced. Indeed, it seemed the only obstetrical operation that was known. In one village preparation had been made to perform this operation on a young woman who had been two days in labor, but whose only trouble was uterine inertia. Mr. Felkin, with much difficulty, prevailed upon the friends to allow him to put on the forceps, and delivered the woman without difficulty, to their great astonishment. In Uganda alone among the countries of Central Africa abdominal section is practiced with the hope of saving both mother and child. The author gives a description of this operation as he saw it performed there, and one cannot but be struck with the remarkably intelligent and successful manner in which it was done, considering the intellectual status and surroundings of the operator. Any comparison between the advantages enjoyed by a "surgeon" like this savage of Uganda and those renowned Arabian physicians, for instance, of the early centuries of our era, whose works have come down to us, is out of the question; yet we do not recall any professional achievement ascribed to Avicenna or Averroes which was more creditable than this operation of the savage of Central Africa. Believing it will be of interest to our readers, we make room for Mr. Felkin's description: —

"The patient was a fine, healthy-looking young woman of about twenty years of age. This was her first pregnancy. I was not permitted to examine her, and only entered the hut just as the operation was about to begin. The woman lay upon an inclined bed, the head of which was placed against the side of the hut. She was liberally supplied with banana wine, and was in a state of semi-intoxication. She was perfectly naked. A band of mbugu or bark cloth fastened her thorax to the bed, another band of cloth fastened down her thighs, and a man held her ankles. Another man, standing on her right side, steadied her abdomen. The operator stood, as I entered the hut, on her left side, holding his knife aloft with his right hand, and muttering an incantation. This being done he washed his hands and the patient's abdomen, first with banana wine and then with water. Then, having uttered a shrill cry, which was taken up by a small crowd assembled outside the hut, he proceeded to make a rapid cut in the middle line, commencing a little above the pubes, and ending just below the umbilicus. The whole abdominal wall and part of the uterine wall were severed by this incision, and the liquor amnii escaped. A few bleeding points in the abdominal wall were touched with a red-hot iron by an assistant. The operator next rapidly finished the incision in the uterine wall; his assistant held the abdominal walls apart with both hands, and as soon as the uterine wall was divided he hooked it up also with two fingers. The child was next rapidly removed, and given to another assistant after the cord had been cut, and then the operator, dropping his knife, seized the contracting uterus with both hands, and gave it a squeeze or two. He next put his right hand into the uterine cavity through the incision, and with two or three fingers dilated the cervix uteri from within outwards. He then cleared the uterus of clots and the placenta, which had by this time become detached, removing it through the abdominal wound. His assistant endeavored, but not very successfully, to prevent the escape of the intestines through the wound. The red-hot iron was next used to check some further hæmorrhage from the abdominal wound, but I noticed that it was very sparingly applied. All this time the chief 'surgeon' was keeping up firm pressure on the uterus, which he continued to do till it was firmly contracted. No sutures were put into the uterine wall. The assistant who had held the abdominal walls now slipped his hands to each extremity of the wound and a porous grass mat was placed over the wound and secured there. The bands which fastened the woman down were cut, and she was gently turned to the edge of the bed, and then over into the arms of assistants, so that the fluid in the abdominal cavity could drain away onto the floor. She was then replaced in her former position, and the mat having been removed, the edges of the wound, that is, the peritonæum, were brought into close apposition, seven thin iron spikes, well polished, like acupressure needles, being used for the purpose, and fastened by string made from bark cloth. A paste prepared by chewing two different roots and spitting the pulp into a bowl was then thickly plastered over the wound, a banana leaf warmed over the fire being placed on the top of that, and, finally, a firm bandage of mbugu cloth completed the operation.

"Until the pins were placed in position the patient had uttered no cry, and an hour after the operation she appeared to be quite comfortable. Her temperature, as far as I know, never rose above 99.6° F. except on the second night after the operation, when it was 101° F., her pulse being 108.

"The child was placed to the breast two hours after the operation, but for ten days the woman had a very scanty supply of milk, and the child was mostly suckled by a friend. The wound was dressed on the third morning, and one pin was then removed. Three more were removed on the fifth day, and the rest on the sixth. At each dressing fresh pulp was applied, and a little pus which had formed was removed by a sponge formed of pulp. A firm bandage was applied after each dressing. Eleven days after the operation the wound was entirely healed, and the woman seemed quite comfortable. The uterine discharge was healthy. This was all I saw of the case, as I left on the eleventh day. The child had a slight wound on the right shoulder; this was dressed with pulp, and healed in four days."

* * *

ETHERIZATION BY THE RECTUM.

The administration of ether by the rectum has attracted much attention in Boston as well as in other places during the past fortnight. The advantages of such a mode of administration in certain cases would evidently be very great. It would render it possible to maintain perfect anæsthesia during operations about the head and face without incommoding the operator by the presence of the etherizing apparatus in the field of operation. Such a condition might well be purchased at the cost of some other inconvenience. Some of the operations about the face are rendered peculiarly trying by the struggles of patients just sufficiently out of ether to blindly struggle, and the length of such operations is sometimes greatly prolonged by the necessity of stopping frequently to renew the anæsthesia. The new method promised freedom from these difficulties. It promised at first still more, for it seemed to present certain advantages. It diminished in certain cases the stage of excitement and reduced to a minimum the tendency to vomiting and did away with the uncomfortable local effects that sometimes followed the contact of the vapor with the throat and air passages. Such at least was the inducement to try the new method held out by the report of Dr. Mollière, of Lyons, which first drew attention to the subject in this country, and the earlier cases, in Boston at least, confirmed the impression; but subsequent experience has shown that if there are advantages there are also grave objections to the method. In many cases the effect has been out of proportion to the amount used, the ether continuing to be absorbed after anæsthesia was already complete until it became profound, sufficient in certain cases to cause anxiety. In these cases in which the insensibility grows deeper and deeper, it is impossible to withdraw the anæsthetic. A rectal tube fails to evacuate any sufficient quantity of gas, and one can only have recourse to stimulants and general measures until the effects have passed away. This prolonged effect has followed the smaller doses and in patients where there was no reason to expect such results. These cases have not rallied easily. In doing away with the local difficulties about the air passages other local difficulties have shown themselves in the rectum and bowels. The diarrhœa has in some cases been marked, and occasionally blood has been passed in sufficient quantities to prove serious, while the vomiting has also been in these same cases quite as severe as in patients anæsthetized in the usual manner. In addition, certain cases have proved quite intractable to the new mode of administration within any reasonable time, and inhalation has been added. A very few inspirations in addition to the amount absorbed by the bowels have proved sufficient.

In general the amount of ether necessary has been small; about two ounces has ordinarily proved sufficient to induce insensibility, though much larger quantities have been administered, and unpleasant symptoms have followed even from that small amount. From New York comes the account of a case, in which two ounces were administered to a child of eight months, in which bloody discharges and death occurred during the following night.

It is unnecessary to pursue the subject farther to show that these grave objections to the method will preclude its general use. Possibly it may be retained as an occasional adjuvant to the ordinary method, but it is not likely to come into general use as the ordinary method of inducing anæsthesia.

The present experience has been sufficient to formulate the following rules, which should guide any one desirous of using the new method, until further experience modifies them: —

Rectal etherization should be reserved for cases in which there is some special objection to the administration by inhalation.

It should be made use of only with robust adults.

In general two ounces should be regarded as a sufficient dose: that dose should be exceeded only with great caution.

When insensibility is fairly established the administration should be stopped.

THE NEW YORK STATE ASYLUM FOR INSANE CRIMINALS.

THE twenty-fourth annual report of the superintendent of the State Asylum for Insane Criminals at Auburn shows that during the last fiscal year 178 patients were treated, of whom 168 were males, and ten females; that two died, and that twenty-nine were discharged. Of the latter number fifteen men and one woman had recovered. The percentage of deaths was 1.13 of the whole number treated, and 1.36 of the average daily population, this being the fifth time in the history of the asylum that the death-rate has fallen below one and one half per cent. of the average daily number under treatment. The report states that during the year no form of mechanical restraint has been used, nor has the necessity of seclusion, as a means of restraint, been of frequent occurrence, the daily average of seclusion for the year being but a little over one half of one per cent. The daily average number of patients to whom medicine was administered for the purpose of inducing sleep was less than one tenth of one per cent. (.093).

In January, 1883, the manufacture of shoes and slippers for the men was commenced, and has been in successful operation ever since among some of the patients. An effort has also been made to provide further occupation to such of the patients as are desirous and able to work, and who are likely to be benefited thereby, by sending them out on farms in the vicinity of the asylum to work on shares. Care is exercised in the selection of patients in order that only those who can be relied on to conduct themselves properly may be allowed to go, each party sent out being in the charge of one or more responsible attendants who usually work with them. In speaking of this the superintendent, Dr. Carlos F. MacDonald, says: "While no money consideration has been asked or received for the labor of patients the asylum has undoubtedly been pecuniarily benefited by the proceeds thereof in the matter of supplies obtained, but this should be regarded as of very secondary importance in comparison with the marked benefit, mentally and physically, which the patients themselves have obtained from being thus pleasantly and usefully occupied. In fact, a noticeable improvement has been observed in the condition of every patient sent out to work, while in two instances complete restoration of mind resulted where recovery was not expected. Applications for permission to go, on the part of patients, were so numerous that some had to be denied, and all who obtained the privilege evinced their appreciation thereof by uniform good conduct and satisfactory work. The effort to provide occupation for the patients in the manner described was experimental, and had to be carried out under embarrassments and anxieties that would not be encountered if the asylum were located on, or had under its control, a farm whereby its inmates could obtain healthful and necessary occupation, and the institution the full benefit of their labor, without exposing them to the gaze of morbid curiosity or subjecting the asylum to the charge of competing with outside labor. The satisfactory results of the experiment would seem to demonstrate beyond question the necessity of providing the institution with a farm for the benefit of its inmates."

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MEDICAL NOTES.

— Drs. H. J. Bigelow and R. M. Hodges have resigned their position as surgeons at the Massachusetts General Hospital.

— On the 21st of April numerous petitions were sent to the United States Senate calling for the passage of a bill "Requiring the Employment of Different Schools of Medicine in the Government Service." The returns made to the Michigan State Board of Health of medical practitioners in that State represent some seventy-five different "schools" of medicine, among them the "Indian," the "Cureopathic," etc. If Michigan can furnish seventy-five schools, when the other States are heard from there will probably be enough schools to "go around" for all the places.

— The native officials in Egypt are found by the representatives of the English government to be rather lax in the performance of their duties. Recently one of the native governors neglected to report to the authorities some cases of cattle plague which he had been instructed to look out for, and which had occurred in his district. He was immediately removed from his office to serve as a warning to the others. The warning succeeded beyond expectation. The other governors all forthwith sent statements of extensive epidemics in their districts, which naturally alarmed the authorities. On investigation it was found that these cases were purely figments of the imagination. The governors had learned that what had cost the delinquent his place was lack of reports of cattle plague, so they were resolved to be on the safe side.

— We find the suggestion in a contemporary, of holding the hands over strong aqua ammonia for a moment as a ready means of ascertaining the existence and location of small abrasions needing a touch of the caustic before holding a post-mortem examination; the smarting will quickly reveal all the sensitive or abraded places, however minute.

— At a recent meeting of the Medical Society of Columbia the president laid before the Society an examination of urine which a man, calling himself Dr. W. H. Hale, had made for a very intelligent patient. It is vouched for as an actual copy: "Analysis of Urine. — Specific gravity 120; excessive alaline; hippuric acid, 7 to 10 per cent.; traces of nerve-casts; acid reaction; temperature 93°. — W. H. HALE."

— We are requested to warn the medical fraternity against a very plausible impostor representing himself as a physician from South Carolina accidentally in want.

NEW YORK.

— At the last meeting of the County Medical Society, held Monday evening, April 28th, Dr. Joseph A. Andrews read a paper on Trachoma, and the Ætiology of Jequirity Ophthalmia, in which he stated that after a series of very careful experiments he came to the conclusion that Sattler's claim, that the disease was due to a special micrococcus, could not at present be substantiated; although it was possible that it might depend on such a micro-organism. At all events it seemed probable that the affection was really promoted by micrococci of some kind. The essential cause of jequirity ophthalmia was probably a ferment developed after the application of the agent to the eye. Dr. Knapp coincided in the opinion that the latter was produced by a chemical poison rather than a bacillus, and the discussion of the paper, which was brought to a close by Dr. Andrews, was also participated in by Drs. Pooley, Gruening, and Brandeis. On motion of Dr. A. Jacobi the approval of the Society was recorded of a bill entitled An Act to Provide Additional Accommodations for the Common Schools in the City of New York, the passage of which had been recommended by the Board of Education, and which provides that bonds to the extent of $2,000,000 should be issued by the city for the purpose named.

— At the last meeting of the Board of Health Sanitary Superintendent Day presented a report embodying the results of an investigation in regard to the adulteration of coffee by poisonous coloring matter. From this it appeared that for years green Gautemala and Maracaibo coffee had been taken to certain mills in Brooklyn and treated in this manner to make them resemble Government Java. The analysis of the coloring matter showed that it contained considerable quantities of arsenic and lead, and among its ingredients were chromate of lead, ferro-cyanide of potassium, yellow ochre (which frequently contains arsenic), umber, Venetian red, lamp-black, gum Arabic, soap-stone, and charcoal. It was estimated that every cup of coffee made from "Java" coffee prepared in this way contains one sixtieth of a grain of arsenious acid. It was further discovered that Rio coffee, which is apt to have a dull-gray color in the bean, was frequently placed in a large revolving cylinder and treated with a mixture of chrome yellow and Prussian blue, by which it is colored a handsome green. The Board at once took action in regard to the suppression of these criminal and dangerous practices.

— Dr. Elwyn Waller, chemist to the Health Department, has submitted to the Board a report of the analyses made by him of five samples of ordinary vinegar pickles obtained from different dealers. In all the samples analyzed it was found that an injurious proportion of copper, ranging from nine to two parts in one hundred thousand, had been used for coloring purposes.

— On the afternoon and evening of April 29th a kirmess, or Dutch fair, was held at the Metropolitan Opera House in aid of the New York Skin and Cancer Hospital. Having many attractive features it was a great popular success, and, no doubt, netted a large sum for the institution named. This hospital has secured a tract of land covering nearly one hundred and fifty acres, just beyond the city line, and it is expected that by midsummer cottage pavilions will be erected sufficient to receive any patient with cancer who may require assistance, whether the case is recent and suitable for operation or chronic and hopeless. For this purpose a fund of $100,000, which will cover the entire cost of the land and the erection of accommodation for one hundred patients, and a considerable portion of which has already been subscribed, is now being raised. The present city building in East Thirty-Fourth Street will still be continued as a reception hospital and for out-door clinics. The proceeds of the kirmess go to the "charity fund," under the management of the Ladies' Auxiliary Board, by means of which the managers are placed in a position never to refuse admission to any suitable case on account of poverty. Mr. John Jacob Astor has recently given $200,000 towards the proposed institution for the treatment of cancer alone, which those connected with the New York Skin and Cancer Hospital have used every effort to have united with their own, but thus far without success.

— On the 29th of April it was reported that there had been sixteen deaths from scarlet fever in the village of Canandaigua within eight days, and that the local Board of Health had issued an order prohibiting public funerals, and recommending the adoption of other needful sanitary precautions.

— A male child is said to have lately been born at West Troy having three perfectly formed legs, the third protruding above the right hip. In the opinion of the medical men who have examined it the extra limb can be satisfactorily amputated when the child gets stronger.

Correspondence.

LETTER FROM WASHINGTON.

Messrs. Editors, — The medical profession in Washington have just finished the spring round of college commencements, hospital fairs, etc., in time to welcome with the first week of spring weather their friends among the visiting physicians, who are arriving here rapidly. The Medical Department of Georgetown University held its commencement on April 30th, granting diplomas to seven graduates. Like all others of its class the attendance was very large, with the usual accompaniments of music and flowers. The Washington Training School for Nurses, on May 2d, graduated four nurses, quiet, refined, and earnest-looking women. The exercises were held in a church building (All Souls) generously loaned for the occasion, and in the presence of a small but appreciative audience. Very few medical men outside of those actually interested in the school were present, but the addresses, which were from Prof. D. W. Prentiss, the president of the Board of Trustees, Dr. P. J. Murphy, the surgeon-in-charge of the Columbia Lying-in Hospital, and Dr. W. W. Godding, superintendent of the Government Hospital for the Insane, were all worthy of the occasion, and merit earnest consideration. There are two classes who can make such a school prominent, the profession first, and the women of the community. Here the first class have not had as yet the opportunity for appreciating a first-class nurse except in occasional cases in private practice, for the simple reason that there are no hospitals of any size which create a demand for them. Providence Hospital is under the nursing of Sisters of Charity. The Columbia Hospital can accommodate but a few, and from its peculiar field of labor the profession generally sees but little of its workings. The Freedmen's Hospital also takes a few, but its wards are not utilized by the mass of the profession. What the new Garfield Hospital is going to do remains a problem. Its friends believe that it will grow in importance and usefulness, as there is a positive need for it, and will before long furnish a suitable field for professional growth. The women could do a great deal, but they are already overburdened with entertainments for the benefit of the Children's Hospital, which should have been mentioned with the others as a small but well-defined field for nurse-training, of the Garfield Hospital, church orphanages, etc., etc., which task their ingenuity and time very seriously. To be a success such enterprises must become fashionable; perhaps some day the Nurses Training School may attain to that proud distinction.

Writing of fashion, doctors' lunches have become quite the thing. We have had two here recently, one given by Dr. Toner to Dr. Warren Bey, and the other by Dr. Jos. Taber Johnson to Dr. Mundé, of New York, and very enjoyable affairs they were, only Johnson's punch was a little too strong to be taken in the middle of the day by any one who still had his rounds to make. A conversation on this subject was overheard as occurring between two ladies: "What are all these doctors' buggies doing here?" "It is a doctor's lunch, my dear." "A doctor's lunch! Well I never heard of doctors stopping to have a formal lunch before."

The American Surgical Association were certainly favored by Dame Nature during their meeting here this week. All the foliage was well out, and everything looks fresh and bright, and even the heat, with the exception of one day, Friday, was tempered to an agreeable degree. The city is looking its best now, and may give to some others of our medical neighbors the desire to reside permanently among us, when they retire from active practice, of course, and follow in the footsteps of Dr. Hammond, who is said to be about to build a marvel of a house on the Mexican plan, with a large central court roofed in with glass, etc. The late Dr. Marion Sims we know also intended to take up his residence here.

The meetings of the American Surgical Association were held in a large room in the National Museum, and surrounded by the park of the Smithsonian Institution. The room was so arranged that by a series of large screens the small body of men — for the attendance was not large — could be shut off quite satisfactorily from the empty space around, and the screens served the purpose of sounding boards, not as well as could be wished however; and as work is still going on in different parts of the open building an occasional sound would reverberate through into the room, annoying Dr. Flint, of the navy, who was exerting himself to relieve the meeting of all such disturbances. An occasional group of visitors would lounge in from the main hall, take a look at the Indian pictures which hung on the walls, and after listening for a few moments pass out, evidently thinking that the other curiosities were of more interest. Dr. Basil Norris, of the army, who was chairman of the Committee of Arrangements, seemed to be always on hand and rendering himself particularly useful and agreeable.

Very few of the Washington medical profession seemed to be present, and a number of faces were missed from the assemblage, such as Professor Gross and his son, Dr. J. C. Warren of your city, and others; but the general impression given, which was heightened by the manner and appearance of the President, Dr. Moore, of Rochester, N. Y., was that of a quiet, dignified, and earnest body of men, and the papers read and discussions held upon them partook of the same character; but as they will be fully reported in your columns elsewhere it is not necessary to particularize them here. Among those present, however, we must mention J. S. Billings, M. D., LL. D. (Edinburgh), U. S. A., whose latest honors do not seem to embarrass him. Think of a man leaving this country on April 2d, going to Edinburgh and participating with honor in the tercentary of her University, and being back at his post on April 30th, in twenty-eight days.

Professor Gross's paper, which was on Wounds of the Intestines, was read in his absence, and a telegram sent by the Association expressing to him their pleasure and profit in listening to his paper and their sympathy and hope for his speedy recovery. There were some forty members registered by the close of the meeting on May 3d, and a resolution was passed to dispense with the annual dinner, but notwithstanding that fact, twenty of the members dined together formally at one of the hotels. Quiet receptions were held on several evenings at the houses of physicians, and upon invitation from Professor Baird the Washington fish-hatchery establishments were visited.

In the election of officers the following were selected: President, Dr. William T. Briggs, Nashville, Tenn.; Vice-Presidents, Dr. J. C. Hutchinson, Brooklyn, N. Y., Dr. E. H. Gregory, St. Louis, Mo.; Secretary, Dr. J. R. Weist, Richmond, Va.; Treasurer, Dr. John H. Brinton, Philadelphia, Penn.; Recorder, Dr. J. J. Ewing Mears, Philadelphia, Penn.; Council, Drs. Henry F. Campbell, Augusta, Ga., Hunter McGuire, Richmond, Va., P. S. Conner, Cincinnati, Ohio, and Dr. J. S. Billings, D. C.

The Association will meet in Washington again in April, 1885, and Dr. Billings was elected chairman of the Committee of Arrangements.

In regard to the Code question, it may perhaps interest you to know that while nothing was said in the meetings with regard to it further than the reading of the report of the Secretary on the first day, to the effect that several resignations had taken place in consequence of the strict adherence of the Association to the Code, and these resignations appeared to be forced, the general tenor of conversation among the members was that the Code of the American Medical Association was to be taken as a matter of course.

Miscellany.

A BILL TO PREVENT THE SPREAD OF CONTAGIOUS DISEASES AMONG CATTLE.

A BILL to prevent the sprend of pleuro-pneumonia and other contagious diseases among cattle has finally passed both houses of Congress, under the stimulating supervision of a committee appointed by a convention of cattle raisers held in Chicago last November. The bill seeks to provide an interstate quarantine system, to establish a system of inspection under the control of the Commissioner of Agriculture, and appropriates a sum to indemnify owners of diseased cattle which may be slaughtered.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 26, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	636	241	16.48	17.44	2.24	4.64	3.68
Philadelphia	927,995	353	117	13.16	6.44	—	2.80	4.48
Brooklyn	644,526	256	83	11.70	17.16	1.17	3.51	2.73
Chicago	632,100	237	122	23.52	13.02	1.55	5.46	4.62
Boston	423,800	165	50	31.01	21.66	3.05	3.05	1.22
Baltimore	408,520	156	65	19.20	7.04	4.48	4.48	—
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	72	23	13.90	6.95	2.78	1.39	1.39
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	68	29	14.70	22.05	—	8.82	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	31	9	18.38	18.38	—	—	12.92
Nashville	54,400	26	5	7.70	3.85	—	—	—
Charleston	52,286	29	6	6.90	6.90	3.45	—	—
Lowell	71,447	30	11	13.33	13.33	3.33	3.33	3.33
Worcester	69,442	21	15	14.28	—	—	9.42	—
Fall River	62,674	17	6	16.66	5.88	—	—	—
Cambridge	60,995	12	3	8.33	—	—	—	8.33
Lawrence	45,516	14	8	21.42	—	—	7.14	7.14
Lynn	44,895	7	1	—	—	—	—	—
Springfield	38,090	5	1	—	20.00	—	—	—
Somerville	31,350	8	4	—	50.00	—	—	—
Holyoke	30,515	8	4	12.50	50.00	—	12.50	—
New Bedford	30,144	16	5	18.75	12.50	—	—	—
Salem	29,503	5	1	—	20.00	—	—	—
Chelsea	24,347	4	0	25.00	—	—	25.00	—
Taunton	22,693	11	2	18.18	—	—	9.09	9.09
Gloucester	21,400	2	0	100.00	—	—	—	—
Haverhill	20,905	6	0	—	50.00	—	—	—
Newton	19,421	7	1	14.28	—	—	—	14.28
Brockton	18,323	5	0	40.00	20.00	—	—	—
Malden	15,273	6	3	—	—	—	—	—
Newburyport	13,947	4	0	—	25.00	—	—	—
Fitchburg	13,433	4	2	—	—	—	—	—
Eighty-three Massachusetts towns	343,107	72	15	6.95	6.95	—	1.39	—

Deaths reported 2273 (no reports from St. Louis, New Orleans, Buffalo, District of Columbia, Milwaukee, and Providence): under five years of age, 1632; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 331, consumption 345, lung diseases 316, diphtheria and croup 88, scarlet fever 69, diarrhœal diseases 38, measles 32, typhoid fever 32, cerebro-spinal meningitis 16, erysipelas 16, malarial fevers 14, whooping-cough 12, puerperal fever nine, small-pox four, typhus fever one. From *measles*, Chicago eleven, New York nine, Baltimore seven, Brooklyn three, Philadelphia and Cincinnati one each. From *typhoid fever*, Philadelphia fourteen, Chicago seven, Pittsburg three, New York two, Nashville, Charleston, Lowell, Worcester, New Bedford, and Andover one each. From *cerebro-spinal meningitis*, Baltimore four, New York three, Chicago and Brockton two each, Cincinnati, Fall River, Lawrence, New Bedford, and Quincy one each. From *erysipelas*, New York five, Philadelphia, three, Boston and Newton two each, Brooklyn, Chicago, Baltimore, and New Bedford one each. From *malarial fevers*, New York and Brooklyn three each, Chicago two, Baltimore, New Haven, Nashville, Fall River, Chicopee, and Spencer one each. From *whooping-cough*, New York four, Baltimore three, Cincinnati two, Philadelphia, Brooklyn, and Chicago one each. From *puerperal fever*, Brooklyn three, Chicago two, New York, Philadelphia, Boston, and New Haven one each. From *small-pox*, Philadelphia, Chicago, Cincinnati, and Pittsburg one each. From *typhus fever*, Cincinnati one.

One case of small-pox was reported in Boston, Cincinnati one; scarlet fever 65, diphtheria 20, typhoid fever four, and measles four in Boston.

In 103 cities and towns of Massachusetts, with an estimated population of 1,404,364 (estimated population of the State 1,955,104), the total death-rate for the week was 15.63 against 16.60 and 16.00 for the previous two weeks.

In the 28 great towns of England and Wales, with an estimated population of 8,762,354, for the week ending April 12th, the death-rate was 20.4. Deaths reported 3418: acute diseases of the respiratory organs (London) 285, whooping-cough 192, measles 142, scarlet fever 63, fever 49, diphtheria 28, diarrhœa 25, small-pox (London eight, Liverpool four, Newcastle three, Birmingham, Sheffield, and Sunderland two each, Derby and Hull one each) 23. The death-rates ranged from 14.9 in Leicester to 31.3 in Wolverhampton; Sheffield 16.1; London 19.1; Leeds 20.1; Birmingham 20.2; Derby 20.3; Birkenhead 21.2; Nottingham 21.9; Blackburn 22.2; Newcastle-on-Tyne 22.4; Liverpool 22.6; Sunderland 22.9; Manchester 25.6. In Edinburgh 22.4; Glasgow 28.7; Dublin 23.0.

For the week ending April 12th, in the Swiss towns, there were 56 deaths from consumption, typhoid fever 27, lung diseases 25, diarrhœal diseases 14, whooping-cough five, diphtheria and croup four, scarlet fever two, small-pox, measles, and erysipelas each one. The death-rates were, at Geneva 31.6; Zurich 23.6; Basle 19.4; Berne 33.3.

The meteorological record for the week ending April 26th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
April, 1884.	Daily Mean.	Daily Mean	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 20	29.947	46	51	42	100	100	100	100	NW	N	N	9	12	5	R	R	R	—	—
Mon., 21	30.026	43	34	35	100	78	62	80	NE	NW	NW	2	18	21	R	O	O	—	—
Tues., 22	30.067	42	53	32	71	48	74	64	N	NW	NE	24	10	3	C	C	C	—	—
Wed., 23	29.979	48	63	34	61	46	87	65	W	W	NW	6	10	6	C	C	C	—	—
Thurs., 24	29.956	45	53	41	74	87	83	81	NE	E	NE	9	9	6	C	O	O	—	—
Fri., 25	29.719	43	51	42	95	98	100	98	NE	NE	N	11	12	8	O	R	R	—	—
Sat., 26	29.790	49	54	41	100	75	87	87	N	NE	N	8	18	6	R	O	C	—	—
Mean, the Week.	29.926	45	51	38				82										48.50	0.83

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 3, 1884.

Harvey, H. P., passed assistant surgeon, detached from Naval Hospital, Chelsea, and ordered to St. Mary's.

McCarthy, R. H., passed assistant surgeon, ordered to Naval Hospital, Chelsea.

Waggener, J. R., passed assistant surgeon, detached from St. Mary's, and ordered to the Hartford.

Wise, J. C., surgeon, detached from the New Hampshire, and ordered as member of Board of Examiners at Annapolis.

Craig, T. C., assistant surgeon, promoted to passed assistant surgeon.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM APRIL 26, 1884, TO MAY 2, 1884.

Shufeldt, Robert W., captain and assistant surgeon. Relieved from temporary duty in Surgeon-General's Office, and ordered to report to Lieutenant-Colonel Basil Norris, surgeon United States Army, attending surgeon Washington, D. C., for temporary duty in his office. Paragraph 6, S. O. 100, A. G. O., April 30, 1884.

Barrows, C. C., first lieutenant and assistant surgeon. Relieved from duty at Fort Grant, A. T., and ordered to report for duty at Whipple Barracks, A. T., relieving First Lieutenant W. E. Hopkins, assistant surgeon, who, upon being relieved, will report for duty as post surgeon at Fort Grant, A. T. Paragraph 1, S. O. 31, headquarters Department of Arizona, April 21, 1884.

Phillips, John L., first lieutenant and assistant surgeon (Fort Warren, Mass). Ordered to report for temporary duty to the commanding officer at Fort Preble, Me. Paragraph 1, S. O. 81, headquarters Department of the East, April 28, 1884.

Cutler, John M., colonel and surgeon, retired. Died at Morristown, N. J., April 26, 1884.

Changes in Stations of Medical Officers.

(Paragraph 2, S. O. 101, A. G. O., May 1, 1884.)

Heger, Anthony, major and surgeon. From Department of Texas to Department of the East.

Happersett, J. C. G., major and surgeon. From Department of Texas to Department of the East.

Bentley, Edwin, major and surgeon. From Department of the East to Department of Texas.

Middleton, Passmore, captain and assistant surgeon. From Department of Texas to Department of Missouri.

Koerper, E. A., captain and assistant surgeon. From Department of the East to Department of Dakota.

Dickson, J. M., captain and assistant surgeon. From Department of the East to Department of California.

Girard, A. C., captain and assistant surgeon. From Department of Dakota to Department of Missouri.

Girard, J. B., captain and assistant surgeon. From Department of Arizona to Department of the East.

Hall, J. D., captain and assistant surgeon. From Department of Dakota to Department of the Columbia.

Hall, Wm. R., captain and assistant surgeon. From Department of Missouri to Department of Texas.

Cuningham, T. A., captain and assistant surgeon. From Department of the East to Department of Missouri.

McCreery, Geo., first lieutenant and assistant surgeon. From Department of Arizona to Department of Dakota.

Cochran, J. J., first lieutenant and assistant surgeon. From Department of Missouri to Department of Arizona.

Suffolk District Medical Society. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, May 14th, at 7.45 o'clock. Dr. E. G. West will report a case of Myxœdema with Autopsy. Drs. F. Minot, R. T. Edes, Streeter, R. H. Fitz, F. G. Webber, J. J. Putnam, W. H. Whitney, and E. G. Cutler will take part in the discussion. Dr. W. N. Bullard will present an account of A Typhoid Epidemic. Dr. Morton Prince will open the discussion. **Albert N. Blodgett, M. D.**, *Secretary.*

Norfolk District Medical Society. — The annual meeting will be held at Rockland Hall, No. 2343 Washington Street, Roxbury District, Boston, on Tuesday, May 13, 1884, at two P. M. The Board of Censors will meet at one o'clock. Order of business: Report of Committees, Report of the Treasurer, Election of Officers, Incidental Business. Communications: —

A Case of Criminal Abortion with Retention of a Portion of the Secundines. E. F. Dunbar, M. D.

The Treatment of Fractures of the Femur without Splints. D. B. Van Slyck, M. D.

G. D. Townshend, M. D. *Secretary.*

Books and Pamphlets Received. — One Hundredth Anniversary of the Foundation of the Medical School of Harvard University. Addresses and Exercises. October 17, 1883. Cambridge. John Wilson & Son. 1884.

Studies from the Pathological Laboratory of the University of Pennsylvania. No. XV The Bacillus Tuberculosis and the Ætiology of Tuberculosis. Is Consumption Contagious? Second Communication. By H. F Formad, B. M., M. D. (Reprint from Philadelphia Medical Times.) Philadelphia. 1884.

Congenital Lipoma. By A. Jacobi, M. D. (Reprint.) Jersey City. 1884.

Contagious and Infectious Diseases. Measures for their Prevention and Arrest. Small-Pox (Variola), Modified Small-Pox (Varioloid), Chicken Pox (Varicella), Cow Pox (Variola Vaccinæ), Vaccination, etc. Illustrated by eight Colored Plates. Circular No. 2. Prepared for the Guidance of the Quarantine Officers and Sanitary Inspectors of the Board of Health of the State of Louisiana. By Joseph Jones, M. D. Baton Rouge. 1884.

Elementary Principles of Electro-Therapeutics, with 135 Illustrations. Prepared by C. M. Haynes, M. D. Designed for the use of Students and Physicians. Published by the McIntosh Galvanic and Faradic Battery Company. Chicago, Ill.

Original Articles.

EXCISION OF A PORTION OF INTESTINE, INCLUDING PART OF THE ILEO-CÆCAL VALVE, FOR THE CURE OF FÆCAL FISTULA IN RIGHT GROIN.[1]

BY C. B. PORTER, M. D.,
Surgeon Massachusetts General Hospital.

During the past five years great improvements have been made in the methods of operating on the intestinal tract, and to-day it is one of the most interesting and progressive of all the departments of abdominal surgery. Up to the year 1877–1878 an occasional bold operator had ventured to perform certain operations on the intestinal tract, such as suture of wounded intestine, or even resection of portions of gangrenous intestine found in the hernial sac, but, as a rule, the surgeon was content when dealing with strangulated hernia to leave the gangrenous bowel to slough off, or, at most, to remove it, and, in either case, to hope to obtain an artificial anus that could be treated later by various plastic operations and occasionally cured. In diseases of the intestine, such as stricture, malignant or otherwise, the only recognized operation was the formation of an artificial anus at some point. This operation was generally performed in the left loin for the relief of strictures of the rectum or the sigmoid flexure. The treatment of wounds of the intestine was almost always expectant, and, unless the intestine was lying outside the abdomen with its cut edges exposed, no treatment except rest and opium was adopted. Cases of suture with or without excision are, however, to be found recorded previous to the period mentioned. In 1727 Ramdohr excised about two feet of gangrenous intestine found in an inguinal hernia. One end was invaginated in the other and secured by sutures, and the patient recovered. Up to the year 1873 there had been recorded eighteen cases of resection of a portion of the intestinal tract, followed by circular suture. The operation is indicated (1) In cases of gangrenous hernia; (2) for the cure of artificial anus; (3) for new growths or stricture of the intestine; (4) for certain cases where tumors of other abdominal organs are so closely united to the intestines that they cannot be separated; (5) for internal strangulation and invagination with gangrene; (6) For lacerations and wounds of intestines. The first two indications are most frequently met, and it is in these cases that the operation has been most often performed.

In the tables of Madelung[2] and Bouilly[3] are collected fifty-four resections for gangrenous herniæ, followed by circular suture, with twenty-eight deaths, giving a mortality of a little over fifty per cent.

Operations for the cure of artificial anus are next in frequency. Of these I find twenty-five cases with nine deaths, a mortality of thirty-six per cent. The first of these operations was performed by Dr. R. A. Kinloch, of South Carolina, in 1863, for artificial anus following gunshot wound of the intestine. The patient recovered after the formation of a fæcal fistula.

Madelung gives nine cases of resection for new growths, seven cases of prolapsed and wounded intestines from abdominal injuries, three cases of wounds during laparotomy, and three cases of internal strangulation. The greater part of these operations was performed by German surgeons, and it is to them that we are mostly indebted for our present knowledge of the subject. England and America have furnished a very small number of cases. In Bouilly's table is mentioned the successful case of Dr. W. Fuller, of New York.[4] To this we can add two cases reported by Dr. Ill, of New York,[5] one of which recovered.

Up to date there have been recorded so far as I can discover one hundred and four cases of resection of intestine, with forty-nine deaths, a mortality of forty-seven per cent. Of these one hundred and four cases there have been recorded four cases where resection followed by suture of the intestine has been performed in the United States, with three recoveries. Beside the hundred and odd cases reported above, there are others on record where the exact lesion is not stated, or where wounds of the intestine made for different objects, or caused by accident, have been united by suture. These are all interesting as bearing on this operation and its history, and show still farther the feasibility of intestinal suture. Perhaps the case to be read cannot strictly be classed with the tabulated cases as it was not a resection of the whole calibre of the bowel; so small a bridge, however, united the large and small intestine that the operation was practically the same.[6]

The method of operating has been thoroughly described in all the journals both at home and abroad, but a brief account of some of the important details in the operation is, perhaps, not out of place here. The two principal points to be observed are the prevention of the entrance of fæces into the abdominal cavity, and a very careful adjustment of the serous surfaces. The intestine should be drawn out of the abdomen and surrounded by warm, carbolized towels, and, in cases where laparotomy has been performed, some operators bring the edges of the abdominal incision together with one or two temporary sutures, leaving outside only the knuckle of intestine that is to be operated upon. Various methods have been employed to prevent the oozing of fæces from the cut intestine, some preferring digital compression above and below the wound, while others use different forms of clamps for the purpose.

Madelung and others advise excising a somewhat wedge-shaped piece of the intestine, the apex of the wedge pointing toward the mesentery. The united intestine forms therefore an obtuse angle, and the point of suture is thus wider than the rest of the intestine.

Many forms of suture have been employed, among them the most important are the invagination suture of Jobert, now seldom used, and the Lembert suture with its various modifications by Czerny and others.

It is always to be remembered that serous surfaces must be opposed. This is very perfectly done by the Lembert-Czerny stitch, which is applied as follows: A row of very fine stitches is taken near the cut edge of the intestine through the serous and muscular coats only, a very fine half curved needle being used. These stitches should be near enough together to completely close the wound and allow no liquid contents of the bowel to pass through the interspaces. A second row of sutures is then placed outside the first, the needle passing as before only through the serous and muscular coat, including a wider portion of the intestinal wall but not reaching the first row of stitches. In this way the peritoneal surfaces are rolled in and thoroughly opposed. A slight ridge is, of course, made on the inside of the bowel, but if the incisions have been made as recommended above, the lumen is not materially narrowed.

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[1] Read before the Surgical Section of the Suffolk District Medical Society, March 5, 1884.

[2] Ueber Circuläre Darmnaht und Darmresection. Arch. f. klin. Chir. 1882, xxvii., p. 277.

[3] Revue de Chirurgie, May, 1883, p. 362.

[4] New York Medical Record, 1882, vol. xxii., p. 430.

[5] New York Medical Record, 1883, vol. xxiv., p. 311.

[6] It may be mentioned here that there has been one case of resection of the pylorus in the United States, that of Dr. C. M. Richter, of San Francisco. [Western Lancet, 1882, vol. xi., p. 289.] The patient died the day following the operation.

Two forms of suture have been used, silk and catgut, and opinions differ as to which is better. Silk is not open to the objection that it may be too quickly absorbed, as is sometimes the case with fine catgut; while catgut is supposed to be less irritating, and to cause less ulceration than silk. Some operators use silk for one row, generally the inner, and catgut for the other. Whichever material is at hand can safely be used if thoroughly carbolized, and a good result can be expected for wounds of this sort when properly treated, as they heal more rapidly and with less irritation than almost any other.

When we consider the results thus far obtained in a class of cases always severe, may we not hope and expect to see the operation much more generally adopted in this country instead of being looked upon as an experimental operation performed only by reckless surgeons in foreign hospitals? The history of the operation shows it to have been most carefully worked out by a great series of experiments on animals and a cautious advance, step by step, until the operation now stands as one not only justifiable, but most advisable and proper in certain cases.

My patient, Mrs. B., aged sixty-seven, entered the Massachusetts General Hospital August 8, 1883. She had a right inguinal hernia at the age of eight years, and at some subsequent time, date unknown, had developed the same condition on the left side. Three years previous to her admission the hernia of the right side became strangulated. An operation for relief was performed, and according to her statement a portion of the intestine sloughed, and artificial anus was formed in the right groin. Twelve days previous to entrance the hernia of the left side became also strangulated. Herniotomy was performed, the intestine returned into abdominal cavity, and she entered for the care of the resulting wound on left side. In about two weeks this wound was healed, and the only remaining trouble was the almost constant discharge from the artificial anus on right side. September 12th patient was etherized, and an operation for closure of the fistula was performed by Dr. John Homans. The edges were refreshed and closed by silk sutures. Two days subsequent it was noticed that the dressings were soiled by fæcal matter. From that time to December 1st, about two months and a half, the condition varied, the opening would apparently close for a few days more or less, and then suddenly break out again with fæcal discharge. December 2d a small abscess formed two and a half inches nearer the median line, which also discharged fæces. December 10th she had a chill and high temperature, which ushered in an attack of erysipelas, from which she had recovered December 31st. Patient was extremely anxious to have another operation for cure, as she was in such a deplorable condition. Alone in the world, without friends, entirely dependent upon charity, the offensive condition in which she was would prevent her from obtaining any employment, and she would have no home but the almshouse. I talked with her a number of times, explaining fully the danger of any radical operation for cure, and she always insisted that it was her right to demand at my hands anything which afforded a chance of relief, stating that she preferred to die rather than live as she was.

According to her wishes I operated January 11, 1884, the bowels having been cleaned out by cathartic and enemata. The condition was this: two fæcal fistulæ in right groin, one about one and one half inches from spine of pubes, and the other about three inches farther outside; each about one inch above Poupart's ligament. A bougie was passed into one of the fistulous openings (the one highest up in the groin) emerging from the other opening three inches lower down. This was then cut down upon, the tissues consisting of hard cicatricial masses, and the entire cavity laid open. This cut divided the lower margin of the abdominal ring, and laid open the hernial sac; the incision was then prolonged downwards to expose the whole sac, making a wound through the skin of abdominal wall four inches long. Two openings into the intestine were found about one inch apart. These were connected by a cut made on the director dividing the superficial epigastric artery, which was first tied with a double ligature. The opening in the intestine was then seen to be in the ileum and cæcum, just at their union. The finger passed readily into the large intestine, but the attempt to introduce it into the small intestine through the ileo-cæcal valve was impossible as the cicatricial contraction involved the valve itself, and the opening was not larger than a small lead pencil. The dilator was introduced and this opening stretched, then with the forefinger of the left hand introduced into the opening a dissection was made to release the intestine from its cicatricial attachments to the abdominal wall, necessitating a section of the muscles from the external abdominal ring outwards for about four inches. This done, the intestine was free from all but its mesenteric attachments. To close up the wound in the intestine the expediency of cutting out a complete section of the intestine was considered, but was not thought wise, as it would involve removing the vermiform appendix and portions of cæcum and ileum. The cicatricial margin of the opening was trimmed off. The opening then involved about four fifths of the calibre of the bowel. The edges of this wound were then approximated, but as one side was small and the other large, intestine, the edges would not lie together smoothly. To obviate this difficulty a longitudinal cut was made in the small intestine, thus giving a longer edge of cut surface, and forming a sort of oval-shaped wound, which could be approximated accurately to the cut edge of the large intestine. The wound was then sewed up with silk sutures as follows: The needle was entered about one half inch from the wound, penetrating the peritoneal layer, then traversing the middle layer (muscular) of the gut, and emerging one eighth inch from the margin of the wound, having left the mucous layer untouched. The needle was then entered at the opposite side of the wound, in a corresponding manner traversing the middle layer, and emerging about one half inch from the wound. Ten sutures were introduced in this way. When these were drawn tight they rolled in the free margin of the wound, thus bringing two serous surfaces in contact, and turning the cut edge into the interior of the bowel.

The intestine was then allowed to fall back in the abdominal cavity after additional silk sutures had been placed between the previous ones, making twenty in all.

The ring and abdominal opening were then brought together and sewed with fine silver wire, the sutures passing through the peritonæum and fascia of the deeper muscles, but not the skin. The ends were cut short and the points bent over. Five sutures were thus placed. The skin was then united by silk sutures, a large-sized drainage tube, three inches long, being inserted into the abdominal cavity.

A graduated compress of carbolic gauze was then placed over the wound, and a full Lister dressing surrounding the abdomen and thigh, the whole being confined by a spica bandage, firmly sewed together. The whole operation was done under carbolic spray and all antiseptic precautions, occupying in all two hours and three quarters. There was but very little hæmorrhage, the vessels of the skin being tied before the abdomen was opened. There was no escape of fæcal matter at any time. The tract of the small sinus first opened was thoroughly curetted before any other cut was made.

The condition of the patient was excellent throughout, the pulse being full and moderate. About one and one half pints of ether were used.

The patient rallied well from the ether, and vomited but very little. In the evening she took hot, strong, black coffee, and brandy and soda water, but before this she had two enemata of brandy, ℥ss. each.

January 12th, the day following, patient was very much nauseated, and did not retain anything on her stomach. She then took enemata of beef tea and brandy every three hours, but after the third enema she failed to retain this. She was then ordered to have nothing at all. The night pulse was good, but after an attack of vomiting it became very weak and rapid for a few minutes. Temperature was 101° F. *Passed flatus freely.* During night she took, in all, brandy ℥ij., beef tea ℥vss., coffee ℥iiss. She had morphine, grain one eighth, subcutaneously, and during the night grain one sixth by suppository.

January 13th. She had almost constant retching, but otherwise her condition was good. She seemed rather unreasonable and complaining. She took, during the night, tea ʒij., brandy ʒiij., coffee ʒi. morphine grain one sixth. Temperature is 100.3° F. Ordered

℞ Chloral . . . . gr. xv.
Potass. bromid. . . . . gr. xx.

every four hours by enema. Also bicarbonate of soda and water by mouth.

January 14th. Condition excellent. Last night she took brandy ʒi., beef tea ℥ij. Enemata have been retained. During the day she has taken brandy ℥i., beef tea ℥iiiss., coffee ℥iij., tea ℥iii. No opiate. Temperature is normal. Pulse 95, full and strong. Has no tympanites or tenderness of abdomen. Has no pain, except an occasional sharp, darting pain in lower part of abdomen. She seems herself again mentally. To-day has had two dejections, the last being involuntary.

January 15th. Temperature up a little (100° F.). No leakage from dressing, but some slight odor. Lister changed under spray. Very little union of edges of wound. Drainage tube removed, and a smaller and shorter one inserted, not penetrating so deeply as to enter peritoneal cavity. Iodoform placed on wound, and full Lister dressing replaced. (She has taken to-day brandy ℥iss., beef tea ℥viii., milk ℥ivss. Enema of bromide and chloral given only once to-day, as patient was perfectly quiet and comfortable.)

January 16th. (Very comfortable. Has taken a large amount of nourishment to-day, namely, beef tea ℥xxi., coffee ℥xxiij., milk ℥v., brandy ʒv. Temperature below 100° F.)

January 17th. Says she feels as well as she ever did, except for weakness. (Has taken to-day brandy ℥i., beef tea ℥xxi., milk ℥xiij., coffee ℥x., tea ℥v. The brandy, although given in ʒij. doses only, causes some flushing; reduced to ʒi. doses.)

January 18th. Slight staining of dressing; changed under spray. The wound of skin has gaped for its whole length, the edges being composed of hard cicatricial tissue, and the bottom of the wound being an old sinus. Short, small drainage tube inserted at middle of wound, and another small one at lower end in place of the original tube. She has taken to-day some stewed oysters and small sandwiches of raw scraped beef.

January 20th. Lister changed. Tube at lower end of incision shortened a little. There is some pocketing of pus at middle of wound.

January 22d. Lister. Small pocket above mentioned dilated.

January 24th. Temperature normal. Feels well. Normal dejection yesterday.

January 25th. Has been doing perfectly well until this noon, when she had a chill and rise of temperature. The dressing was changed, and the wound seen to be looking very well. The skin was a little tense, and there was a general marked induration all about. A phenyle poultice, consisting of cotton batting wrung out in hot phenyle and covered with oiled silk, was applied, and iodoform was sprinkled into the wound. Felt very restless and was querulous, quite different from her ordinary self.

January 26th. The phenyle poultice was changed every fifteen minutes until midnight, a dry gauze dressing being then applied. This morning upon removing the dressing pus was seen to escape by two openings in the wound; the tenseness and induration had disappeared to a great extent. On coughing about ℥ss. of fetid pus appeared at upper end of wound. Fomentations replaced and renewed every half hour until night.

January 29th. Had rise of temperature last night, probably due to extra exertion caused by sitting up in bed, or perhaps to bowels. Patient was given an enema with good results. Last night appeared weak in her mind, talking in a childish manner, but responding to questions rationally.

January 30th. Mental condition all right. Wound looking perfectly. Tube shortened to a small piece at lower end of sinus. Has had three loose dejections today.

February 2d. Temperature to-night 102.5° F., due, possibly, to the fact that she was somewhat excited by the visit of the students. Has had two dejections.

February 5th. Has been out of bed, allowed to stand on her feet, and take a step or two.

February 6th. Drainage tube omitted, and the wound, which is merely superficial, packed with charpie and myrrh. Almost no dischage from the wound. Patient is gradually gaining in strength, and her mental condition much less childish than a few days ago.

From this time on the patient has gradually improved, the wound has entirely healed, and temperature and dejections have been normal. There has also been a constant increase in strength.

SPINAL IRRITATION AND NEURASTHENIA.[1]

BY G. LIEBMANN, M. D.

It appears that the word "neurasthenia" is at present in everybody's mouth; that it is, in fact, like a big pot into which various nervous and mental disorders of depression are thrown pell mell, and without much discrimination.

Although Beard and Rockwell, in their work on medical and surgical electricity (1875), say that spinal irritation almost always forms a part of hysteria and neurasthenia, constituting, as it were, a subdivision or accompaniment of them, they still hold, it may be with a certain degree of reluctancy, that spinal irritation is a disease per se "when the spinal tenderness and the symptoms that directly flow from it overshadow other accompanying conditions." We see, therefore, that these authors only conditionally identify neurasthenia (nervous exhaustion) with spinal irritation, and I, for my part, cannot comprehend how Rosenthal, and, if I am not mistaken, Erb, come to the assertion that these, our American authors, proposed the term of neurasthenia for the so-called depressed form of spinal irritation. The fact is, Beard and Rockwell are the first who described the symptoms of nervous prostration, pure and simple, under the name of neurasthenia, but vindicated to spinal irritation its character of a separate and independent disorder. They relate cases in which the least physical or mental exertion was followed by extreme exhaustion *without spinal tenderness*, even one case of neurasthenia in a plethoric patient in whom not a trace of an organic lesion of the cord could be detected.

Each practitioner ought to do his own thinking, and although looking up to the great lights of our science with admiration, still have his eyes open, and see how far his own experience tallies with the teachings of authorities. If we do this with regard to the disease in question (neurasthenia) we plain practitioners find that uncomplicated neurasthenia is a very rare disease. In a practice of twenty-seven years I scarcely can recall more than five cases of idiopathic neurasthenia which came under my treatment if I exclude those cases of nervous prostration which depended upon anæmia, losses of blood, and protracted lactation. I say cases of *idiopathic neurasthenia*, for many cases of apparent nervous exhaustion are no distinct and separate disease *per se*, but reflexes caused by underlying organic diseases of the sexual organs. Notwithstanding the assertion of Rosenthal that the depressed form of spinal irritation is identical with neurasthenia, numerous cases in my practice teach me otherwise, and that the irritation in question is not a spinal neurosis, but a symptom of chronic prostatitis in the male or chronic ovaritis or metritis in the female. Apart from my own observations of cases of so-called spinal irritation (with depression) or neurasthenia in young men, Rosenthal, in enumerating the symptoms of spinal irritation, also lays great stress on the prostatic symptoms. The following are his words: "Other important disorders also appear on the part of the genital functions. In general the patients are easily excitable, but the erections and virile power are deficient; ejaculation of semen is often premature, and followed by distressing sensations in the back and legs. When the mind is occupied with erotic thoughts, and even after defecation or micturition, some drops of prostatic fluid (almost always without admixture with spermatozoids) frequently appear in the meatus. True spermatorrhœa only occurs at great intervals. Chronic pollutions, on the other hand, are frequent, and when they follow one another in rapid succession they greatly aggravate the manifestations of the disease. In the majority of patients the urethral canal presents, especially in the prostatic portion, an acute sensitiveness even when a sound of small calibre can be introduced without difficulty." Who reading this graphic description does not think at once of the so frequent chronic prostatitis with all its tortures to the patient and the attending physician as well? As all the chronic disorders of the pelvic organs through the sympathetic nervous system produce the most serious bodily and mental disturbances, and especially a hypochondriacal state of the mind, the disorders of the prostate gland and ovaries do so *par excellence.* But although these disorders, by means of disturbances of the vaso-motor nerves within the spinal column, may bring on *temporary* hyperæmia or anæmia, we have no right to isolate these symptoms from the existing original pelvic disorder, and to classify them under the head of "spinal irritation with depression," for I always find that in the course of these pelvic lesions the spinal symptoms are but evanescent, and coincident with the functioning or excitation of the respective diseased organ. Furthermore the nervous weakness is but apparent, as best shown by the results of treatment. Although these patients complain of bodily and mental fatigue (see also report of cases of urethral stricture by Drs. G. H. Tilden and F. S. Watson), a tonic treatment, often and faithfully employed by me, never accomplished anything. Again, the much-extolled *rest*, doing so much good in real neurasthenia and in true spinal irritation, gives bad results in the symptomatic form.

I come, therefore, to the conclusion that neurasthenia and spinal irritation are two *different* and *distinct* things, and that cases of the so-called depressed form of spinal irritation of Rosenthal neither belong to the one nor the other, *and are but symptoms of another existing disease of the pelvic organs.* For whilst in real spinal irritation by means of a false innervation and consecutive vaso-motor disturbances these pelvic organs may be affected secondarily, or, on the other hand, might have ceased to be diseased some time before the advent of the spinal symptoms, in pseudo-irritation the pelvic lesions always precede the symptoms of irritation, and these in return disappear with the disappearance, or at least abatement, of the organic pelvic disturbances.

When young men with all the symptoms of a chronic prostatitis, and complaining of some lumbar pain and hebetude, and exhibiting more or less vetebral tenderness, call on their physician, or young married ladies with some slight trouble of the pelvic organs apply to our skill and sympathy, and are frightened out of their wits by being told why they suffer from spinal irritation, I unhesitatingly say *this is downright cruelty*, for the impression thus made on the patient is demoralizing and discouraging in the extreme, and besides we say what is not true. I therefore propose the following classification of the disorders: —

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[1] Read at a meeting of the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, March 12, 1884.

(1.) Neurasthenia.
(2.) Spinal irritation.
(3.) Pelvic rachialgia.

I. NEURASTHENIA.

This is, as the term itself implies, a nervous weakness, uncomplicated with organic disease, a diminution of nerve force, depending upon a hitherto unknown disturbed condition of the nerve centres. As we do not know, so far, the material basis of this condition, we have to consider the malady as a functional exhaustion of the motor and intellectual sphere. The least bodily or mental exertion causes fatigue and rapid exhaustion, and any mental labor brings on nervous excitement and inability to go on in the work. As a rule, there is no tenderness of the vertebræ, and but exceptionally the disease is complicated with spinal irritation. Rachialgia is no conspicuous symptom, and of the sensory nerves only those of the head are involved. Nutrition is impaired, and loss of flesh is considerable. The psychical faculties are affected. Although intelligence may be preserved there is weakening of the memory and confusion of ideas, and the result is a considerable diminution of the capacity for mental labor. There is disturbance of sleep, even insomnia. But the most apparent symptom is the lack of muscular endurance.

From an ætiological point of view a hereditary disposition to neuroses is first of all to be mentioned. Among the exciting causes which produce nervous exhaustion, grief, mental distress, overwork, excesses in venery, and seminal losses play the most conspicuous rôle. *Overlactation* is sometimes a cause of neurasthenia, but it is not always easy to determine whether under such a contingency we have to deal with anæmia or neurasthenia. I have seen a young married lady with most alarming symptoms of nervous prostration, which came on during lactation, and yielded readily to weaning the child and a ferruginous treatment. In her case the differential diagnosis was established by a microscopical examination of the blood, which excluded anæmia.

The *treatment* of neurasthenia must consist of rest, abstinence from emotional excitement, and from mental and physical work. Besides a sojourn in the country, along with avoiding fatigue or long walks, the application of general faradization offers the quickest and surest chances of recovery. It is in neurasthenia that I have had the best results from the method of applying the interrupted current, first practiced and described by Beard and Rockwell, and designated by them as general faradization.

II. SPINAL IRRITATION.

If in *neurasthenia* we noticed that the most predominant symptoms were those of *depression*, we see in spinal irritation those of *irritation*. The most prominent symptom is dorsal pain, which appears especially after exertion and fatigue, but is hardly ever wanting (Rosenthal). Generally, several vertebræ are tender, which tenderness, however, is stable, and not varying, as in the symptomatic form. This painful region is acutely sensible to slight mechanical irritations, such as the application of electricity or heated water. The rachialgia is increased through any exertion, especially flexion of the trunk (Rosenthal), and the patie [illegible] cramps and pain in [illegible] brain as well take this pain for pain in the kidneys. [illegible] only sides, unlike neurasthenia, neuralgias in differe[illegible] of the body, cervico-occipital, intercostal, facial, lumba[illegible] abdominal and crural; there are cephalalgia and nausea, besides numbness in the lower limbs, and sensations of burning and sometimes of cold. Again, there are serious motor disturbances, as muscular contractions, which are very distressing, and occurred in two of my cases especially in the muscles of the neck and calf. In true spinal irritation, as in neurasthenia, *but unlike* symptomatic spinal irritation, or rather pelvic rachialgia, we meet generally with emaciation of our patients; the features are pinched, there is an expression of suffering and of anxiety. If we say that neurasthenia is amenable to treatment, we have to state that spinal irritation gives a far worse prognosis. That there is an organic lesion of the spinal column in spinal irritation, either hyperæmia or anæmia, seems to be accepted by most authorities except Leyden. Again, if we may depend upon the assertions of some that spinal irritation runs into tabes occasionally we must certainly believe it to be an inflammatory process, a surmise that is strengthened by the fact that local antiphlogistics, as cupping, leeching, counter-irritants, often bring about relief.

Treatment. A hot douche to the spine daily employed along with the administration of tincture of aconite root (two drops every three hours), or five drops of gelsemium every four hours (Bartholow, spinal hyperæmia) are the most efficient means. The latter author remarks: "In all cases of spinal hyperæmia the cause must be removed." But can we do this always? I hold that spinal irritation is mostly hereditary, and of course we cannot remove heredity. The most powerful remedy at our hands to improve the faulty circulatory conditions of the spinal column is, after all, galvanism, and a descending stabile galvanic current has produced more good in my hands than any internal remedy.

III. PELVIC RACHIALGIA.

This term, I am aware, does not fully cover the whole field of symptoms which I am about to group together as a disorder, — distinct from, although resembling, spinal irritation, — and the term *symptomatic* or *pseudo*-spinal irritation might for this reason be more appropriate. But as *rachialgia* is by far the most prominent symptom, and originates from and follows the underlying pelvic disturbances, and the word spinal irritation, even when qualified by the reassuring prefix *pseudo* or *symptomatic*, is so vague, misleading, and shocking to the sensibilities of physician and patient alike, I adopted this term as it stands. Pelvic rachialgia, then, is a complex of symptoms generally designated by the authors as spinal irritation with depression. But these symptoms constitute, as we have seen, no distinct, separate disease of the spine, but are the expression of an organic lesion of the pelvic organs. I omit to relate cases illustrative of this point, and offer to your kind consideration but my honest conviction, gained from observation of a great many cases, in which it was evident that the so-called symptoms of spinal irritation never appeared *before* the affection of the prostate, the ovaries, the uterus, or the urethra, and that they were constantly accompanying the pelvic disorders, although it must be admitted that a hereditary disposition to neuroses in general favored the appear-sympathy. If, on the other hand, proved, the wo the spinal irritation coincides with the and deject of the pelvic disorders, we must certainly come to the conclusion that the sympathetic symptoms of the spinal cord, as rachialgia, burning sensations in the lumbar region, general languor, are typical and characteristic symptoms of pelvic organic disease just as much as a mucous discharge after defecation or micturition is of prostatitis or leucorrhœa of cervicitis. If in studying real spinal irritation we have noticed that, as in neurasthenia, loss of flesh, even emaciation, is likely to be present, that the expression of the face denotes a considerable degree of suffering, a suffering stabile and constant; again, that the appetite is poor and sleep disturbed, we find in pelvic rachialgia that the *appetite is good*, and that the patients have a healthy and plump appearance, a circumstance that induces the friends, and often even the attending physician, to think that the symptoms complained of are either imaginary, exaggerated, or simulated. There is besides, as already stated, a considerable difference in the *result* of *treatment* between spinal irritation and pelvic rachialgia. In the former violent bodily exercise increases the trouble, and rest and tonics give good results. In the latter rest is injurious, tonics give a negative result, but saline aperients and bodily exercise give, as a rule, astonishing success.

I have at present a patient suffering from incurable chronic prostatitis, whose distress and despondency for the last ten years has been pitiable indeed, as his rachialgic symptoms, as lumbar pain and burning, languor, irritability, and nervousness, had not been mitigated either by tonic, hydropathic, or electrical treatment, who instinctively takes some kind of physical exercise and experiences instantaneous relief from his nervous irritation. Under the head of these exercises I name ten-pin rolling, billiard playing, horseback riding, and walking. That the transitory good result of these physical exertions must depend upon disengorgement of the prostatic gland, brought about by removing venous stasis or congestion, I do not doubt for a moment. An important difference between real spinal irritation and the feigned form (pelvic rachialgia) is, that the symptoms of the latter are *evanescent*. Thus you are apt to see such patients in the most changeful state and disposition of body and mind, now exultant and joyful, elastic in their actions, free from pain, with a complexion ruddy, with eyes beaming and reflecting happiness and high spirits, only to relapse after the act of micturition or defecation into a fit of exhaustion, suffering, despondency, or distress. As also in pelvic rachialgia the spinous processes, especially of the lumbar vertebræ, show a decided tenderness, but, as I very often observe, during the interval of comparative well feeling this tenderness is entirely wanting. It is interesting to study how with the reappearance of the pelvic irritation this tenderness recurs at once, and along with it the entire train of symtoms of irritable weakness.

Cephalalgia or other neuralgias and *insomnia* I rarely meet with in pelvic rachialgia. On the contrary, patients sleep generally long, are inclined to be indolent, and excuse their laziness by stating that they feel better whilst in bed. But this comfortable feeling in bed is but apparent, for during rest in bed there is no desire to micturate or defecate, the pelvic organs are at rest, and there is hardly any congestion. Hence a pause in the rachialgic symptoms.

But as soon as the patient after rising goes to stool, the prostate, riding as it were on the rectum, is getting pushed or pulled along by the movement, and this irritation is at once transmitted to the lower parts of the spine, to be followed by nervous prostration, burning, tenderness of the vertebræ, and so on. How these symptoms are produced, whether by disturbances of circulation within the spinal column, due to temporary paresis or stimulation of the vaso-motor nerves, or by reflex action, I am not prepared to state.

The prognosis as to an ultimate radical cure in pelvic rachialgia is not favorable, as only with a cessation of the pelvic disorders a perfect cure can be expected, and these very diseases are rarely eradicated. But an amelioration of the distressing symptoms to the extent even of a rather comfortable existence can with safety be promised the patient.

As the most successful *treatment* of pelvic rachialgia I consider the administration of drachm doses of sulphate of magnesia before breakfast three to four times a week, cold ablutions of the lumbar and hypogastric regions, and moderate bodily exercise, as gymnastics, horseback riding, billiard playing, and so on. Furthermore, I find celibacy on the one hand and excesses in venery on the other injurious, but a very moderate and judicious performance of the sexual functions beneficial.

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RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

A CONTRIBUTION ON THE FORMATION OF GIANT CELLS IN EPITHELIAL TISSUES.[1]

MUCH has been done of late in the investigation of giant cells, and differences of meaning have arisen as to their manner of formation, their origin, their value, and the soil from which they spring.

In regard to their formation, it is supposed that they came either from a single cell alone or by the addition of protoplasm from the neighborhood, or from the union of many cells.

Their origin has been assumed to be from white blood corpuscles, from granulation tissue, from endothelium, and from epithelium.

A different value has been assigned to them. In part they are considered as a product of progressive, in part as an expression of retrograde, metamorphosis. To the first group are reckoned the cells of this class occurring normally in the bone marrow as well as those arising in granulation tissue and in sarcomas, while those in lupus and tubercle appear to many authors to belong to the second group.

They come in very different tissues. Normally they are found in the bone marrow, in the reabsorption of bone, in the placenta, and in the uterine sinuses at the insertion of the placenta. In pathological processes they occur repeatedly. Here the nuclei are colored less distinctly, and are only to be recognized by their faint contour; this finally disappears, and with it the nucleus, and there only remains a glancing scale.

In epithelial growths the protoplasm in which these nuclei lie corresponds with that of the epithelial tongues, and is either granular or homogeneous. It has no peculiarities in respect to coloring agents, except at times it does not color at all, suggesting a fatty degen-

[1] Klauss, Virchow's Archiv, vol. xcv., p. 249.

eration. The shape of the cells varies greatly. Among the smallest there is a form corresponding to flat epithelium, while the larger ones have no type. The first can often be seen in the periphery of the tongues, and occasionally they are found occupying an entire cross section. For these cells there is no doubt of their origin from epithelium. On the other hand, when these cells lie in the periphery they are either directly connected with it or separated from it by a narrow space. In the latter case they appear as polyformed protoplasmic masses corresponding in size to several epithelial cells, to which they probably correspond. Finally, giant cells are found in the round cell tissue, but their nuclei and protoplasm correspond with those previously described.

Whether these cells are formed by confluence of other cells, or whether from nuclear division or from a combination of both processes, is to be considered. In support of the confluence theory there is to be brought forward their irregular form, the atypical position of the nuclei, the degenerative processes which they undergo (calcification, or change into hyaline scales), and finally the fact that a faint contour is still visible in many of the larger cells. In other cases where round or oval protoplasmic masses can be made out, in the midst of which are fine vesicular nuclei, the division of the nuclei must be assumed.

The essential results of these observations, which were made on over seventy cases of epithelial new growths, were: —

(1.) In epithelioma there occur giant cells which are derived from the epithelial cells.

(2.) No certain conclusion can be drawn as to the manner of their formation.

An interesting fact was the production of giant cells along a piece of catgut which had been used at a primary operation and was removed with the recurrent growth.

In an adenoma of the sebaceous glands, a very rare form of growth, and essentially an epithelial structure, giant cells were also present.

INVESTIGATIONS ON THE CICATRIZATION OF THE INTIMA AND MEDIA OF ARTERIES AFTER LIGATURE.

Zahn [1] has made a series of observations upon the healing of the media and intima of vessels after rupture. He was led to this by a case of aneurism, in which this had evidently taken place, and where it seemed that the material for restoration was formed from the endothelium without the aid of the elastic or connective tissue.

The experiments to prove this consisted in the partial ligature of the carotid or femoral of rabbits. A silk thread was passed round the vessels and tied; after a time, varying from thirty seconds to one minute, the the knot was loosened and the blood allowed to resume its course. Sometimes one and sometimes two ligatures were placed about the vessel. In the latter case the peripheral was always loosened first in order to prevent the sudden pressure from causing an extravasation of blood between the coats.

In a few cases the external surface was covered with cinnobar. The wound made by the operation quickly healed by first intention.

The animals were killed after varying times either by puncture of the medulla or by bleeding. The skin was quickly removed, and the artery carefully loosened from the surrounding tissue for a co[illegible]amps and pain in A piece of pith was placed beneath the brain as well was pinned to it. The whole was then remo[illegible] only the artery laid open with a fine pair of scissors. The internal surface was washed with a small stream of distilled water, then covered for a few minutes with a one half per cent. solution of nitrate of silver. The specimen was hardened in alcohol and imbedded in celluloid.

The specimens from the third or fourth day after ligature were prepared by first washing with a three fourths per cent. solution of common salt, then for fifteen to thirty minutes in a five per cent. solution of nitric acid. After this a weak solution of alum was poured over them and then immersed for twenty-four hours in a solution of alum carmine. Afterwards hardening in alcohol.

As the result of the examination of these preparations it appeared there was no formation of a thrombus after tearing the intima through entirely and partially rupturing the media. During the first or second day rather more red and white corpuscles were found on the irregular edges of the rent than elsewhere on the surface of the vessel, but never in sufficient numbers to form a real clot. Further, the rest of the media and the externa were sufficiently strong to withstand the arterial pressure and thus prevent an aneurismal dilatation.

The most important rôle in the process of repair is played by the intima. In the neighborhood of the edges there is a marked formation of new cells. In places these lie one over the other and push towards the opening, first covering the sides and then the bottom of the tear. By their further increase they fill up the hole entirely, and then appears between them a homogeneous substance replaced later by a fibrillar connective tissue. Thus the cicatrization proper is brought about by the endothelium alone, the other tissue elements taking no part in it.

In consequence of the force applied to the outside of the vessel there is a reactive hyperæmia of the adventitia, with an infiltration of round cells, which later assume a spindle shape. They never, however, penetrate deeper than the external coat, and cannot therefore have anything to do with the repair of the inner coats.

(*To be concluded.*)

Reports of Societies.

THIRTY-FIFTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

First Day's Proceedings.

The thirty-fifth annual meeting of the American Medical Association opened in Washington, Tuesday morning, May 6th, at eleven o'clock, at the First Congregational Church, about one thousand delegates being present.

The first session was called to order by **Dr. A. Y. P. Garnett**, Chairman of the Committee of Arrangements. Prayer was offered by **Rev. John H. Elliott**, and the address of welcome was then delivered by **Dr. Garnett**, who dwelt upon the appropriateness of Washington as a centre for such gatherings of a national character, and predicted its increasing importance and attractiveness as a city.

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[1] Virchow's Archiv, vol xcvi., p. 1.

DDRESS BY THE PRESIDENT.

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STIN **FLINT**, President of the Association, eceived with much enthusiasm upon rising to deliver the annual address. The first part of his address was a review of the history of the Association, and his subsequent remarks were especially devoted to a consideration of what had been done in the past to elevate the standard of medical education and of professional dignity, and of what remained to be done in the early future.

He expressed his conviction of the necessity of endowments for the establishment and maintenance of high standards in medical schools. During the preliminary education previous to the study of medicine every student ought to gain a thorough knowledge of the more liberal arts and sciences. The study of the dead languages is not so essential to a medical education as the study of physics, of biology, and of the French and German languages.

There are some colleges, Dr. Flint acknowledged, which may be guilty of flagrant abuses, which do injustice to students seeking a higher standard of medical knowledge, by allowing other students to gain a knowledge of the profession cheaply and too hastily. In an experience, however, of forty years among medical students, he was prepared to say that they compare favorably with students of the other sister professions.

In the standard of medical education he had no disposition to apologize for some abuses and evils complained of by brother professors. A large number of medical colleges place their reliance upon State legislation, which is delusive. Some private colleges are deficient in their means of instruction, and lack the requirements for giving a proper and thorough medical education. Our duty is to promote more and more and elevate our profession, and to do this the profession must rely upon itself, recommending changes and improvements in certain measures of immediate practicability. In this the National Association must take the initial step, at the same time coöperating with the medical colleges, with an earnest desire for harmonious views and united action, to secure uniformity in the different States, and opposing all differences. To this end he suggested that a standing committee be appointed upon the uniform action of medical colleges. It is not to be expected that all of these desirable improvements can be accomplished at once, but with earnest efforts the result of a higher standard of medical education can be achieved through a board of examiners not engaged in medical education.

Dr. Flint then referred to the usefulness of the medical profession, the manifold difficulties and peculiarities of the calling. In order to practice the profession a physician must both honor himself and the profession. The same Code of Medical Ethics which was adopted in 1847 at the convention held in Philadelphia is still held intact by the medical societies throughout the United States except in New York. The excellence of the Code has produced a salutary influence upon the lives of the profession, and far more so than the medical ethics of any other country. The opposition to this Code involves both a question of taste and of principle. It forbids consultation with irregular practitioners, and presumes that every practitioner must possess the professional ability and requirements of a physician, who has received a regular education, and who does nothing that is prejudicial to the honor and usefulness of the profession.

Continuing, Dr. Flint alluded to the humane principles of the profession and its higher laws of philanthropy. He referred to the advancement in the diffusion of medical knowledge through the medical journals, and the work done by the several Sections.

Referring to the International Medical Congress of 1887, Dr. Flint thought it should be held in this country rather than at Copenhagen. He feelingly alluded to the serious illness of Prof. Samuel D. Gross, of Philadelphia.

In conclusion, Dr. Flint spoke of the great advantages to be derived from the American Medical Association meeting in Washington, where the Army Medical Museum and a medical library, the largest, most valuable, and most practical in the world, were at hand. He hoped that Congress would provide for the erection of a new library building in which this valuable medical collection could be safely stored. Here also was the National Museum and the Department of Agriculture, all of which were of interest to the delegates.

Dr. Flint was frequently applauded during his address, at the conclusion of which

DR. JOSEPH M. TONER, of Washington, moved that a telegram be sent to Prof. S. D. Gross, of Philadelphia, informing him of the sympathy felt for him by the Association in his illness and of its hopes for his speedy recovery. This was unanimously adopted.

DR. SAYRE, of New York, moved that that part of President Flint's address relative to the International Medical Congress of 1887 be referred to a special committee of five with Dr. Billings as chairman, and the motion was adopted.

A motion by **DR. QUIMBY**, of New Jersey, that 5000 copies of the President's address be printed, was also adopted. That portion of the address concerning the subject of Medical Ethics was upon motion of Drs. Garcelon of Maine, and Ferguson, of New York, referred to a committee of seven, to report upon its recommendations as soon as possible.

ANNOUNCEMENTS.

Announcements were made of certain papers submitted to be read before the Association upon State County Hospitals by Dr. Suttens, of Aurora, Ind.; one by Dr. Theobold; another by Dr. John T. Roberts, upon the Use of the Trepan in Head Injuries; another by Dr. Walter Wyman, U. S. A., in charge of the Marine Hospital Service in Baltimore, upon Hospitals, etc.

The announcement was made that the various delegations would meet in different portions of the auditorium and galleries of the church after adjournment for the purpose of nominating one member from each delegation to form a nominating committee upon officers to be elected for the ensuing year.

The Association adjourned at 1.30 P. M., to reassemble at ten o'clock the next morning.

MEETING OF SECTIONS.

After the adjournment and at 2.30 o'clock the different Sections met. Those of the Practice of Medicine, Physiology, Obstetrics and the Diseases of Women, on Ophthalmology, Otology, and Laryngology, and on Diseases of Children, meeting in different portions of the church; the Section on Surgery at the armory of the National Rifles; and the Sections on Oral and Dental Surgery and State Medicine at Medical Society Hall, southeast corner of Sixth and F Streets.

The first Section, on the Practice of Medicine, Dr. John V. Shoemaker, chairman, listened to papers by Drs. Austin Flint, Sr., Edward Janeway, New York, Louis A. Duhring, of Pennsylvania; Whittaker, of Cincinnati; Black, of Illinois; and Traill Green, of Pennsylvania. In this Section several papers were passed over for want of time.

The second Section, on Obstetrics, Dr. T. A. Reamy, of Cincinnati, President, carried out its full programme, papers being read by Drs. Sutton, of Pennsylvania; Campbell, of Georgia; Polk, of New York; Byford, of Illinois; Joseph Taber Johnson, of the District of Columbia; and Jenks, of Illinois.

The third or Surgical Section, Dr. C. T. Parks, of Chicago, chairman, heard one paper by Dr. Fred. S. Dennis, of New York, and on the announcement of the death of Professor Gross, of Philadelphia, adjourned until the next day.

The fourth Section, on Public Health, Dr. Deering J. Roberts, of Tennessee, chairman, and Dr. Franzoni, District of Columbia, secretary, listened to papers by Dr. Leffmann, of Pennsylvania, and C. H. Von Klein, of Ohio.

The fifth Section, Dr. J. J. Chisolm, of Baltimore, chairman, heard papers by Drs. Keyser, of Pennsylvania; Risley, of Pennsylvania; Williams, of Ohio; and Seiler, of Pennsylvania.

Papers by Drs. Woodbury (Pennsylvania), Duncan (Missouri), and Brown (New York) were read before the sixth Section (Diseases of Children), of which Dr. William Lee, of Baltimore, is chairman, and Dr. G. N. Acker, of Washington, secretary.

The Section on Oral and Dental Surgery, Dr. T. W. Brophy, of Chicago, chairman, and Dr. John S. Marshall, of Chicago, secretary, heard a paper by Dr. Jacob H. Williams, of Boston, and adjourned.

RECEPTION AT THE WHITE HOUSE.

In the evening the Association was received by the President of the country at the White House. The arrangements were as elaborate as for any official reception of the winter. The suite of state apartments on the ground floor was open and decorated, and, in addition, almost all of the rooms of the second floor were thrown open to the guests. The Marine band was stationed in the vestibule, and at half-past eight struck the first chords of "Hail to the Chief" as the receiving party descended the stairway and entered the blue parlor. In addition to the thousand members of the Association in the city, many of them accompanied by their wives, many government officials and others were present by invitation of the President. Secretaries Frelinghuysen, Lincoln, and Chandler, Postmaster-General Gresham, Attorney-General Brewster, and Secretary Teller were in the blue parlor back of the receiving party.

Upon leaving the White House the members, accompanied by their families, repaired to the residence of Mrs. L. Z. Leiter, corner of P Street and Connecticut Avenue, where a very handsome reception was given them. This reception lasted until after midnight.

Second Day's Proceedings.

The American Medical Association reassembled Wednesday, June 7th, at the previous place of meeting at ten o'clock A. M., and prayer was offered by Rev. W. A. Bartlett, D. D.

DEATH OF PROFESSOR G

The President announced in a few suitab only the death of Prof. S. D. Gross, which took place Philadelphia the previous afternoon. Dr. Gross was formerly President of the Association, and his name evoked some eulogistic remarks.

A committee, consisting of Drs. Austin Flint and L. A. Sayre, New York; Drs. Packard, Pennsylvania; F. H. Hamilton, New York; Moses Gunn, Chicago; W. T. Briggs, Tennessee; and I. M. Hayes, Pennsylvania, was appointed to draft resolutions of respect to the memory of the deceased.

APPOINTMENT OF COMMITTEES.

The committee of seven to which was referred the President's address was named, as follows: Drs. N. S. Davis, W. W. Dawson, W. T. Briggs, D. W. Stormont, T. F. Prewitt, J. L. Cabell, and H. B. Ransom.

It having been suggested that the next International Medical Congress — that of 1887 — ought to be held in the United States, the following gentlemen were appointed a Committee on Invitation: Drs. J. S. Billings, Washington; L. A. Sayre, New York; R. H. Fitz, Boston; I. Minis Hays, Philadelphia; Henry F. Campbell, Georgia.

The following Committee on Nominations was appointed: Jerome Cochrane, Alabama; P. O. Hooper, Arkansas; J. W. H. Lovejoy, District of Columbia; H. Galloway, Dakota; Jesse Harris, Colorado; G. L. Porter, Connecticut; W. Marshall, Delaware; F. W. Hatch, Jr., California; E. P. Cook, Illinois; T. B. Harvey, Indiana; H. C. Huntsman, Iowa; F. T. Dickman, Kansas; W. H. Wathen, Kentucky; T. G. Richardson, Louisiana; F. C. Thayer, Maine; J. S. Lynch, Maryland; B. A. Duncan, Mississippi; D. Leasure, Minnesota; Charles A. Savory, Massachusetts; N. F. Essigs, Missouri; C. J. O. Hagner, North Carolina; J. W. Parsons, New Hampshire; H. F. Lester, Michigan; S. F. Merser, Nebraska; J. W. S. Gouley, New York; J. Parish, New Jersey; W. M. Beach, Ohio; J. B. Murdock, Pennsylvania; J. H. Eldridge, Rhode Island; W. Huger, South Carolina; J. H. Pope, Texas; Duncan Err, Tennessee; Alexander Harris, Virginia; H. D. Holton, Vermont; George Beard, West Virginia; William Fox, Wisconsin; J. R. Smith, United States Army; N. L. Bates, United States Navy; Walter Wyman, United States Marine Hospital Service.

MEDICAL AND SANITARY SERVICE ON PASSENGER VESSELS.

Dr. A. N. Bell, chairman of the committee appointed upon the resolution for securing more competent medical and sanitary service on board trans-oceanic passenger vessels, submitted a report. He stated that after due consideration a bill was prepared and placed in the hands of Hon. H. W. Slocum, who had introduced it in the House, and it had been referred to the Committee on Commerce. The bill To Regulate the Carriage of Passengers by Sea provides that in all such vessels two compartments shall be provided exclusively to be devoted to hospital uses, one for men, and one for women. It requires the employment of a medical practitioner, and when the number of passen-

[illegible] ndred he is to have an assistant. proved, the [illegible] report to the captain such regulations and [illegible] carried out.

[illegible] report of Dr. Bell elicited a discussion which was participated in by Dr. Kaiser, of Philadelphia, Dr. Irwin, of New York, and Dr. Jones, of Pennsylvania. Dr. Kaiser thought that the bill was a good one, but it did not go far enough, as it should require the surgeon of the vessel to report directly to the United States government, and not to the captain of the vessel. Dr. Irwin said that owing to the fact that the bill allowed the surgeons to be appointed by the company, and to be under their control, it was impracticable. He favored the plan of making the surgeon independent of the company, and in all sanitary matters subject only to the laws of the United States. Dr. Jones said that from his position as a government medical inspector he had never found that captains of our vessels interfered with sanitary regulations, or that the hospitals of those vessels were occupied with rope and waste matter. The report of the committee was accepted, and the committee continued.

A resolution urging upon Congress immediate action in the matter was adopted.

THE BACILLUS TUBERCULOSIS AND THE GERM THEORY.

Dr. J. V. Shoemaker, chairman of the Section on the Practice of Medicine, read his Report, treating especially of the Bacillus Tuberculosis and the Germ Theory of Disease. After a few preliminary remarks in regard to the difficulty of his subject in consequence of the new theories constantly advanced, he said that in the field of pathology and pathological research the study of the infinitesimal has attracted great attention; and of the subjects prominently brought to the attention of the profession, and exciting more universal interest than any other, is the bacillus of tuberculosis and its contagious character. The causal relation of the bacillus to the disease was still an open question. Typhoid fever, yellow fever, and cholera were considered in their relation to the germ theory. Trichinosis was touched upon, and the reader defended American pork against the aspersions cast upon it by European governments, claiming that trichinosis with us is a very rare disease in comparison with its frequent occurrence in Europe. In conclusion Dr. Shoemaker referred to the tendency manifested on the part of specialists to form cliques and separate associations, and to exclude the rest of the profession from their deliberations, which the speaker characterized as an attempt to form an aristocracy in the most democratic of professions. Outside organizations on special subjects, said the speaker, will detract from the interest and advantages of our meetings, and the younger members, neglecting the general subject of medicine, dazzled by the apparent brilliancy of a select few, will wander forth to ultimately destroy their own usefulness.

These remarks were loudly applauded.

Dr. T. A. Reamy, of Ohio, chairman of the Section on Obstetrics, read instead of a Report a paper upon the Operations for Laceration of the Cervix Uteri.

Drs. Buford and Stevens, representatives of the Canadian Medical Association, were invited to seats on the platform.

An invitation was read from the managers of the New Orleans Cotton Exposition for the Association to hold its next meeting in one of the rooms of the Exposition Building.

LEGISLATION RELATING TO VIVISECTION.

Dr. Henry Smith, of Philadelphia, offered a resolution opposing legislation restricting the practice of investigation in medical science by experiments on animals, and asking the appointment of a standing committee for this purpose.

Dr. Dalton said that the proposed legislation was aimed at vivisection and originated with the Anti-vivisection Society. It would prevent a professor from showing his class the process of digestion, or the circulation of blood in a frog's foot. The medical profession would coöperate with the society in preventing needless cruelty. The resolution was referred to the following committee: Drs. H. C. Wood, William Pepper, James Tyson, of Pennsylvania; Christopher Johnson, Maryland; J. C. Dalton, Austin Flint, Jr., of New York, and J. S. Billings, United States Army.

MEDICAL COLLEGES.

Dr. Atwood, of St. Louis, offered a resolution, objecting to the general advertising of medical colleges as tending to increase the number of scholars and lower the standard.

Dr. Benjamin, of Maryland, followed with an additional resolution, urging upon all medical colleges the necessity of elevating the standard of education, at least so far as to require a preliminary examination, a three years' course, a registry of attendance and practical demonstrations of diagnostic skill.

Debate on the resolution being agreed to, **Dr. Henry**, of New York, expressed his emphatic disapproval of the manner in which the medical colleges were disgracing the profession on account of the incompetent doctors which they graduated. This remark was greeted with applause and a few hisses. Dr. Henry replied warmly that there was no use in hissing, for he knew that those who hissed had private axes to grind. The resolution of Dr. Benjamin was finally adopted, and the Association adjourned shortly after one o'clock until ten the next day.

MEETING OF SECTIONS.

During the afternoon the various Sections met in the church, Medical Society Hall, and Rifles' Armory. The Section of Surgery and Anatomy met at the latter place, a large attendance being present. A resolution of respect to the memory of the late Dr. Gross, of Philadelphia, and highly eulogistic of his learning and skill, was reported by a committee consisting of Drs. J. M. Keller, chairman; Lewis A. Sayre, Austin Flint, Jr., and R. A. Kinlock, and was unanimously adopted. A paper on Railroad Injuries of the Extremities of the Human Body was read by Dr. T. R. Varick, of New Jersey. An address was delivered on Spontaneous Fracture of Calculi by Dr. Gouley, of New York. The discussion on this paper was participated in by Drs. J. Ford Thompson, of Washington; Hutchinson, of Brooklyn; Sayre, of New York; Prewitt, of St. Louis; Pollock, of Pennsylvania; Dawson, of Ohio; and others. Papers by Dr. C. A. Wheaton, of Minnesota; Dr. Joseph Ransohoff, of Ohio; and Dr. A. Pearce Gould, F. R. C. S., were read by titles only, after which the Section adjourned.

The Section on the Practice of Medicine listened to a paper entitled A Contribution to the Clinical Study of Epilepsy, by Prof. William Pepper, of Pennsylvania, which was discussed by Dr. Eugene Grissom, of North Carolina, and others. Dr. Flint also read a paper, but the programme which had been prepared could not be followed for want of time. The Section on Children's Diseases heard a paper by Dr. J. W. Brown, of New York, on Diphtheria, and papers by Dr. Atlee, of Pennsylvania, and others. The Section on Obstetrics heard papers by Dr. Theophilus Parvin, of Pennsylvania, Dr. A. Reeves Jackson, of Illinois, Dr. William H. Taylor, of Ohio, and others. Dr. Engelman, of Missouri, and Dr. Campbell, of Georgia, participated among others in the discussion. Dr. B. N. Towle, of Massachusetts, read a paper before the Section of State Medicine. Papers were read before the Section of Ophthalmology, Otology, and Laryngology, by Drs. Fulton, of Minnesota, Rankin, Little, and Turnbull, of Pennsylvania, and others. The Section on Aural and Dental Surgery heard papers by Dr. Edward C. Briggs, of Massachusetts, and Dr. A. W. Harlan, of Illinois.

RECEPTION AND BANQUET.

In the evening the delegates were given a reception and banquet by the Medical Association of the District of Columbia at the armory of the National Rifles, on G Street, between Ninth and Tenth Streets northwest. At least two thousand persons, delegates to the National Convention and their wives, were present. Drs. A. Y. P. Garnett, chairman of the Committee of Arrangements, and Dr. D. C. Patterson, were in charge of the entertainment. Music was furnished by the Marine band, and dancing was kept up until about midnight. The floor committee consisted of Drs. S. S. Adams, McArdle, L. L. Friedrich, Clarke, Patterson, G. S. Magruder, H. D. Frye, and Frank Hyatt.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

S. J. MIXTER, M. D., SECRETARY.

March 5, 1884. Dr. C. B. Porter reported a case of

EXCISION OF A PORTION OF INTESTINE, INCLUDING PART OF THE ILEO-CÆCAL VALVE FOR THE CURE OF FÆCAL FISTULA IN RIGHT GROIN.[1]

The reader showed several dried specimens, illustrating the anatomy of the parts involved and the portion of intestine that had been removed.

Dr. Chadwick said that he had never excised a portion of the intestine, but had had a case of tear during ovariotomy. The edges were brought together without attempting to bring the serous surfaces in apposition. Union did not take place. The possibility of washing out the intestine above and below the seat of operation in these cases, by means of a long flexible tube, was also spoken of.

In answer to a question asked by Dr. Harrington, Dr. Porter said that his treatment of abdominal wounds in the future would, perhaps, be somewhat influenced by his success in this case. In cases of pistol-shot wounds, and some other penetrating wounds where there was no certainty of escape of fæces into the abdominal cavity, it would be much better to wait until some symptoms of such a condramps and pain in before opening the abdomen. rain as well

Dr. Mixter said that this was the first case [illegible] only ord where it had been stated that the ileo-cæcal valve had been excised. The difficulty experienced in uniting the large and small intestine in this case was similar to that found in uniting the stomach and duodenum after excision of the pylorus. On looking up the literature of the subject, one is struck by the fact that in almost all the cases where death has followed the operation the wound in the intestine has been found on autopsy to be thoroughly united by plastic lymph even where the patient has died from shock a few hours after the operation. Fatal results seem to be due principally to shock, which is, of course, especially to be feared in cases of long-neglected strangulation and gangrene, or else due to septic processes started by escape of fæcal matter at the time of operation into the abdominal cavity. If the operation has been performed antiseptically, and the cut ends of the intestine carefully united in the proper manner, a good result may be expected.

A general discussion on the liability of abdominal hernia as a result of laparotomy followed.

In reply to Dr. Chadwick, Dr. Greene stated that he had seen several cases, seven or eight, where this condition had resulted. These herniæ were very difficult to keep in place, the best apparatus being a well-fitted abdominal belt with firm padding. Good support should be ordered for some time after operation.

Dr. Cheever spoke of the use of silver wire in the reported case in uniting the edges of the abdominal ring. In many cases silver wire is retained and causes no trouble, but in others it is a constant source of irritation until it is discharged. The latter seems to be most often the case when it has been used in a situation where it is subjected to pressure, or to constant movement.

Dr. Douglas Graham read the following extracts from a letter received from a patient who is afflicted with

BRITTLE BONES.

"I will now try to tell you what I can about my numerous accidents. The whole number of breaks is eighteen. I can remember fourteen of them. Mother thinks the first was the left arm at the elbow, caused by stumbling against the stove zinc when I was eighteen months of age. Then occurred a few breakages about the location of which we are uncertain. After these came a fall from a chair, breaking my right collarbone, which I remember very well, although then hardly three years old. At four years of age stepped backward from a door-step, breaking my left leg between the knee and ankle. Before I was five, fell on the carpet and broke right elbow. A few months afterwards broke right elbow again. At eight had broken each arm again at the elbow, one of these caused by a fall from a swing, and the other at school. As soon as possible after these breaks I slipped on a wet plank and broke right leg between knee and ankle. Before this was well I tried to walk a little while mother was out and broke the same leg again at the same place. When a little past nine years of age I fell on a stone sidewalk and broke the right elbow, or rather the ends of both bones about one inch below the joint, dislocating them, and injuring the shoulder so that I can still turn my arm with the point of my

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[1] See page 457 of this number of the Journal.

[illegible] was not set, but makes a useful proved, the wo[illegible] and deje[illegible] [illegible]d no more accidents, except a sprain or two, been [illegible] until I was thirteen, when a little dog ran against me and then I fell on the pavement and broke my left collar-bone and some other bone about the shoulder. At fourteen broke one of the bones between the elbow and wrist. At eighteen fell through a hole in the sidewalk and broke the point of right elbow, and this made quite an improvement in the looks of it. At eighteen a mischievous horse chased me. I ran, and on reaching the plank walk stepped so quickly that my left ankle was broken through the joint. That was the worst break I ever had, and I was lame a long time after it.

"These are all the accidents I can remember. Mother kept an account of the number. The summing up is: —

"The right arm, broken nine times; the left arm, twice; left leg, three times; right leg, twice; right collar-bone, once; left, once. Total, eighteen.

"I used to be extremely lame and suffer very much on going to school, especially in winter when the walking was rough by reason of ice, or any inequality of surface, and any slight twist or wrench of my limbs would cause extreme pain. Since I have attained my growth I have been much better, and I have met with no accident for fourteen or fifteen years, except while in Boston I sat down before I was quite ready.

"It may be of interest to you to know that my father broke his bones fourteen times, a cousin of his twenty-one times, and the latter suffered from breaks after he was quite an old man. My father's paternal uncle was also a bone breaker."

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NEW YORK ACADEMY OF MEDICINE.

AT a stated meeting of the Academy held Thursday evening, May 1st, DR. J. G. ADAMS read a Memoir of E. L. Beagle, M. D., after which DR. MARY PUTNAM JACOBI read a paper entitled

SOME CONSIDERATIONS ON ENDOMETRITIS.

She started out with the proposition that the endometrium was the essential part of the utero-ovarian system. The two cycles, the greater one of pregnancy, and the lesser one of menstruation, peculiar to this germinal membrane, were, she claimed, completely homologous, and endometritis always had its origin in subinvolution following the one or the other of these cycles. Parenchymatous metritis, again, always depended on disease of the mucous membrane, while nearly all utero-ovarian disorders could be traced to the same origin. The ultimate aim of all treatment in this class of affections was, therefore, the restoration to its integrity of the menstrual cycle, and for both the success and the safety of the measures employed it was essential that the rhythmical character of this process should be taken into consideration.

In view of these considerations a slight uterine catarrh became a matter of great significance. A diseased condition was not to be studied as an isolated fact, but in relation to its origin, connections, and possible results; and it was because the tissues of the highest function were always the first to become affected in any pathological process that endometritis was the original factor in utero-ovarian disease, and that it assumed such grave importance. Dr. Jacobi then advanced the hypothesis that at the time of menstruation the accumulation of blood in the periuterine and ovarian plexus of veins caused new growth in the lining mucous membrane of the uterus, and that this development of the endometrium continued (unless pregnancy occurred and the greater changes peculiar to its cycle resulted) until the new growth was arrested by pressure, which finally resulted in the rupture of vessels giving rise to the menstrual hæmorrhage. The further growth of the venous plexus was also arrested by pressure. The true cause of menstruation on this theory was, then, the emptying of a vascular reservoir with the development of new material. There was thus a successive growth of the endometrium exactly similar to that of the ovarian cortex, and these two parts of the utero-ovarian system were physiologically linked together in the closest possible manner. It was extremely rare to have ovarian disease without preceding or accompanying endometritis, though the latter was not always associated with ovaritis. There were three essentials for normal menstrual hæmorrhage, namely, (1) the complete emptying of the venous reservoir; (2) prompt evacuation of the uterine vessels; (3) no remaining distention of veins. If the process was not completely accomplished the membrane would become thickened when the next cycle of growth occurred, on account of the venous hyperæmia still remaining from the preceding cycle. Consequently there would be a successive development of abnormal tissue, and the result of this would be chronic endometritis of catarrhal, vegetative, or other character, with its pain in the back and hips and other characteristic symptoms dependent on the condition of the ovario-uterine nerves. Many of the symptoms were those common also to pregnancy, such as nausea (which was never met with when the cervix alone was affected), vasomotor derangements, headache, and cerebral disturbances. Such symptoms were also observed in connection with cases of central hysteria where no pelvic lesions could be discovered, but it was probable that in these instances there had been a temporary endometritis present. The following symptoms were considered as pathognomonic signs of endometritis: (1) pain resulting from the introduction of a probe into the uterine cavity; (2) hyperæmia as indicated by the hæmorrhage excited by the passage of the probe, and (3) tenderness of the fundus uteri when pressure was made upon it through the abdominal walls. Dr. Jacobi denied that there was such a thing as ovarian dysmenorrhœa. Whenever there was pain during menstruation in cases with ovaritis it was uterine and not ovarian. The characteristic of pain from ovarian disease was that its maximum intensity was reached during the premenstrual week, and that it was relieved when the flow came on.

One of the serious effects of endometritis was periuterine inflammation, and on account of the tendency for this to occur it was of paramount importance in the treatment that the rhythmic character of the menstrual process should be kept in view. The limits of danger, she believed, were insufficiently defined in the minds of the profession. After the close of the first week after the flow ceased the danger of setting up periuterine inflammation by making applications to the uterine cavity commenced, and it was therefore unsafe to practice such treatment for two weeks before the beginning of menstruation.

Another important effect of endometritis was the production of uterine flexions. This was due primarily to the softening of the uterine stem in consequence of the inflammatory process. If the latter was confined to the cervix alone, no such result would follow; but if it extended to the cavity of the uterus there was always danger of such accidents. The production of uterine flexion was then illustrated in the case of a girl suffering from chloro-anæmia. There was, first of all, low arterial tension, and after a time, as a result of this, leucorrhœa (due to cervical catarrh). Finally, after some years, perhaps, endometritis ensued; the fact of the extension of the trouble above the cervix being first indicated by the commencement of pelvic pains. Then, and not till then, would flexion of the uterus be noticed, unless it was one of those exceptional cases in which the flexion was congenital. The uterus was enmeshed in a fibro-muscular structure similar in character to its own tissue, and of which, indeed, its parenchyma was only a more condensed portion. Now the characteristic tendency of such fibro-muscular tissue was to contract, and hence when the uterine stem became softened in consequence of the presence of endometritis the contraction of the round ligaments would naturally produce anteflexion. Retroflexion, on the other hand, was a paretic phenomenon, and the essential prerequisite for its occurrence was relaxation of the round ligaments. In retroversion there was relaxation of the utero-sacral ligaments also, and in complete prolapsus there was a total collapse of all the ligaments. A permanent cure for displacements was not to be expected, therefore, from simply holding the uterus in position by means of a pessary, except in very rare instances where the condition has been merely temporary.

The treatment of endometritis naturally resolved itself into three parts. In the first place, whatever would be of service in raising the arterial tension throughout the body, and especially in the pelvis, would do good, and among the agencies recommended were hydro-therapeutics, counter-irritation by means of sinapisms, etc., faradization, general gymnastics, and the health lift. Some such general measures were indispensable in all cases. In the second place, local treatment of the endocervitis existing in connection with the endometritis was advised. The dissipation of the hyperæmia of the cervix might, perhaps, affect the latter condition so favorably that no applications to the cavity of the uterus would be required. For this purpose iodine was often of great service, on account of its stimulating effect upon the pelvic circulation. In many cases, however, it was dangerous on account of this, and, as a general rule, in proportion to the sluggishness of the circulation would it be found efficient. In the third place, if, after a time no effect was produced upon the endometritis by the treatment of the cervix alone, direct local applications were to be made to the cavity of the uterus. The utility of this procedure and the character of the agents to be used for the purpose had excited much violent controversy, and different authorities had expressed widely different opinions. After recapitulating the advantages to be derived from such applications, and the dangers which were liable to result from them, Dr. Jacobi went on to say that it was necessary to define what was to be expected from th amps and pain in entering upon it. rain as well

In regard to the use of astringents she said only was impossible to expect any benefit from the application of such agents to the uterine vessels while in a state of growth, as indicated by the successive development of neoplasm. This was well illustrated in nævi, where the use of astringents was of no value. An application that was really of service would have the effect of destroying abnormal tissue, modifying the condition of the blood-vessels by reflex influence, and imparting a healthful impulse to the movement of growth, which would moderate its extent at the succeeding menstrual cycle. The time when neoplastic tissue could be most successfully destroyed by such applications was when it was at its lowest point of activity, and that was during the first week following menstruation. As before mentioned, two weeks before the occurrence of menstruation the danger of exciting peri-uterine inflammation commenced, and it was therefore important that the time for such applications should be limited exclusively to the week following the period. Another point of importance to observe was that the effect of one local application must have completely subsided before another one ought to be made. Such applications were always liable to cause a certain amount of irritation, which was analogous to that occasioned by scraping the periosteum in scrofulous subjects. Once in two months in some cases was as often as it was desirable to repeat them. In order to make the application satisfactorily it was sometimes necessary to dilate the canal by means of tents, and this was attended by more danger when ovaritis than when parametritis was present. Every intra-uterine application was to be regarded as a surgical operation which was only to be performed at the house of the patient, who should remain in bed for the rest of the day, and if a tent had been used, for three days afterward. Having expressed a preference, as a rule, for the use of the strong mineral acids, and particularly nitric and chromic acids, for the purpose, Dr. Jacobi stated that the proper effects of the treatment would be observed (1) in the diminution of leucorrhœa, (2) in the relief of the pains in the back and hips, and (3) in the less painful character of the next menstruation. Intra-uterine applications were never to be made unless the patient suffered from some form of dysmenorrhœa. In conclusion, she said that this procedure was confessedly attended with certain disadvantages and dangers, and that the reason why she advocated it was because results could be achieved by this method which were unattainable by any other means.

DR. B. F. DAWSON remarked that the position taken by Dr. Jacobi in regard to so-called ovarian dysmenorrhœa, that the pain was always premenstrual and was relieved when the flow commenced, would seem to be a sound one on theoretical grounds; but at the same time he had undoubtedly seen cases in which no trouble of any kind whatever except ovarian disease could be detected, and yet in which the pain continued throughout the whole menstrual period.

DR. PAUL F. MUNDÉ thought that as a rule in endometritis (which, he agreed with Dr. Jacobi, was due to subinvolution, either menstrual or puerperal), the external os was widely gaping, and that the internal os was also considerably distended. This he regarded as one of the signs of endometritis as well as those which had been mentioned. He considered it of great im-

[illegible] treatment should be commenced at [illegible] as possible (just as soon as the condi[illegible]as recognized), since the longer the trouble continued the more difficult it was to cure, if it could be cured at all. When pelvic cellulitis and peritonitis were present, it was necessary to remove the uterine catarrh on which they depended: but, at the same time, it was not to be forgotten that the use of intra-uterine applications was liable to set up additional inflammatory trouble. He could not agree with the author of the paper that parametritis was principally dependent on trouble at the fundus uteri, as his experience had indicated that it was more frequently associated with disease of the cervix, which he believed was on account of the closer lymphatic connection with the latter. The same, he had found, was true in regard to ovaritis, and hence he was always afraid to treat disease of the cervix if the ovaries were affected. Having spoken of erosion of the external os as another sign of chronic endometritis which Dr. Jacobi had omitted to mention, and stated that fundal tenderness (through the abdominal walls) was also an indication of areolar hyperplasia, as well as endometritis, he said that he thought the author's theory of uterine flexions was an ingenious and plausible one. In regard to the treatment of endometritis (which he considered in the majority of cases was merely palliative), he thought the applications must be made from the fundus downward, and not the reverse, since if they were made first to the cervix the discharge from above would be a continual source of fresh irritation. He agreed with Dr. Jacobi that it was the stronger remedies that were of the greatest service, and there was one means that had not been mentioned which he often found of much benefit, particularly in cases attended with menorrhagia, namely, the use of the dull curette. After employing it he applied a caustic to the mucous membrane. He thought it was not necessary to dilate the canal, as a rule, and this was to be especially avoided if there were any parametritis present.

Dr. W. Gill Wylie referred to the not infrequent presence of salpingitis as a complication of endometritis, which rendered it incurable. The influence of specific disease, he thought, was also to be taken into consideration, and this was very apt to be associated with salpingitis. In the treatment he spoke of the advantage of rest. During the acute stage local treatment was more or less dangerous, and he thought it was often best to wait six months, in the meanwhile employing preparatory treatment, which he thought was of great importance. Applications to the vagina were very useful, and for this purpose he preferred tampons of pure glycerine, or of glycerine and alum. He thought that dilatation of the uterine canal was absolutely necessary in a great many cases, and for this purpose he employed Sims's dilator. He had given up the use of tents long ago, except in very rare instances. In making intra-uterine applications it was usually best to place a tube in the cervix first, so that the agent employed would not be rubbed off the applicator before it reached the fundus, the direct medication of which he regarded as a very important point. If it was necessary to use tents he had them prepared with a large percentage of iodoform, so as to render them antiseptic, and he said he also used iodoform in connection with all vaginal tampons.

Dr. Mary Putnam Jacobi thought that a very tight condition of the internal os was very common. She said she had not referred in her paper to salpingitis and gonorrheal trouble, because she was speaking only of homologous disease, and not of heterologous, which depended on infection, and was altogether a different matter. The prognosis in endometritis depended a good deal on the nature and general condition of the patient. In those with chlorotic tendency and imperfect development, and in those who from any cause had been reduced to a condition of exhaustion, it was much less favorable; but it was, unfortunately, too often the case that the treatment was exclusively local, instead of being directed to the improvement of the general system as well.

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PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

March 12, 1884.

Meeting called to order at eight o'clock. Dr. Edes being absent, on motion of **Dr. J. W. Farlow** Dr. E. T. Eastman was elected chairman *pro tem.* A summary of the records of the last meeting was given by the Secretary, which was approved.

The first paper of the evening was by **Dr. G. Liebmann**, entitled

SPINAL IRRITATION AND NEURASTHENIA.[1]

Dr. S. G. Webber in opening the discussion said that the difference between neurasthenia and spinal irritation is not so definite as the author states in the paper to which we have listened. The two diseases depend upon similar conditions. The distinctions made in the paper are purely arbitrary. The two affections run into each other. That state or condition which the author calls "false spinal irritation," depending on irritation of the pelvic organs, cannot be too constantly kept in mind. We do not always realize how much disturbance may arise from this cause, not only in women but also in men. Dr. Webber is far from satisfied with the usual explanations of spinal irritation, and does not believe that anæmia or hyperæmia of the cord is a necessary or universal condition. In many cases there may be at times excess and at other times deficiency of blood supply. In most patients it is doubtful if the symptoms depend on disturbances of the circulation. There is probably an exhaustion of the nerve cells, often in the brain, sometimes in the cord or in the sympathetic system. Their reactions are irregular, and disturbances of function and secretion result. Heredity exerts a grave influence in neurasthenia and spinal irritation, and is an important ætiological factor in these diseases. In such cases the parents, frequently one, often both, have not strong and vigorous constitutions. The scenes and influences of childhood are sometimes at fault, and the neurotic condition may be developed where there is no hereditary tendency. Late hours are not beneficial to children, but predispose to the various neuroses. We do not see children romping and playing nowadays as was the habit years ago, but they go to evening parties, sit up late, and eat stimulating food at unseasonable hours. Too warm and ill-ventilated rooms are also doubtless predisposing factors in the production of nervous diseases. Our school-rooms are often kept at a temperature of 72° F. to 75° F. Children are also sent to school at too early an age, and are thus exposed to unfavorable influences at a perilous period in their nervous development, and frequently become the subjects of neurotic derangements.

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[1] See page 460 of this number of the Journal.

DR. J. J. PUTNAM said that he did not believe that there was any clinical or pathological advantage in trying to draw a line between neurasthenia and "spinal irritation," so called.

The former term, although vague, is a convenient one, and does not, like the latter, prejudge the pathological diagnosis. Our knowledge of the functions of the spinal cord does not justify us in referring the majority of the symptoms of so-called "spinal irritation" to disease of that organ. On the contrary, the complicated cerebral functions, including those which have to do with the animal and vegetative processes, probably are affected in all the cases of this class, and this affection furnishes their predominating characteristics. It is on these functions that the evil influences transmitted by heredity mainly fall.

At the same time it is not to be denied that the ganglia of the spinal cord and sympathetic may share in the disorder. Dr. Putnam agreed with the reader and with Dr. Webber that the tendency has been to pass slightingly over the nervous symptoms to which diseases of the male genital organs may give rise, although it is true that congenital instability of the central nervous system is usually needed to furnish the material for these symptoms.

DR. DOUGLASS GRAHAM said he thought we were inclined to be myopic in limiting our observation to reflex neurasthenia arising from irritation of the sexual organs alone, even if this were one of the most frequent causes. Pain or disturbance in any organ, especially below the diaphragm, he said, gave rise to reflex neurasthenia. Indeed, neurasthenia forms the background to the picture of all diseases and injuries whether of an organic or functional nature. The simplest form of neurasthenia is the natural and not unpleasant fatigue which results from an active and satisfactory day's work, from which we recover by food and sleep. After this comes the fatigue from which we do not recuperate as usual, the fatigue of being overworked, or in common parlance "played out," when rest and change are of the first importance. Thirdly, there are the continually wearied, wakeful, nervous business or professional men with numerous and varying ailments who have learned by experience that "the labor they delight in physics pain," and who find more relief in work than in rest. Many physicians, doubtless, find themselves in this class, especially at this time of year. Then there are the neurasthenics who are such because they have no object in life, who are spoiled children with plenty to live on and usually more, who can do what they please and cannot do what they do not please, who take delight in telling of all the eminent medical authorities whose care they have been under without benefit, and who are never happier than when they can be regarded as interesting, by trying some method of treatment that is novel to them, so that they may finally have the satisfaction of saying that it did them no good. A classification of neurasthenia based on causation might be indefinite.

DR. G. L. WALTON considered the brain the chief if not the only sufferer in the cases under consideration. Certainly such symptoms as cramps and pain in the back and loins could arise from the brain as well as from the cord, while the mental symptoms could only arise from the brain. Whether the spinal centres were implicated or not, enough had been said to show the non-existence of a distinct class of cases to be gathered under the term spinal irritation. In this case further division into pseudo-spinal irritation was absurd. He thought that all we could say by way of pathology at present was that there is a large number of nervous patients whose symptoms fall neither under hysteria nor hypochondria, whom we may name neurasthenical, locating the functional disturbance in the central nerve cells. It remained to inquire if the sub-classification proposed would prove of clinical value. The impression conveyed by the paper was that the practitioner had only to ask himself whether the patient before him suffered from neurasthenia, spinal irritation, or pseudo-spinal irritation, and to regulate his treatment accordingly. In point of fact all these cases had to be treated as individuals, one needing rest, another exercise, and so on, any attempt to treat in classes being destined to prove a failure.

DR. MORTON PRINCE spoke as follows: There is one point which has been raised here on which I wish to say a few words, and that is the question of the cerebral origin of the symptoms of spinal irritation. I cannot agree with Dr. Putnam as to the cerebral origin of these symptoms. This view has lately been advanced with considerable force in an article by Dr. Walton. That some of the symptoms met with in spinal irritation, or neurasthenia (as you may choose to term it), such as vertigo, melancholia, anorexia, pains about the scalp, mental weakness and irritability, and many symptoms distinctly hysterical, are cerebral in their nature every one admits. About such symptoms there is no question. But that there is another larger group of symptoms which are of spinal origin I believe there is also no question. Such symptoms are numbness and pricking in different parts of the body, pains over the spine, neuralgic pains of all kinds. In some cases of nervous prostration the cerebral symptoms may be so prominent as to predominate. Such cases have been denominated *cerebrasthenia* in distinction from others where the cord and nerves are principally implicated.

When a functional nervous disease is met with the symptoms presented are individually such as are caused by organic disease of the same segment, the difference being due not to the essential character of the symptoms, but to the method of grouping, the absence of some symptoms and presence of others, the onset, course, severity, etc. The symptoms met with in functional disease of the cord are such as occur in organic disease of the same part, and the symptoms observed in functional disease of the brain are such as occur in organic disease of the brain. In other words, the symptoms caused by functional or organic changes in a part are conditioned by the physiological functions of the part. For example, we get atrophy with the electrical reaction of degeneration in the muscles of the limbs from organic disease of the anterior cornua of the spinal cord and not from disease of the brain, and conversely we get aphasia from disease of the brain and not from disease of the cord. Now the group of symptoms met with in pure spinal irritation (?) are such as are met with in organic disease of the cord and not of the brain; and therefore there is every reason to believe that their origin is spinal and not cerebral, and especially is this the case when in severe cases the symptoms are so similar to, nay, almost identical with, those produced by inflammation of the cord and its membranes that it may fairly be questioned whether we have not to do with an organic and not a functional disease. I cannot help thinking that some cases which have been described as spinal irritation are in reality mild forms of inflammation.

I do not mean to say that some of these symptoms may not occur isolatedly in organic brain disease. That may happen with some symptoms, as, for example, anæsthesia and paralysis, which are common to both spinal and cerebral disease. But they do not occur in similar groups, and some symptoms are not present at all. In functional brain disease nearly every kind of symptom may be met with, but here the grouping is different, and it is a question whether some of the symptoms of functional brain disease, as hysteria, may not be dependent upon implication of the cord. In fact this is much more likely than that the fundamental symptoms called spinal irritation are due to cerebral disease.

As this is a practical and important question it may not be out of place here to refer to the argument advanced in the paper I have just mentioned. Pains in the back and sensitiveness over the spine are referred to irritability of the *cerebral* centres, because the centres for *feeling* are in the brain and not in the cord. A similar process of reasoning would as well explain the pains and tenderness complained of in sciatica, spinal meningitis, and myelitis by a disease of the brain.

In regard to the differentiation of spinal irritation from neurasthenia, Dr. Prince was glad to hear Drs. Webber and Putnam express doubts as to whether they could be regarded as distinct diseases. If we examine the descriptions of spinal hyperæmia, anæmia, irritation, and neurasthenia given in the text-books, it would be found impossible to form any clear and definite picture of each as distinct from the others. Erb, to be sure, had described neurasthenia as characterized by being more common in the male sex, while the symptoms exhibited were principally sexual and motor weakness, sensory disturbances being less prominent. Spinal irritation, on the other hand, he had practically limited to females, while the sensory disturbances were very prominent. Ross, in England, had followed Erb's description. In America, on the other hand, the speaker thought that it was the general experience of neurologists that neurasthenia was greatly more common in women, while the group of symptoms included under the name was identical with that described in Germany and England as spinal irritation. It did not seem, then, that there was sufficient grounds for differentiating two diseases.

It is possible that the disease could be occasioned by molecular changes in the spinal cord without having resort to the theories of anæmia or hyperæmia. Sigmund Mayer has made some investigations on the changes which physiologically occurred in normal nerves. His observations were made on the nerves of a large variety of animals and also of men, and showed that the peripheral nerves of vertebrates are not fixed structures, but are continually going through a process of degeneration, followed later by regeneration and a return to the normal condition. The changes observed were similar to those which take place in a nerve which has been divided or otherwise injured. These changes he believes to be constantly taking place, so that in every nerve may be found a number of fibres in this condition.

The thought naturally suggests itself whether these changes may not play some important part in the production of functional nervous diseases. Mayer suggests that this may be the case, and that those neuroses represented by transitory impairment of the sensory and motor functions are due to an increase in the normal number of degenerated fibres, and thinks that these changes are destined to become prominent factors in future neuro-pathology. If these results shall be confirmed by other observers, we have here a means of understanding how disturbances of sensation and motion such as are met with in neurasthenia may be caused by molecular changes alone, and this thought is reenforced by the fact, that while the anatomical changes which are said to occur in normal nerves are similar in kind to those observed in an injured nerve, differing only in degree, so many symptoms met with in spinal irritation (neurasthenia), such as formication, numbness, pain, muscular weakness, etc., are similar in *kind* to those caused by injury to a nerve, though they differ in degree, grouping, mode of onset, and persistency. If similar changes shall also be shown to take place in the central nervous structures, we shall have a complete theoretical picture of anatomical changes which may be at the bottom of neurasthenia.

The idea at present is merely speculative, but is interesting as suggesting a direction for future investigation.

(*To be concluded.*)

Recent Literature.

The Medical Register for New England. By Francis H. Brown, A. M., M. D. Boston: Cupples, Upham & Co. 1884.

Perhaps if it were known as the Medical Directory the object of this book would be more easily recognized; but it is very much more than a directory, it is a register not only of the regular physicians of New England, but of all sorts of information more or less remotely connected with the subject of medicine. It contains a list of Associations and Societies: Medical Schools and Kindred Institutions, Hospitals and Dispensaries, Benevolent and Charitable Asociations and Asylums, information in regard to Miscellaneous Matters, beside the Directory and Business Guide. The Directory contains an alphabetical list of the members of each State society, and also a local list in which the physicians of each town are given.

This list of subjects fails, however, to give a just idea of the valuable information which the book contains. The last edition was published in 1880. The labor and time spent in the preparation of the new edition, which contains increased material as well as the changes that have taken place during the four years, must have been enormous, and we trust a generous support at the hands of the profession will show the author that his labor of love is duly appreciated.

—The published report of an English benevolent society says: "Notwithstanding the large amount paid for medicine and medical attendance very few deaths occurred during the year."

Medical and Surgical Journal.

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THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION AT WASHINGTON.

The thirty-fifth annual meeting of the American Medical Association at Washington has been from many points of view a peculiarly successful one. About thirteen hundred delegates were in attendance, and a fair proportion of time was devoted to the transaction of business and to hearing and discussing papers. The work in the Sections was not all of equal merit. Some of the Sections, however, and notably those on the Practice of Medicine and on Obstetrics and Diseases of Women and Children, were prepared for with unusual care, and their programmes offered many interesting titles and strong names. Several of the papers read in these Sections were excellent. Unfortunately, the programmes were out of proportion to the time allowed, and several members who had taken much pains in their preparation, and came a long distance for the purpose, were unable, after all, to read. This was especially the case in the Section on the Practice of Medicine. Such sources of disappointment and dissatisfaction should be avoided if possible. It is, of course, not always easy to accomplish this, and it is quite as undesirable to have to cut short a profitable and animated discussion of a suggestive paper already read as it is to leave unread a paper on another subject. One tendency should certainly be summarily dealt with; we refer to the practice of reading a roll of previously-prepared manuscript, more or less germane to the subject in hand, instead of discussing the views set forth by the reader of the regular paper itself.

The subject of Ethics was not brought prominently forward, except in the address of the President of the Association, Dr. Austin Flint, his remarks being referred to a committee for consideration. As at the last meeting, delegates were required to sign an agreement to support the Code and the laws of the Association. We do not learn that any one felt persecuted, unless it may be some gentlemen in the State of New York. The difficulty about the Code seems to have narrowed itself down to a squabble between New York and the rest of the country. One loyal delegate from New York we thought justly aggrieved at being asked if he had signed with mental reservations, and apparently for no other reason than his coming from that State.

The President's views as to the reforms required by many American medical colleges were evidently not sufficiently advanced to satisfy a large and influential portion of his audience.

The appointment of a committee to invite the International Medical Congress of 1887 to meet in this country was a very suitable step, and we understand the chairman thinks it probable that the proposal will be favorably entertained.

The public collections, the agreeable excursions, and the generous hospitality of the city were thoroughly appreciated by the delegates and their families, and undoubtedly added much, as was to be expected, to the success of the occasion. For further details readers are referred to our Washington letter and to the reports of the meetings.

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THE THERAPEUTICS OF EARLY RISING.

The subject of early rising has a physiological and a therapeutical aspect.

It may be laid down as a general proposition, applicable to the great majority of men, women, and children in health, that the proverb "early to bed, early to rise," etc., embodies sound common sense, and is safe to follow, enabling those who conform to it to perform the greatest amount of work of which they are capable with economy of time, of eyesight, of nervous energy, and of the general health.

The tendency of modern civilization has been to lead people greatly to disregard nature's law (to which the inferior animals generally conform), whereby night is the time for rest, and day is the time for toil. This law is a result of natural selection, as pointed out by one of its great apostles. "An animal so constituted that waste and repair were balanced from moment to moment throughout the twenty-four hours would, other things equal, be overcome by an enemy or competitor that could evolve greater energy during the hours when light facilitates action at the expense of being less energetic during the hours of darkness and concealment."

Early rising is the proper sequel of early retiring, and when recommended as a hygienic rule it is with the presupposition that ample time — which with every individual is a fixed quantity — shall have been devoted to sleep.

The majority of laboring people, in accordance with the necessity in most adults for about eight hours' sleep a day, have wisely chosen the period between nine o'clock in the evening and early morning, and farmers who, retiring in the summer at dark, arise at daybreak, testify to the extraordinary salubrity of the morning air. The atmosphere then is cooler and more invigorating, more heavily charged with oxygen, than later in the day when rarefied by the heat of the sun. There is no time so favorable for exercise, as students well know who are in the habit of taking long walks or practicing gymnastics in the morning before breakfast. An hour spent in exercise at this time of day will fortify a student more than two hours of bodily training at midday, and this season should be chosen for physical rather than for mental exercises.

If sufficiency of sleep be necessary, excess of time spent in repose is enervating and harmful; it promotes languor of the circulation, and thus induces torpor and congestion of the viscera; it interferes with the energetic performance of the respiratory function, on which the due oxygenation of all the tissues depends; muscular tonicity and nerve nutrition are also enfeebled by prolonging the season of sleep.

From what has been above said it may be inferred that in pathological states characterized by deficient metabolism of nitrogenous waste elements, where, in common parlance, the biliary function is said to be deranged, early rising, with exercise in the open air, will be of powerful therapeutic efficacy. The blood is charged with the products of defective oxidation, the result of over-eating or over-work (or both combined), and all the symptoms of liver indigestion ensue. Here the best hygienic advice is that of old Dr. Abernethy, "An axe, a cord of wood, and five o'clock in the morning!" Under this regimen the "biliousness," with its attendant headaches, malaise, loss of appetite, etc., will often disappear as if by magic. If it is "the early bird" that catches "the worm," it is the early bird that can digest the worm. Dr. Abernethy's advice applies to many cases of simple dyspepsia, which will be more speedily and permanently benefited by early rising than by wine bitters and pepsine; it may also be indicated in gout and diabetes, which are diseases of mal-nutrition.

As for nervous disorders, those characterized by spasm are, as a rule, more amenable to this kind of hygiene than paretic diseases, a recumbent posture increasing spinal reflex activity. Epilepsy and hysteria have both been benefited by the establishment of correct habits of sleep and by early rising, and to a certain class of debilitated young men (with whom every physician has much experience) no counsel is more important than to rise as soon as the first sound sleep is over. As for cases characterized by exhaustion and loss of power (neurasthenia and the paretic diseases of the nervous system), long-continued rest is often the only treatment that does any good. The damaged nervous elements have lost the power of rapid recuperation under sleep, and early rising would, in such patients, be a cruelty if not an impossibility. Reserve force is lacking, and morning weariness is often overpowering. Other persons are neurasthenic from want of a proper hygienic education, and cannot be too much exhorted to curtail the hours devoted to enervating inaction. To such patients the effort, persisted in, of early "springing from the bed of sloth," and engaging in some energetic occupation, is a victory over their infirmity.

In anæmia and chlorosis a "morning air bath" (as Dr. Franklin styles it) is often more beneficial than a course of iron and arsenic.

The victim of insomnia must sometimes, perforce, lie abed in the morning; hours lost in vain attempts to go to sleep may be partially made up by prolonging the season of rest, and subsomnolent states are, as Dr. Crichton Browne observes, the next best thing to sleep. For the great majority, however, of people who are not bedridden a matinal walk is better than medicine.

LEPROSY IN THE HAWAIIAN ISLANDS.

The report of a recent suit for libel in Honolulu, brought by a Dr. Fitch, one of the Board of Health, against the proprietor of the *Saturday Press*, furnishes information of much interest and importance in relation to the present condition of leprosy in those islands, and explains why the disease still prevails so extensively in spite of the law of segregation. The editor of that journal had published an article exposing "the criminal mismanagement of leprosy in these islands by the Hawaiian Board of Health, of which body Mr. Gibson, the premier, and Dr. Fitch were the officials chiefly responsible."

During the trial Dr. Fitch, who was the principal witness of the prosecution, testified that leprosy is the last stage or form of syphilis, that its period of incubation is twenty-five days, that in most cases it is not contagious, and that in old persons it has passed the contagious period. Several witnesses for the defense testified that he had claimed to be able to cure leprosy, and it appeared that his diploma and professional antecedents were of doubtful character.

Among the physicians called to give evidence for the defense was Dr. Trousseau, a member of the examining board who send lepers to Molokai, who stated that he had been studying the disease in the islands for twenty years, and had sent some seven hundred lepers to the hospital. He believed it to be fully as contagious, if not more so, than syphilis, and that it was contracted by absorption or inoculation, by contact with the abraded portions of a person's body, by the lips in using a pipe, by the mouth in eating poi, or by sexual intercourse. He regarded anything but segregation as dangerous. He had never known an authentic case of cure. The period of incubation in his opinion was probably six or seven years, the proof being that no young children have it, although suckled by leprous mothers, the disease appearing after a lapse of about this number of years.

Dr. Emerson testified that he received his medical education in the Harvard Medical School and in New York. Had practiced in Honolulu between four and five years. Had had charge of the leper settlement at Molokai for the greater part of eighteen months. He believed that the disease was contagious in about the same degree as syphilis and under similar conditions. As a rule Hawaiians lack proper fear of leprosy. With regard to the period of incubation, it was his belief that five years was an average and considerably under the maximum. He had not known of a case of continuous improvement of five years, treated or untreated.

W. M. Gibson, Premier and President of the Board of Health, stated that he had been present with his majesty when lepers were discharged by order of the Board on Dr. Fitch's statement; that some forty or fifty were discharged from the branch leper hospital in one year, and about twenty from the leper settlement since Dr. Fitch's administration. That he had never known of lepers being discharged as cured during the administration of Dr. Emerson. He had allowed an article entitled Lepers Cured and Discharged to appear in the paper of which he is proprietor.

Several discharged lepers were then introduced and found to be in an active state of disease.

The following extracts from Mr. Dole's address to the jury reflects the feelings of a portion of the community there concerning the disease, and are commended to the attention of our own National Board of Health: —

> "This is a case in which the most important question before the Hawaiian nation is being tried on its merits. The community have from time to time become alarmed on the question of leprosy, and then the rush of business and other interests have driven it aside, and society with its pleasures and its cares has allowed itself to go to sleep in the face of the greatest danger that has ever threatened it. It is well that society should be awakened from this sleep, and I believe that this case of libel you have been so long considering, in which Dr. Fitch is the prosecuting witness and Mr. Thrum the defendant, will accomplish this.
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> "Leprosy is the worst known disease of the present and historic times. It has successfully defied medical skill. Physicians have not been able to say whence it comes or to explain its laws. It has always and everywhere been found to be incurable. It attacks all races and all classes; no rank in life is safe, adults and children are alike exposed to its ravages. Medical skill can make no limit, no assurance can be given from the lessons of experience against this most terrible, most loathsome, and most hopeless of all human diseases. But Dr. Fitch has come, like a new Columbus breaking an egg, to tell the people of this nation that leprosy is identical with syphilis, a disease which is remarkably amenable to medical treatment, and is undoubtedly curable. It is for discussing this theory of Dr. Fitch and criticising his statements and methods in applying it, that the defendant is charged with the crime of libel. The subject is one of vast interest to the whole community. Nearly all of the physicians of this country have been studying the disease of leprosy for years; they have not hesitated to expose themselves to its contagion, have patiently investigated its nature, trying to discover some clew that might lead them to some method of treatment which would conquer a disease which has hitherto been found unconquerable. All the physicians here agree, with one exception, and that one exception is Dr. Fitch, that leprosy is altogether distinct from syphilis. All the great medical authorities over the world, without exception, support this view. Upon this question depends the moral, social, and commercial future of the Hawaiian Islands. . . .
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> "Now the existing management of this matter of leprosy is more important to this commuity than any other question. It goes to the pocket of every taxpayer. It is a menace to property, to society, to health and life. It is the great public question, and Dr. Fitch is its principal exponent. The legislature and the government have given him great powers. He is the chief executive officer in the treatment of leprosy. He is an agent of the Board of Health, with the law and the police at his back. He has more power for good or ill than any other officer in the kingdom; and though his rank may be lower and his salary less than that of other officers, he holds to-day the most important office under the Hawaiian government, for on the proper exercise of the authority of his office depends the health, the wealth, and the future of the realm; and if he may not be held to a strict accountability, if his methods and professional conduct be not fair subjects of newspaper inquiry and condemnation, then there is no such thing as freedom of the press and free speech in the kingdom. We all know something about leprosy. . . . Life to the leper is worthless, and worse than worthless. He is loathsome to others, and most loathsome of all to himself. In the Middle Ages leprosy extensively prevailed, and segregation and nothing else has driven it into the corners of Europe. How is it here? I tell you, gentlemen, the government is playing with this disease. *When you see the king and the Board of Health, all laymen, going on a kind of picnic party to the Kakaako Hospital, taking with them one — only one — physician out of the three medical inspectors of lepers, examining the patients, having them stripped, and, upon the advice of that one physician with his unsupported theories, turning nine of them loose upon the community, and then writing the affair up in a newspaper*, I say it is worse than child's play. And they dare to do this when every medical man in the kingdom, except one, says that such action is dangerous to the public at large, — and that one is Dr. Fitch, the prosecuting witness in this case. . . . We have had medical testimony that leprosy is seen daily on our streets, is found in public places of resort, and among government employees. It is the clearly defined duty of Dr. Fitch to carry out the law of segregation. How has he done it? We find him with his two theories, that leprosy and syphilis are identical, and that leprosy in certain stages is not contagious, or is not contagious at all, as he says in his printed statements. If he confined his theories to private practice we might have less ground for noticing them. But to experiment with his theories at the risk of the whole community, and in defiance alike of medical testimony and public opinion, is an outrage. He admits that Mr. Sumner was discharged upon his recommendation. It was said that Sumner was to be isolated at a private house at Fisherman's Point. But he was not isolated at that place. He remained there a few days, and removed to a house in the heart of the city, near the Hawaiian Hotel; has been to Waikiki; is free, in fact, to go where he likes, and to associate with whom he likes. And there is the unfortunate young lady who, I believe, is a fine school teacher, who has been treated by Fitch for leprosy for more than a year. She has been allowed to carry on a large school of little children for all this time, children who have not the knowledge and discretion of adults in regard to this disease. Is not this almost like murder?"

In his charge to the jury the judge said that —

> "The importance of the office held by the prosecuting witness could not be overestimated. If, by any means, these islands should become a plague spot, the effect would be more important upon the future of the nation than the withdrawal of the reciprocity treaty. If the medical man in charge of all those supposed to be afflicted with leprosy should assert and believe that leprosy is not contagious, and succeed in producing a general acquiescence in this belief, the public fears would be lulled, and persons be less likely to be careful in keeping themselves from contagion. The injury which such a course of conduct might entail is untold. And the *Saturday Press* could not sustain its character as a leader or as an exponent of public opinion, or a guardian of the welfare of the country, if it did not expose the falsity of such an opinion, — that is, if leprosy is in fact contagious. So, also, if the medical superintendent and the agent of the health, who has by law almost unlimited powers, shall by his published reports to the legislature, or by his other printed articles or spoken words, induce a general belief that leprosy and syphilis are identical, the result would be that those who are living pure and moral lives would become careless as to the exposure of themselves or their children by mere contact with lepers, believing sexual intercourse, by which syphilis is commonly taken, to be the only way in which they could take leprosy, and keeping themselves free from that. So, if Dr. Fitch should persuade people generally that leprosy is curable, people would become indifferent, and say: 'I have the means of employing a physician; it matters not if I take leprosy. I can be cured.' It has been often stated that among people where leprosy is less feared it spreads with greater rapidity than where it is more feared. Now, you have heard the testimony of all the other physicians, except Dr. Fitch, and quoting from medical authorities all over the world, that leprosy is not identical with syphilis, that it is incurable, and that it is in a certain sense contagious; and if they have proved this to your satisfaction the defendant was justified in what he said of Dr. Fitch. Dr. Fitch has said that he believes in a policy of segregation of lepers. If he allows lepers to be discharged who, by the weight of testimony, are not cured, would this be adhering to a policy of segregation?"

The jury brought in a verdict of not guilty.

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MEDICAL NOTES.

— The remains of the late Dr. Samuel D. Gross were cremated at Washington, Pa. They were brought back to Philadelphia under the escort of the family and friends of the distinguished physician. The ashes weighed about seven pounds, were hermetically sealed in a tin box, and placed in the coffin in which the body was carried to Washington. On reaching Philadelphia the coffin was removed to the late residence of Dr. Gross, and subsequently the ashes were inclosed in a marble urn about three feet high, unornamented and without inscription, and placed beside the coffin of Dr. Gross's late wife in the family vault at Woodland cemetery. Rev. Dr. Charles Currie read the Episcopal burial service at the cemetery.

— Mr. Knowsley Thornton recently removed a cystic spleen by abdominal section (median incision) at the Samaritan Hospital, London. The patient was a single girl, aged nineteen, and the tumor had been growing slowly for two years. Latterly it had increased much more rapidly, and caused much pain. The reports up to the end of the first week show that the patient was progressing quite satisfactorily. During the tying of the pedicle the patient suffered severely from shock, and for some minutes her life was in great danger; but she revived immediately, the tumor was cut away, and the drag taken off the pedicle. The specimen will be shown, and the further progress of the case reported, at the Pathological Society.

— In the recent pedestrian match in New York the strain on the bodies of the leading contestants after the first three days of the walk is described as being intense. Even allowing for possible inaccuracies in the description of the newspaper reporters, one is led to believe, in view of the record of the work done, that the picture drawn is not greatly exaggerated. Speaking of the man who won the race, one of the Brooklyn papers says: "His eyes were sluggish, bloodshot, and heavy, and encompassed by huge purple circles. His cheeks had so sunk in that the contour of the teeth could almost have been seen through them, and every movement was an illustration of acute agony. He swung his arms painfully, his head dropped on his chest, his shoulder blades stuck out sharply from his attenuated body, his legs dragged lamely one after the other, and the muscles of his neck twitched nervously with every step. He dragged himself steadfastly ahead, never turning his eyes to the right or left, until he came to the scorer's stand, when he painfully and laboriously turned his face toward the figures to see that they were correctly given." The change in the Englishman who held the second place is described as even more pronounced and pitiable.

— The medical world is represented in the little volume entitled *English as She is Spoke*, by the following new rendering of an old story, which, though it may leave something to be desired in elegance of diction, is yet admirable in its philosophy: "A physician eighty years of age had enjoyed of a health unalterable. Theirs friends did him of its compliments every day: Mister Doctor, say they to him, you are an admirable man. What you make then for you to bear you as well? I shall tell you it, gentlemen, he was answered them, and I exhort you in same time at to follow my example. I live of the product of my ordering without take any remedy who I command to my sicks."

— To the Pathological Society of London (March 18, 1884) Mr. Roger Williams showed photographs of a boy, in whom the femora were absent. No trace of the femur or patella could be found on careful examination on either side; a bony mass in the groin, and apparently articulating with the pelvis, was ascertained to be the head of the tibia somewhat altered. Mr. John Wood, discussing the case, said that about twenty years ago a man who went by the name of the man-monkey was well known in London; the femora were absent, but he was exceedingly agile, and this, combined with the fact that his hands reached to the ground, had earned him his sobriquet. He thought that one moral might be drawn from such cases, and that was how exceedingly useful one section of a limb might be; it was, he thought, an argument in favor of the operation of excision.

— The following remarkable cases of longevity in husband and wife, at Cleveland, Yorkshire, England, are given by a correspondent of the *Lancet*. James Miller died lately of senile decay. He was ninety-five years old, and was in good health until a few days before his death. He smoked to the last. He wanted his bed removed just before he died, and his wife, Mrs. Miller, who had "an advantage," as will be seen, in point of seniority, and would at the same time appear to have had considerable "force" of character, although she was ill at the same time, remarked, "Ay, he was always first and foremost all his life in everything, and now he wants to be so in death." Mrs. Miller did not long survive her husband, but died on March 17th last of senile decay. She was returned as one hundred and four years of age, and her doctor thinks she might have been living yet had she not refused taking medicine. She had no movement of the bowels for three weeks before her death, and refused the doctor's help. A short time before her husband was taken ill Mrs. Miller wanted him to go to Hinderwell, a good stiff walk. He said he was not able to go; Mrs. Miller replied, "It was nothing but idleness of him." Mrs. Miller, like her husband, was a lover of the "weed," and enjoyed a smoke up to time of her death.

NEW YORK.

— Dr. A. Randolph Mott, resident physician at the Riverside Hospital, Blackwell's Island, died May 6th, of typhus contracted two weeks previously in the discharge of his duties at that institution. He was twenty-six years old, and was born at Leesburg, Va., where his father is a prominent physician. In 1878 he was graduated from the University of Virginia and came to New York, where he obtained an appointment to the medical service of the workhouse on Blackwell's Island. From there he went to the Randall's Island Infant Hospital and Hart's Island Hospital, also under charge of the Department of Charities and Correction, and in 1881 was appointed to the Riverside Hospital, where he remained up to the time of his death; at the same time holding a position in connection with the chair of gynæcology at the New York Polyclinic. The Board of Health has passed suitable resolutions in reference to his untimely decease and the loss of his efficient services.

— A death certificate was filed last week at the bureau of records of vital statistics in Brooklyn, stating that Luke Walker had died in that city at the age of one hundred and one years. He was born in Ireland in May, 1783, and fought under Bolivar for the independence of Venezuela in 1818. His father is said to have lived to be one hundred and one, his grandfather to be one hundred and two, and his grandmother to be one hundred and ten.

Correspondence.

LETTER FROM WASHINGTON.

WASHINGTON, *May* 10, 1884.

MR. EDITOR, — The thirty-fifth annual session of the American Medical Association has been participated in by nearly 1300 members (registered), is now over, and the vast body dispersed. The meeting was characterized by good temper, earnestness, and an amount of material for work in the Sections which it was impossible to dispose of. The general tone and character of those in attendance was of the best type, and it was a subject of general remark that the appearance of the delegates generally was that of fairly prosperous city men, although here and there were still evidences of very primitive manners, especially at some of the receptions, at one of which two gentlemen? (God save the mark!) spent a large portion of their time in the supper room with their hats on.

The meetings were held in the Congregational Church, which is in the centre of the business portion of the city, and near to the various branches of the street railroad. The church was kept constantly filled, and the acoustics were bad, that is, for some voices. Dr. Flint in reading his address as President could be heard by but very few. The place of registration was, unfortunately, in the main hall, through which every one had to pass to get at the general session, while opposite to those engaged in this duty was a man selling tickets for an excursion to Mount Vernon who kept constantly calling out, "Secure your tickets for Mount Vernon!" About four hundred availed themselves of this opportunity on the last day of the session. The janitor of the church was also busying himself by hanging up placards of "Please do not smoke in this church," and exerting his personal influence to the same effect, which was resented as an impertinence by some, quietly ignored by others, while the good-natured strolled out to the front steps with their cigars. Among the delegates there was quite a sprinkling of women, and the galleries were fairly filled with interested spectators; disgusted, however, on one occasion when the roll-call of the 1200 was ordered and proceeded with, which being so much like many of the proceedings of Congress, they left without ceremony.

The Sections were all well attended, and it spoke very well for the earnestness of the delegates to see this large attendance in a city which, especially at this time, presents so many attractions to the stranger. They also had the weather in their favor, for although it was warm the sky kept overcast, with fresh breezes. The Masonic Temple was set aside for the exhibit of drugs, books, and instruments. It was well filled and tastefully arranged. Men would walk in quietly and soberly to come out with their pockets bulging in the most significant manner, and with their arms filled with bundles. Here you got a cup of hot phosphatized cocoa; there a glass of Hoff's malt extract, in one corner the American preparation, and at the opposite end of the room the German imported article; in another place milk was digested for you after the most approved plan, and you took a glass of that. In other words, one found there a concentration of the book and drug fiends who come into your office with that little black bag, and that "hope-I-don't-intrude" air, to just leave you a little sample of their goods. Talk! Well all you could do was to stand still quietly and look hopelessly at the other end of the room until there was an end to the description, and another victim was secured. Yet the men would go there; almost all went. At the close of the exhibit Dr. D. C. Patterson, who had charge of caring for the exhibitors, was presented by them in a neat little speech with several handsome pieces of silver, and he certainly deserved it for the labor involved.

It was expected that the question of the Code might crop out at this meeting, but there was little said regarding it. The blanks signed by those registering were of the same character with those used in Cleveland last year, and if there were any protests they were not loud enough to excite comment. New York was well represented by some of her best men, L. A. Sayre, Isaac E. Taylor, J. C. Dalton, Flint, Jr., Janeway, C. L. Dana, Gouley, and a number of others, and the impression seemed to be that their new Society organizations would enable them to be independent of their erring brothers, so far as their affiliation with the Association was concerned, and that these might depart in peace. There was very little temper shown about the matter, and the idea was expressed that a large number would see the folly of their ways and come back into the fold. On the last day the committee to whom proposed changes in the Code had been referred made a verbal report, that in view of the departure of so many members it had been decided not to recommend any changes, but a committee was appointed to make such an explanatory declaration of the Code as might be deemed necessary. This was thought advisable, owing to the misrepresentations of certain provisions.

When the question regarding certain resolutions bearing upon the manner in which medical colleges were conducted, and upon medical education, was considered, for a time there bid fair to be a lively discussion, and Dr. Henry, of New York, made some forcible remarks with considerable warmth, but the discussion did not proceed very far, and was closed by the adoption of a resolution offered by Dr. Benjamin, of Maryland, urging upon all medical colleges to require a preliminary education, a three years' course, a register of attendance, and practical demonstrations of diagnostic skill.

The question upon the continuance of the journal of the Association, and the mode of conducting it, caused, as may well be imagined, considerable interest. A great deal of dissatisfaction was expressed as to its general management, which culminated in a printed circular issued by Dr. Packard, who was Secretary of the Board of Trustees, and an attempt was made to transfer the place of publication and editorial management to Washington, Philadelphia, or New York. The friends of the *Journal* as upon its present basis took the ground — and it would seem with reason — that Dr. Packard should have brought forward his objections within the body of trustees, to be discussed there rather than to go forth as his printed circular did; that while there was a desire to meet the best interests of the Association no positive, feasible plan had been proposed, and no assurances given of any special individuals suitable to take charge of the *Journal*. Dr. Davis resigned his position as editor, but his resignation was not accepted by the trustees, and he was induced to continue the management of the *Journal* for one year longer only, so that it is hoped that by the next meeting of the Association some definite plan for his successor will be determined upon.

The report of the Board of Trustees showed that 3800 copies had been issued, and that after the payment of all possible expenses incurred, including salaries, etc., there would remain in the treasury $500, so that the Association would begin its year from July, 1884, with the whole of the income from the present meeting as a financial basis. Dr. Packard, from the Board of Trustees, read his minority report, embodying what has already been stated, and exciting considerable discussion, during which some rather amusing scenes occurred. A rather small and excitable member upon the platform jumped up to second the call for the ayes and noes, with the remark that he had done so the day before in connection with some other point, but Dr. Sayre had sat upon him and squelched him, when a ponderous member from the other side of the platform hoped Dr. Sayre would sit down again. The ayes and noes, by a vote of 191 to 74, laid the minority report upon the table.

The report of the librarian showed that the library has grown to 6000 volumes. This report should receive more consideration than has heretofore been given to it. With the publication of the *Journal*, exchanges are increasing to a marked degree, and it is time that the library should be utilized in some way. It has outgrown its quarters in the Smithsonian Institution, and if some provision is not made for its proper care it might as well be done away with. The librarian, Dr. Kleinschmidt, states that he has numerous calls for books from all over the country, and as yet has lost none by sending them by express to members.

On the last day of the session a number of resoultions were offered, among which was one by Dr. Gihon, that the Association erect a statue to Rush in Washington. There was a great deal of force in his remarks, but there was no discussion of them. Some one suggested that Simms and Gross, as national representatives of medical science in this country, should be similarly honored.

Dr. Von Klein, of Ohio, offered a resolution to abolish the opening of the sessions with prayer, as the body was composed of so many infidels, free thinkers, materialists, etc., but this was instantly laid on the table. And so, with a number of important motions and resolutions, which will of course be fully reported in your pages, the American Medical Association closed its sessions to meet next year in New Orleans, with Dr. H. F. Campbell, of Georgia, as its president.

The entertainments which took place in the evening were varied and enjoyable. The hospitals generally were not thrown open, with the exception of the Government Hospital for the Insane, upon the invitation of the superintendent, Dr W. W. Godding, and the Columbia Hospital for women, upon the invitation of Dr. P. J. Murphy, the surgeon in charge, who prepared a lunch there for the use of the Obstetric Section each day of its meeting. Dinners and lunches at the houses of physicians were largely attended. Of the special entertainments the President's reception was the most extensive. As is the rule, there were no refreshments offered, but the whole house, up stairs and down, with the conservatory, was thronged with people, too much thronged for comfort, some ladies being overcome with the crowd and the heat. One very bad feature was the fact that the Marine Band was stationed in the hall-way and gave blast after blast through its brass instruments right into the ears of the packed and jammed crowd of visitors. The President had quite a party of people about him, supposed to be assisting him to receive, but apparently looking on with curiosity at the crowd; to step out of the ranks and into this little party for a few moments and watch the ushers leading people by was quite amusing. The new Siamese embassy was there in full court regalia.

On the second day there was a reception by the profession of Washington in a large hall, with music and dancing, and with abundant refreshments. This was very enjoyable, but it was noticed that there was a marked lack of ladies of the families of the receiving physicians. The few who were there made themselves very agreeable.

On the third day the Corcoran Art Gallery was illuminated, and the venerable W. W. Corcoran, now eighty-four years of age, received the guests with his usual affability and cordiality.

On the fourth day the Surgeon-Generals of the United States Army and United States Navy, with their respective staffs in full uniform, received at the Army Medical Museum, and the President of the Senate and Speaker of the House of Representatives received at the Capitol. There were also receptions at the private houses of Mr. Leiter, of Chicago, who occupies Mr. Blaine's house, the Commissioner of Agriculture Dr. Loring, Mr. Hildrup, and Chief Justice Waite.

Miscellany.

IMPORTATION OF RAGS FROM EGYPT.

THE Marine Hospital Service, through the Treasury Department at Washington, issues the following circular to Collectors of Customs and others whom it may concern: —

The following letter to this Department from the Secretary of State, dated April 16, 1884, is published for your information and guidance, and, until further notice, rags from infected ports will not be permitted to land except under the provisions contained therein: —

"I have the honor to say, in connection with previous correspondence in relation to the proper disinfection of rags imported into the United States from Egypt, that the Department has, upon careful and mature consideration of the subject commensurate with the interests involved, decided upon the following methods of disinfection, either of which will be satisfactory to the health authorities of New York City, New Haven, and Boston, who have been consulted in respect to the matter, namely:

"(1.) Boiling in water for two hours under a pressure of fifty pounds per square inch;

"(2.) Boiling in water for four hours without pressure; and

"(3.) Subjection to the action of confined sulphurous acid gas for six hours, burning one and a half to two pounds of roll brimstone in each 1000 cubic feet of space, with the rags well scattered upon racks,

"An inspector has been designated, who will have immediate supervision, under the Consul-General, of the process of disinfection, will be required to give the subject his earnest personal attention, and furnish a proper certificate. This certificate will show the following facts: —

"(1.) His name;

"(2.) The name of the consignee in the United States;

"(3.) The place where the rags were disinfected; and

"(4.) The process of disinfection, which must be one of the processes hereinbefore described.

"After that the Consul-General is to authenticate the certificate given by the inspector. This process is to be observed in the case of every bale of rags, which is to be also marked "Thoroughly inspected," with the name of the inspector.

"The Consul-General at Cairo has been told that, although he should not refuse to certify invoices even when lacking the inspector's certificate, he must give notice to all shippers of rags that these goods will not be permitted to enter the United States unless accompanied by such certificate."

REPORTED MORTALITY FOR THE WEEK ENDING MAY 3, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	689	272	17.10	16.05	2.25	6.00	2.10
Philadelphia	927,995	364	114	13.44	14.56	—	3.92	2.16
Brooklyn	644,526	277	77	15.48	13.68	1.08	3.24	3.60
Chicago	632,100	234	106	20.01	8.60	4.73	4.27	1.29
Boston	423,800	167	56	12.60	16.80	2.40	5.98	1.80
Baltimore	408,520	169	67	24.60	16.80	5.40	3.00	1.80
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	105	31	20.90	20.90	1.90	—	3.80
New Orleans	234,000	149	52	15.51	8.71	2.68	1.28	.64
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	77	32	7.74	7.74	—	5.16	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	17	5	16.66	5.88	—	5.88	5.88
Nashville	54,400	23	11	26.10	4.35	—	—	—
Charleston	52,286	41	10	17.08	24.39	12.19	—	—
Lowell	71,447	14	3	14.28	35.70	—	—	—
Worcester	69,442	15	9	26.66	18.88	13.33	6.66	6.66
Fall River	62,674	21	11	—	4.76	—	—	—
Cambridge	60,995	—	—	—	—	—	—	—
Lawrence	45,516	14	2	7.14	78.54	—	—	—
Lynn	44,895	13	3	15.38	30.76	—	15.38	—
Springfield	38,090	6	2	16.66	33.33	—	—	16.66
Somerville	31,350	6	1	—	33.33	—	—	—
Holyoke	30,515	11	7	36.36	—	18.18	—	9.09
New Bedford	30,144	12	2	—	16.66	—	—	—
Salem	29.503	9	1	—	44.44	—	—	—
Chelsea	24,347	8	2	12.50	25.00	12.50	—	—
Taunton	22,693	4	0	—	—	—	—	—
Gloucester	21,400	7	2	14.28	14.28	—	—	—
Haverhill	20,905	—	—	—	—	—	—	—
Newton	19,421	3	2	33.33	—	—	—	33.30
Brockton	18,323	3	0	—	33.33	—	—	—
Malden	15,273	4	0	—	75.00	—	—	—
Newburyport	13,947	3	0	—	—	—	—	—
Fitchburg	13,433	5	1	20.00	20.00	—	—	—
Eighty-four Massachusetts towns	482,727	66	14	7.60	19.76	—	1.52	6.08

Deaths reported 2526 (no reports from St. Louis, Buffalo, District of Columbia, Milwaukee, and Providence): under five years of age, 895; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 428, consumption 381, lung diseases 291, diphtheria and croup 100, scarlet fever 59, diarrhœal diseases 59, measles 49, typhoid fever 42, small-pox 27, malarial fevers 27, whooping-cough 26, cerebro-spinal meningitis 15, erysipelas 12, puerperal fever 12. From *measles*, New York 14, New Orleans 13, Baltimore 11, Chicago and Cincinnati four each, Brooklyn two, Philadelphia one. From *typhoid fever*, Philadelphia 16, New York and Chicago five each, Brooklyn and Baltimore four each, Cincinnati three, Boston, New Orleans, Pittsburg, Charleston, and Lawrence one each. From *small-pox*, New Orleans 21, Nashville three, Philadelphia, Boston, and Pittsburg one each. From *malarial fevers*, Brooklyn seven, New York and New Orleans six each, Baltimore four, Chicago three, Cincinnati one. From *whooping-cough*, New York 11, Chicago and Baltimore four each, Brooklyn three, New Orleans two, Philadelphia and Boston one each. From *cerebro-spinal meningitis*, New York and Chicago three each, Cincinnati and Nashville two each, Philadelphia, Boston, New Orleans, Lowell, and Fitchburg one each. From *erysipelas*, New York five, Brooklyn two, New Orleans, Nashville, Charleston, and Gloucester one each. From *puerperal fever*, Chicago four, Brooklyn three, New York, Philadelphia, Baltimore, New Orleans, and Lowell one each.

Cincinnati reports one case of small-pox; scarlet fever 53, diphtheria 25, and typhoid fever six in Boston.

In 102 cities and towns of Massachusetts, with an estimated population of 1,468,570 (estimated population of the State 1,955,104), the total death-rate for the week was 13.67 against 15.63 and 16.60 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending April 19th, the death-rate was 22.5. Deaths reported 3773: acute diseases of respiratory organs (London) 318, whooping-cough 189, measles 159, scarlet fever 88, diarrhœa 37, fever 40, diphtheria 24, small-pox (London 11, Liverpool and Newcastle two each, Wolverhampton and Sheffield one each) 17. The death-rates ranged from 13.1 in Derby to 28.7 in Bolton; Leicester 16.1; Birmingham 20.2; Birkenhead 20.7; Newcastle-on-Tyne 21; London 21.4; Sunderland 21.6; Sheffield 23.6; Liverpool 25.5; Nottingham 26.2; Leeds 28.4; Wolverhampton 28.6; Manchester 28.7. In Edinburgh 21.4; Glasgow 25.3; Dublin 28.7.

For the week ending April 19th, in the Swiss towns, there were 48 deaths from consumption, lung diseases 21, diphtheria and croup 13, typhoid fever 13, diarrhœal diseases eight, whooping-cough four, scarlet fever three, measles two, erysipelas one. The death-rates were, at Geneva 14.3; Zurich 11.8; Basle 24.8; Berne 33.3.

The meteorological record for the week ending May 3d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
April–May, 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 27	30.166	44	52	41	83	78	78	80	NE	E	E	8	10	4	C	C	C	—	—
Mon., 28	30.074	43	48	38	87	82	96	88	E	E	S	7	14	5	C	C	F	—	—
Tues., 29	29.951	45	52	37	93	62	69	75	W	NW	NW	8	17	18	F	O	F	—	—
Wed., 30	30.006	55	68	40	76	42	68	62	N	E	NW	17	5	5	C	C	C	—	—
Thurs., 1	30.098	46	56	42	91	87	95	84	NE	SE	S	13	15	8	F	C	F	—	—
Fri., 2	29.859	56	75	41	93	60	53	69	SE	S	W	3	9	15	O	F	C	—	—
Sat., 3	30.133	55	64	45	60	30	62	51	NW	NW	W	11	12	7	C	C	F	—	—
Mean, the Week.	30.041	49	59	40														.25	—[2]

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening. [2] Too small to measure.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 3, 1884, TO MAY 9, 1884.

Webster, Warren, major and surgeon. Granted leave of absence for six months from April 29, 1884, on account of sickness. Paragraph 5, S. O. 103, A. G. O., May 3, 1884.

Sternberg, George M., major and surgeon. Now at Governor's Island, New York Harbor, ordered to repair to this city (Washington, D. C.) to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to meet on May 5, 1884, and on adjournment of the Association to return to Governor's Island. Paragraph 2, S. O. 103, A. G. O., May 3, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 10, 1884.

Gravatt, C. W., passed assistant surgeon, detached from Naval Hospital, Chelsea, and ordered to U. S. S. Michigan.

Harmon, G. E. H., passed assistant surgeon, detached from the Michigan and granted leave of absence.

Edgar, T. M., assistant surgeon, ordered for examination preliminary to promotion.

INSPECTOR OF MILK AND VINEGAR.

Dr. B. F. Davenport, having been appointed Inspector of Milk and Vinegar for the City of Boston, will be pleased to receive and report upon all samples sold in this city which may be sent in to him at the office, which during the month of May will continue at 30 Pemberton Square, but after that will be in the Old Franklin School Building, 1151 Washington Street, near the corner of Dover Street.

CORRECTION.

The paper read before the New York County Medical Association on Sanitation, referred to in the Journal of May 8th, was by Dr. Charles A. Leale.

The Bowdoin Medical Alumni Association will hold its first general meeting in Brunswick on the 28th of May, the day of the graduating exercises. There will be a dinner and other festivities. The residences of many of the alumni are unknown, and every graduate of the Medical School of Maine who has not received notification of this meeting is requested to send his address to the Secretary of the Association, Dr. C. D. Smith, Portland, immediately.

The Navy Medical Corps. — There are at present twelve vacancies in the Navy Medical Corps. A Board for the examination of candidates for admission into the Corps is now in session at Philadelphia.

Suffolk District Medical Society. Adjourned Special Meeting. — *Section for Clinical Medicine, Pathology, and Hygiene.* The adjourned special meeting for the continuation of the discussion upon Sewage Systems will be held at 19 Boylston Place, on Wednesday, May 21st, at 7.45 o'clock. Dr. Faxon, of Quincy, Prof. William R. Nichols and Prof William T. Sedgwick, of the Massachusetts Institute of Technology, Henry M. Wightman, Esq., City Engineer of Boston, Desmond Fitzgerald, C. E., Superintendent Western Division Boston Water Works, Edward S. Philbrick, C. E., Eliot C. Clarke, C. E., and others are expected to be present.

Robert T. Edes, M. D., *Chairman.*
Albert N. Blodgett, M. D., *Secretary.*

Books and Pamphlets Received. — Wharton and Stillé's Medical Jurisprudence. Fourth Edition. Edited by Robert Amory, A. B., M. D., and Edward S. Wood, A. M., M. D. Vol. II. Philadelphia: Kay & Brothers. 1884.

Diphtheria, Croup, etc., or the Membranous Diseases; their Natural History, Causes, and Treatment. With a Review of the Prevailing Theories and Practice of the Medical Profession. Also a Delineation of the New Chloral Hydrate Method of treating the Same, etc. By C. B. Galentin, M. D. Cleveland, Ohio. 1884.

Sanitary Drainage of Tenement Houses. By William Paul Gerhard, C. E., New York City. (Reprint.) 1884.

Epileptic Insanity. A Paper read before the Academy of Medicine February 4, 1884. By Philip Zenner, A. M., M. D., Cincinnati, Ohio. (Reprint.)

Notes on the Opium Habit. By Asa P. Meylert, M. D. New York: G. P. Putnam's Sons. 1884.

Brain Exhaustion, with some Preliminary Considerations on Cerebral Dynamics. By J. Leonard Corning, M. D. New York: D. Appleton & Co. 1884.

Conversations between Drs. Warren and Putnam on the Subject of Medical Ethics, with an Account of the Medical Empiricisms of Europe and America. By Frank Hastings Hamilton, M. D. New York: Bermingham & Co. 1884.

Quarterly Compendium of Medical Science. Edited by D. G. Brinton, M. D., and Joseph F. Edwards, M. D. April, 1884. Fourth Series. No. 6.

The Treatment of Typhoid Fever. By George L. Peabody, M. D. (Reprint.)

Medical Diagnosis, with Special Reference to Practical Medicine. A Guide to the Knowledge and Discrimination of Diseases. By J. M. DaCosta, M. D., LL. D. Illustrated with Engravings on Wood. Sixth Edition, Revised. Philadelphia: J. B. Lippincott & Co. 1884.

Elements of Modern Chemistry. By Adolph Wurtz. Second American Edition, Translated and Edited, with the Approbation of the Author, from the Fifth French Edition, by William H. Greene, M. D. With 132 Illustrations. London and Philadelphia: J. B. Lippincott & Co. 1884.

National Board of Health. Closing Argument submitted to the Committee on Public Health.

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Address.

EXTRACTS FROM THE ADDRESS AT THE ANNUAL MEETING OF THE PENNSYLVANIA STATE MEDICAL SOCIETY.

BY HENRY H. SMITH, A. M., M. D. U. P., PRESIDENT.

Members of the Medical Society of the State of Pennsylvania, and Ladies and Gentlemen, — The recurrence of the period when delegates from all our County Medical Societies assemble to interchange professional opinions and renew or form the fraternal ties of a distinguished brotherhood, has again brought us together on this the thirty-fifth annual session of the Medical Society of the State of Pennsylvania.

Welcomed as you have been by our Committee of Arrangements on behalf of the Philadelphia County Medical Society, honored by the presence of the Governor of the Commonwealth, and coming among those who have been the preceptors of many of you, in our well-known medical schools, you hardly need the greeting I tender you this evening, on behalf of our citizens here assembled, in recognition of your presence in Philadelphia.

Chosen to preside over your deliberations, I highly appreciate the unsought honor conferred by your choice, and have entered on the performance of the duties this honor entails with a consciousness that I am dependent on your kind assistance for the proper execution of the functions of the chair.

The By-laws of our Society make it incumbent on your President to deliver a public address, and in the performance of this duty I ask your consideration of a theme with which you are all doubtless more or less familiar, but which now and evermore must be the subject illustrated in these annual assemblies.

This theme I would formulate as —

THE IMPORTANCE AND USEFULNESS OF SCIENTIFIC MEDICAL ORGANIZATIONS TO OUR PROFESSION AND THE PUBLIC.

In order correctly to comprehend the objects obtainable by such organizations it may be useful —

(1.) To note their origin and elementary formation, as described in history.

(2.) Show in what manner our annual meetings are useful to the profession and the public.

(3.) Allude to the reciprocal obligations of the public to the profession.

A *society* has been defined as "an association of individuals voluntarily created for the promotion of knowledge, industry, or virtue, and of planning or creating orders for these purposes." It is especially constituted for the *extension* of knowledge and the general good of the community in which it exists.

The creation of societies is due to comparatively modern periods in the history of mankind, and is evidence of the progress of civilization and literary culture, Alcuin, about 781, under the patronage of the Emperor Charlemagne, being, it is said, the first who attempted to organize one.

The earliest literary society was called an academy, and derived its name from *Academus*, the original owner of the grove in the suburbs of Athens where Plato and his followers held their philosophical meetings.

Cicero also named his villa near Puzzuoli an academy, and is said to have there written his Academical Questions and his book De Natura Deorum. Subsequently the term academy signified "a society of learned men established for the improvement of art or science," as in the Royal Academy of Science in Paris, and our own Academy of Natural Sciences in Philadelphia.

A medical academy or society, designated as that of the "Naturæ Curiosi," existed at an early period in Germany; another was founded at Palermo in 1645; and another met weekly at Venice in 1701.

The Academy de Naturæ Curiosi, or the Leopoldine Academy, was founded by Bauschius, a physician, in 1652. He extended an invitation to all physicians to communicate their extraordinary cases, which, in 1684, were published as a volume of observations under the title of Ephemerides, a title in existence in a journal of the present day.

The most enlarged idea of a literary and scientific society is, however, believed to have originated with Sir Francis Bacon, in England, "who recommended to James the First the institution of societies of learned men, who should give to the public from time to time a regular account of their researches and discoveries, and thus unite the *world* into one great republic of letters, which, though consisting of many detached states, should yet hold a strict union, and preserve a mutual relation to each other in everything that regarded the common interest." In his New Atlanta he delineated a philosophical society which Cowley is said to have presented to Charles the Second of England for the charter of the Royal Society of London, and it may interest some to know that Dr. William Harvey, the discoverer of the circulation of the blood, was, in 1628, physician to Lord Chancellor Francis Bacon,[1] and doubtless participated in the planning of this society.

History has thus demonstrated the utility of such organizations, and that many improvements of a public character have been due to the united labor and intelligence of men interested in one grand pursuit.

The charter of the Royal Society of London was granted in 1662, that of Christian Knowledge in 1698, and that of the British Medical Association in 1832.

The New Jersey Medical Society appears to have been the first medical society organized in this country, it being regularly constituted by the voluntary association of a number of the Practitioners of Physic and Surgery of East New Jersey, at New Brunswick, on July 23, 1766, "for their mutual improvement, the advancement of the profession, and the promotion of the public good."[2]

The American Academy of Sciences was established in 1780, by the Council and House of Representatives of Massachusetts, "for encouraging medical and philosophical discoveries, and whatever tended to advance the interests, honor, and dignity of a free, independent, and virtuous people."[3]

The organization in 1847 of the American Medical Association, of which our State Society is an integral portion, is precisely that which Lord Bacon esteemed so advantageous to the general welfare, it being, in fact, a great republic of medicine in which individual State societies are united in a common interest, namely, the preventing, curing, or alleviating the "ills that flesh is heir to."

In the association of individuals that thus formed societies it soon became apparent that some laws or rules of action applicable to each and every member must be adopted, in order to regulate intercourse and restrict irregular or individual opposition to the interests of the Society, and that in these laws, as in those of all communities, the most important portion would be "the penal or vindicatory clause," it being useless to say, do this or avoid that, unless the law also declared what would be the penalty or consequence of non-compliance. Ethics, or the law of manners, collected in a paper-book, termed Codex or Code, was thus adopted at an early period in the history of all societies, and the Code of Ethics of the American Medical Association is but another illustration "that history repeats itself."

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[1] Encyclopedia Britannica, etc.

[2] Narrative of the Rise and Establishment of the New Jersey Medical Society. Transactions from 1766 to 1859.

[3] Dobson's Encyclopedia.

In this Code the vindicatory or penal clause is found in the By-laws, and as the Code is accepted by each society, it is applicable to every one who is elected to membership in a State or County society. In the ninth by-law of the American Medical Association the rule explicitly states that "no State, local society, or other organized institution shall be entitled to representation in the Association that has not adopted this Code of Ethics, or that has intentionally violated or disregarded any article or clause of the same."[1] Consequently, the penalty of violation is exclusion and loss of membership, which also implies non-intercourse professionally with other members.

The origin of our own State Society dates back only to the year 1848, when the preëxisting county societies of Chester, Philadelphia, and Lancaster elected delegates to a Medical State Convention that assembled in the city of Lancaster to take the necessary steps to create a State Society such as was required to form a part of the American Medical Association. With this object the Philadelphia County Medical Society, on February 5, 1848, elected as delegates to the Convention, Drs. Emerson, John Bell, B. H. Coates, George W. Norris, Henry H. Smith, Rutter, Shallcross, Henry Bond, J. Rodman Paul, and Isaac Parrish,[2] of whom the speaker alone remains an active member of this Society.

The proposition for the meeting of the Convention originated with the Chester County Medical Society; whilst the Lancaster County Society tendered the first invitation for its assembling in Lancaster. At this meeting, on April 11, 1848, in the Methodist Church of that city, the daily newspaper, called *The Lancaster County Farmer*, greatly aided the objects of the meeting by reporting its proceedings. The delegates to the Convention from the Lancaster County Society were: Drs. J. L. Atlee, Humes, Kerfoot, Duffield, Clarkson, and Emerson; and of these, our venerable fellow-member, Dr. Atlee, yet continues his active interest in our Society, the formation of which he greatly promoted by his professional influence, whilst illustrating the pleasures arising from the social intercourse of its members by a handsome evening entertainment at his own residence.

In its progressive development this Society, like all others, adopted as an integral portion of its constitution the Code of Ethics published by the American Medical Association, and again acknowledges its high estimate of the "old Code," and the incalculable benefits it has bestowed on the profession and the public.

This Code, now so widely recognized as an exponent of many professional obligations, was reported by the late Dr. Isaac Hays[3] (on behalf of a committee) to the National Convention that formed the Association, and was composed chiefly from a great number of Codes of the preëxisting county and State societies in the United States, as well as from the Code of Institutes and Precepts, prepared by Dr. Thomas Percival, of Manchester, England, that was published in 1803. The adoption, by the Association, of a series of rules for professional conduct that thus had the approval of the most eminent physicians of that period, and some of the sections of which were in the words of our distinguished citizen, Dr. Benjamin Rush,[4] may be cited as among the first fruits of the organization of the medical profession in the United States, and illustrates, as Lord Bacon suggested, "the good derivable from an association of kindred spirits in the formation of a society," as well as the truth of our national motto, "that in union there is strength."

At a period when rebellion to the regularly constituted authority of the profession, as organized in this country, is attracting even the attention of the daily press, it cannot be useless to recall the history and provisions of this Code, and to remind those who are now objecting to its beneficent laws, and endeavoring to substitute their individual sentiments for those of the profession regularly assembled and organized for the creation of an association in which they openly united, that they are risking the severance of professional connections that calmer consideration may hereafter cause them deeply to regret. If the progress of time and the wishes of a majority of the profession demand a modification of this Code, it should be accomplished in and by the Association that originated it, and not by any county or State organization that with extraordinary selfishness ignores the sentiments of their brethren in other States.

A question that has been warmly discussed in connection with this Code is the right of members of the American Medical Association or a county society to consult at the bedside or office in regard to the diagnosis and treatment of disease with those who practice and believe in an exclusive dogma, and especially that one revived by Hahnemann, of *similia similibus curantur*, or that "like cures like."

It matters little, in the consideration of this question, to ask how or why it arose. The propriety of such consultations is positively settled by the Code, and hence its repeal is advocated by that comparatively small number, especially in New York, who perhaps anticipate benefit from the change. Any one who reads the clause in reference to consultations will readily see that the Code recognizes the fact that two physicians, of different medical creeds, cannot agree on any question of pathology and therapeutics, when each is conscientious in the correctness of his own professional opinion. . . .

UTILITY OF THESE ANNUAL MEETINGS TO THE PROFESSION AND THE PUBLIC.

The influence exercised by these annual meetings of our Society is, however, by no means limited to medical ethics, but extends to the entire community, through the scientific work thus accomplished.

In reviewing all that this Society has done in the last thirty-five years our increased knowledge of the best means of preventing or alleviating disease is very apparent.

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[1] Article IX., Section II., By-Laws of American Medical Association.

[2] Philadelphia Medical Examiner, 1848.

[3] Prefatory Note to original Code, printed in 1848.

[4] Ibid.

No post-graduate course of medical instruction, now so much in vogue, "with doctrines fashioned to the varying hour"[1] offers more valuable information to a medical man than that afforded by the papers and discussions presented in our sessions. The great difficulty at present is to condense the large amount of valuable material annually presented, and he who would not be left behind in the improvements of his profession cannot safely neglect attendance on these meetings or fail to read our printed Transactions.

Since 1848 many advances in pathology as well as in practice have been made in this body and been subsequently developed for the public good.

In the annual addresses of the chairmen of the Sections on The Practice of Medicine, Surgery, Obstetrics, and Hygiene, how much valuable information has been laboriously gathered by their respective authors, tested by their ripe experience, and freely offered to the profession and the public in the most attractive and scholarly manner, presenting facts not readily obtainable by those educated sons of toil, the hard-worked, badly paid, and ever-busy country practitioners, as well as by their more favored brethren in our cities, whose constant occupations leave but a brief hour to read up the improvements presented each day by a prolific press.

In the annual reports made by the able chairman of the Section on Hygiene, and especially by him who has also for years faithfully served the Society in the care of its funds, how many suggestions have tended to secure the comfort and sanitary safety of many of the towns and villages of this great Commonwealth.

In 1875, in inaugurating these reports on Hygiene, the chairman[2] aptly described "the absolute necessity of corporeal sanity to the existence of mental sanity," recognizing the great truth that the preservation of health implies the prevention of disease, and illustrating the ancient proverb, "mens sana in corpore sano," as well as the wisdom of Hippocrates, who nearly twenty-five hundred years before him first enunciated the principles of public hygiene in his treatise *Περι αερος, υδατων χαι τωπων*, — air, water, and localities, — principles yet carefully studied by our profession for the especial benefit of every community, thus realizing the truth of the anecdote of the Scotch doctor, who, being called on at a supper for a toast, gave "The health of this company, though very much agin my interest."

How much of the attention now given by laymen to the purity of the water they drink, the vitiation of the air they breathe, the importance of proper drainage, and the removal of excreta are due to the assembling of our various medical societies. . . .

From the annual meetings of our Society have also arisen many legal acts relating to the protection and preservation of some of the most valuable interests of the community, — acts, it is true, only gained from our Legislature by persistent efforts. In the Act for the Registration of Births, Marriages, and Deaths, now in general use in Philadelphia, how valuable a record is secured in tracing relationship or recovering property for otherwise unknown heirs.

The law requiring every physician to be registered by the prothonotary of his county, and the exhibition of his diploma before he can be allowed to practice medicine or issue a single prescription, has worked much good to the community, but it yet requires increased power. In those States that can enforce a thorough law it has driven away many of the harpies that, under the pretense of curing disease, preyed upon the credulous.

(*To be concluded.*)

Original Articles.

THREE CASES OF HOMONYMOUS HEMIANOPIA.[3]

BY O. F. WADSWORTH, M. D.

The cases which I have to report are of interest from the fact that, while in all the occurrence of hemianopia was sudden, in two this was attended, or followed, by only very slight other symptoms of cerebral disturbance, which in one, if not both, were quite temporary, and in the third there was no other symptom whatever. Hemianopia, as an accompaniment of other disorders of cerebral origin, — hemiplegia, hemianæsthesia, aphasia — is, as is well known, not uncommon, probably in a certain number of cases it is present without being recognized. But as an isolated symptom, appearing suddenly, without paresis or disturbance of sensation, it may be regarded as infrequent. I have found only some half dozen such cases reported, in a somewhat careful examination of the literature of the subject. Most of these cases are, like my own, incomplete, — there was no autopsy. Two, in which there was an autopsy, are of special importance in connection with the localization of the lesion causing the hemianopia.

Mr. N., aged sixty, was seen in consultation December 30, 1881. He was a large, fleshy man, smoked to excess, but was in other respects temperate, though perhaps a large eater. He was subject to dyspepsia. For ten or fifteen years he had had occasional slight, momentary attacks of vertigo. He had for a long time occasionally waked suddenly from sleep with a feeling as of stoppage of breath, over so soon as fairly awake. Three weeks and a half before I saw him, on going to bed at night, he suddenly remarked to his wife that she had turned out the gas, it being still lighted. He was much excited by this, and his wife and daughter were up with him for perhaps two hours calming him, but I did not learn positively whether the loss of sight had continued so long or only his excitement. The following day, at least, there was no complaint of disturbance of sight, but for the next few days there was a tendency to coldness of hands and feet. Four days after this attack he rose from his chair, poured out and drank off a full glass of ice-water, became immediately much congested in the face, had some vertigo, and complained of blur of vision. Since then he had been confined to his room, most of the time to bed; his pulse had been intermittent at times, and there had been a murmur following the first sound of the heart, but he had improved with the administration of digitalis, and when I saw him the pulse was regular and strong. His memory, his physician thought, was a little affected; he would ask the same question several times in the course of the visit; the daughter said she had noticed something of this tendency to repeat questions during all the past autumn; I did not observe it. It may have been in part nervousness; he had been very nervous about himself, and I was introduced as if my visit was unpremeditated, and was asked not to question him closely to avoid exciting him. He had complained from the time of the attack of a sort of blur before his eyes, "as when one looks at the light and then away;" he told me his "vision was not quick;" said, pointing to the door, which was a little to his left as he lay, "I would walk against that door if I tried to go out of it." His vision seemed good, however; he could tell time by the clock on the mantel, some fifteen feet off, and he could read, though "something troubled him in reading." The eyes were externally normal. The retinal veins looked rather dark (the superficial veins of the hands were also dark), but there was nothing else to be seen in the fundus of either eye to suggest any pathological condition. The patient sat or lay with his right side toward the edge of the bed, the other side of the bed being near the wall of the room, so that nearly the whole room was either directly in front of him or to his right side. Nothing had occurred to suggest to me hemianopia, and it was as a matter of routine that I tested his field of vision. The examination was made roughly with the moving hand, and hurriedly, so as to avoid causing alarm. The left half of each field was wanting, the right half apparently unaffected. My diagnosis was probable cerebral embolism.

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[1] Goldsmith.

[2] Dr. Benjamin Lee, of Philadelphia.

[3] Read before the Boston Society for Medical Improvement, May 12, 1884.

I have not again seen Mr. N., but have recently heard indirectly that he gave up his business and moved into the country, that he has become rather cross and peevish, but in other respects is in fair health. His hemianopia has continued.

Mr. A., aged fifty-nine, has been for thirty years yard-master at the terminus of one of the railroads leading out of Boston. Eighteen years ago he was struck on the back of his head by a moving car, and was unconscious for three or four hours. At that time he was kept from his work for three weeks, but afterwards was as well as ever. He had had no other serious disturbance of health. He is a large man, of florid complexion, averaging two hundred and twenty-five pounds in weight. In July, 1883, after his usual exposure to the sun on a very hot day, he came home at noon with flushed face, and complaining of dizziness and headache, eat no dinner, but went back to the yard and attended to his customary work in the afternoon. When he reached home at night he told his wife that on the way he had run into people on the left side because he did not see them. His headache was worse, his face flushed, his pulse rapid and full. All uncomfortable feelings were relieved by a saline cathartic, bromide of potassium, and rest, but the defect of vision persisted. He was away from work only two days at this time, but a few weeks later took a vacation of a month. With this exception he had attended to his regular duties and been in his usual good health till I saw him, on March 19, 1884.

The eyes were externally normal, the pupils reacting well. Vision of either eye, with + 48, $1\frac{4}{6}$—$1\frac{1}{2}$. There was complete loss of vision on the left side of the field in both eyes; on the right side no contraction of the field could be made out. The boundary of the defect was sharply defined, practically vertical through the fixation point, but with a slight curving out round the point of fixation toward the side of the defect. When he fixed a black dot on white paper at 16″, the black point of a pencil, approached from the left in the horizontal meridian, was seen only when it had arrived within a quarter or three eighths of an inch of the dot; from a little above or below the horizontal meridian the pencil was seen only when it reached the vertical meridian.

Placed 9′ from the blackboard, a white object was seen with the left eye about two inches to the left of the fixation point in the horizontal meridian; with the right eye in the same meridian at 3″ to 4″ to the left; above and below the line ran along the vertical meridian for the right eye; for the left eye coincided with the vertical meridian below, but above inclined very slightly toward the left. The media were clear; the disks a trifle grayish in both eyes, but not beyond the physiological limit for his age; the fundus generally quite normal in appearance.

Mrs. M., aged fifty-four, applied to me April 12, 1884, with complaint of loss of sight of the left eye, as she expressed it, which had occurred suddenly on February 23d, seven weeks before. For sixteen years she had been subject to attacks of sciatica, chiefly on the left side, at intervals varying from two or three weeks to three or four months, the pain situated in toe, heel, leg, or thigh, lasting from a day or two to two or three weeks, and at times severe enough to require subcutaneous injections of morphia two or three times daily. Her daughter, who came with her, spoke of slight hæmorrhage from the lungs on two occasions some years ago, but Dr. Hanscom who had attended the family the past eight years, writes me he had never heard of any such hæmorrhage, that he had looked upon her as a woman of rather delicate health, but always about the house and at work. He had attended her through a mild attack of pneumonia several years ago, and had been called to see her several times when suffering from sciatica. Some eleven weeks before I saw her she had an attack of severe sciatic pain in the left leg, with some tenderness in the knees, and considerable fever. She had morphia subcutaneously for the pain, and for two or three days a small amount of salicylate of soda, but as this last remedy disturbed her stomach, quinine, two grains four times daily, was substituted for it. At this time there was complaint of pain in the head near the temples, and of noises in head and ears, as of machinery. Both these symptoms ceased after a few days, though the quinine was continued some time longer. A day or two after relief of the sciatica, and a week from its beginning, pneumonia developed at the base of the left lung. She got on very well with this, and there was nothing specially noticeable in the course of the sickness except that convalescence was retarded by great and continued prostration. Improvement had been manifest for some time, however, when the defect of vision set in.

On the morning of February 23d she was lying in bed, having been awake perhaps an hour. The nurse gave her her medicine (syr. hypophos. co.), and went down-stairs to bring her breakfast. "Before the nurse could have got down-stairs" sight was completely gone on the left side, without any other sensation whatever, except a faint glimmering, which seemed to be chiefly or wholly on the left side. By April 12th her general health had improved, but the condition of the eyes had not changed, unless it were that the glimmering had been a little more pronounced the last three or four days.

The eyes were externally normal. Vision, R., with $+30, = \frac{14}{12}$; L., with $+24, = \frac{14}{12}$. The fundus was quite normal in both eyes. The left half of the field of vision was wanting for both eyes. The limit between the seeing and non-seeing halves was sharply defined. Measured on the blackboard at a distance of 14″ the dividing line ran an inch to an inch and a half to the left of the point of fixation, above and below it ran vertically and a very little to the left of the vertical meridian. The outer boundary of the right side of the field in each eye was normal.

At the present time it may be assumed that a partial decussation of the optic nerve fibres at the chiasma is accepted with practical unanimity, at least by ophthalmologists, and that the production of homonymous hemianopia (the only pure form, that is, in which there is stationary defect of the whole of corresponding halves of each visual field) must be ascribed to an injury farther back than the chiasma.

Two principal views have been held as to the course of the tractus fibres backward. According to the one view, of which there have been some variations, the scheme proposed by Charcot being probably the best known, a second partial decussation takes place at some point after the tractus has reached the brain. In Charcot's scheme the fibres which come from the outer part of the retina, and which do not cross at the chiasma, do cross to the opposite hemisphere after they have reached the cerebral ganglia, so that eventually all the fibres supplying the retina of each eye are connected with the hemisphere of the opposite side. If this scheme be correct homonymous hemianopia can be caused by a single lesion only if it involves the tractus between the chiasma and the point where the second decussation occurs. The scheme was originated to account for amblyopia of one eye from affection (hysterical) of the opposite hemisphere without abandoning partial decussation at the chiasma. Since it has been demonstrated, however, that in these cases there is not unilateral amblyopia, but that both eyes are affected, though in unequal degree, Charcot is said to have abandoned his scheme, at least to have indorsed an essay of his pupil, Féré, in which the latter proposed to give up the supposition of a second partial decussation. But aside from this there is now ample evidence against the accuracy of Charcot's view.

According to the other and most generally received opinion all the fibres of each tractus which are concerned in vision pass backward to the cortex of the hemisphere of the same side. In favor of this course of the fibres there appears to be convincing testimony.

Let me sketch very briefly the path the fibres follow on their way from the chiasma to the cortex. The tracts diverge from the chiasma, pass outward and backward beneath the crura cerebri, and curve upward around these. The main body of the fibres of each tractus then passes around and through the corpus geniculatum externum into and over the surface of the posterior part of the optic thalamus, and from the latter fibres pass on to the anterior corpus quadrigeminum. From these three ganglia, again, fibres run backward to the cortex of the occipital lobe. The inner portion of the tractus separates from the rest before reaching the corpus geniculatum externum, and most of it may be traced into the corpus geniculatum internum and posterior corpus quadrigeminum. Still another, innermost, fasciculus of the tractus enters the crus cerebri and goes, as Stilling states, to the ganglion of Luys, situated in the crus. According to Wernicke, who is supported by the results of Gudden's experiments on animals, these inner portions of the tractus have no anatomical or physiological connection with the eye; they do not pass into the optic nerves.

The evidence that the cortical centre of vision is in the occipital lobe is such as can scarcely be doubted, and is of various kinds. First, from the result of experiments on animals, especially the careful and repeated experiments by Munk on dogs and monkeys, in which the effect on vision produced by removing portions of the occipital lobe on one or both sides was studied. And although it may never be justifiable to draw from animals absolute deductions as to the conditions existing in man, such investigations are of great value when considered in connection with the data given by pathological examination. Among the evidence furnished by pathological anatomy are two cases reported by Huguenin.[1] The one was a man, fifty-three years of age, who had been blind of the left eye since his fifth year, and died of pneumonia. At the autopsy there was found circumscribed atrophy of the cortex in the posterior median part of the occipital lobe on either side, — much greater on the right, in agreement with the fact that the number of fibres that cross at the chiasma is greater than that of the non-crossing fibres. The other was a woman of forty-three years, nearly blind of both eyes from early childhood, and dying of typhoid. Here, too, there was atrophy of corresponding parts of both occipital lobes. Finally, there are now a number of cases recorded in which there was hemianopia, and in some of which the only lesion, in others the only lesion that could have caused hemianopia, was situated in the occipital lobe.

It is clear that homonymous hemianopia may be produced by an interruption in the course of the nerve fibres anywhere from the chiasma to the cortex. The question arises whether it may be possible to localize the interruption. For this purpose the path of the fibres may be divided into four districts: the first embracing the tractus from the chiasma to the central ganglia; the second the central ganglia, optic thalamus, corpus geniculatum externum, and anterior corpus quadrigeminum; the third the region extending from the central ganglia through the posterior part of the internal capsule; while the fourth extends from the point where the visual fibres separate themselves from all others to the cortex of the occipital lobe.

When, in addition to hemianopia, there are disturbances of sensation or of motion, or of both, the problem is a complicated one. There may be multiple lesions, or, if only one, a part of the disorders may be merely indirect consequences of it. The question is simpler if the hemianopia is the one important loss of function, when, as in the cases above reported, the onset of hemianopia is sudden, and there are no other symptoms, or at most only such as are temporary and of small moment. It is this simpler question alone that I propose to discuss.

Theoretically it would seem as if a lesion to produce such a result must almost necessarily be in the course of the optic tract, and, indeed, within the tractus itself. It can hardly be conceived that a hæmorrhage outside the tractus of sufficient amount to wholly cut off conduction by pressure could fail to excite also other grave symptoms of cerebral disturbance. Hæmorrhage, embolism, or thrombosis within the tract might produce complete hemianopia and nothing else, yet, so far as I have been able to learn, there is record of no autopsy to show this has ever taken place. Its possibility, of course, cannot be denied. Partial destruction of the tract by embolism or thrombosis has been observed. Marchand[1] reports a case in which, three days before death, and when the patient was in a condition that must have prevented anything like accurate examination, right-sided hemianopia was said to have been observed. Here, besides other lesions, among the rest thrombosis of the left internal carotid, there was an area of softening in the left tractus due to embolism or thrombosis. The softening involved but about one third of the thickness of the tractus, however, and certainly could not, as Marchand states, have entirely interrupted its function. The hemianopia must, therefore, have been incomplete. Doubtless injuries within the tractus have been sometimes overlooked, and many cases never come to autopsy. Cases of sudden blindness of one eye have been supposed, with some likelihood, to be caused by hæmorrhage into the optic nerve, and the same thing might take place in the tractus, yet there is an anatomical difference in the circulation of the two parts of some significance in this respect. An artery and a vein of relatively considerable size, the central vessels of the retina, run for some distance within the optic nerve. The tractus, on the other hand, like the greater portion of the nerve, is supplied only by quite small vessels. The fact remains that positive evidence in this direction has not yet been presented.

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[1] Centralblatt für pract. Augenheilkunde, 1878, page 311. Corresp. f. schweiz. Aerzte, 1878, No. 22.

So far as the central ganglia are concerned, their anatomical relations make it at the least extremely unlikely that a lesion could occur there of sufficient amount to produce complete hemianopia without, at the same time, impairing motility and sensation, one or both. The posterior portion of the optic thalamus, the pulvinar, is probably the most important of these ganglia for the function of vision. From Flechsig's investigations it appears that the thalamus is connected with all parts of the cortex by fibres which pass outward in all directions from its external surface, and make up in large degree the corona radiata. The most accurate pathological evidence as to the effect of localized disease in this situation is furnished by a case reported by Hughlings Jackson,[2] the autopsy by Gowers.

A man, aged sixty-five, in November, 1871, felt sick, vomited, attempted to go up-stairs, fell, and became unconscious. He was "unconscious" for two weeks, and for six weeks too ill to be left night or day. In March, 1873, there was a trifling drawing of the face to the right. He could execute all large movements of the upper limb, but they were all imperfect, feeble, and slow. The leg was more paralyzed than the arm; he could walk, however, a great distance. There was great diminution of sensation of the left side of the face, trunk, and limbs. There was left hemianopia. This defect of vision he found out when he recovered consciousness. In 1874 his condition was practically the same. In the early part of this year he had what was probably a slight paralytic attack, but no clear account of it was obtainable. It left no obvious permanent effects. Some time later the man died after a few days' illness, which, from his friends' account, presented no further definite local symptoms of nervous origin. Examination of the brain revealed but one lesion.

"The right optic thalamus presented a considerable depression over its posterior half, where it was much softer than that of the opposite side. On section the tissue was seen to be softened, grayish-yellow in tint. The amount of softening was greatest on the inner side, the posterior tubercle (pulvinar) being broken down and destroyed, and here the softening extended up to the ventricular surface. It did not extend beyond the limits of the thalamus into the white substance of the hemisphere or the crus, and the anterior half of the thalamus and posterior extremity of the corpus striatum were intact. The microscopic characters were those of simple softening. The vessels at the base of the brain were moderately atheromatous; no occluded vessels near the softened area could be discovered. Convolutions healthy. No disease elsewhere."

On the other hand, in a case reported by Baumgarten, in which there was a small cicatrix near the centre of the optic thalamus, no mention is made of motor or sensory affection. Baumgarten's personal knowledge of the case, however, was limited to the condition after death; the history is given with extreme brevity, and the publication was made to show the connection between the hemianopia which had existed and another and more extensive lesion. It is more than likely, therefore, that motor or sensory defect was present at some time, but was omitted in the relation. A detailed account was promised in *Graefe's Archiv.* It has not been given there. This case will be referred to again later.

The fibres going from the central ganglia concerned in vision to the cortex are, in their path through the internal capsule, closely associated with fibres connected with other functions. It must be assumed, then, that a sudden lesion in this position which produced total hemianopia would give rise to other disturbances of function also — hemianæsthesia and hemiplegia.

But recently has attention been strongly directed to the occipital lobe as the seat of the injury in hemianopia, yet there are, as has been said already, several cases in which it has been demonstrated that the defect of vision was caused by a lesion in that locality. In most of these, as was naturally to be expected, this was not the only symptom pointing to a localized disorder. A destruction of the lobe of sufficient extent to excite abruptly complete hemianopia cannot always be strictly limited, and in some instances the other disturbances were doubtless merely its indirect results. There is, however, one case (Curschmann's[3]) where the patient was under observation at the time hemianopia appeared, and until his death not long afterward, in which this was the only symptom of local, the one important symptom of any, cerebral disease.

A man of fifty years, previously quite healthy, was brought to the hospital three days after swallowing by mistake sulphuric acid. He presented the usual symptoms of sulphuric acid corrosion, and, as he could not swallow, was nourished by enemata. The circulatory apparatus appeared normal. A week after admission embolism of the right brachial artery occurred. The morning of the next day the patient complained that he could see nothing in the left side of the visual field. Examination discovered that the left half of the field in each eye was wholly wanting, while central vision, eccentric vision in the right half of each field, and the fundus of both eyes were wholly intact. The hemianopia continued unchanged till death. No other symptoms of a localized disease in the brain appeared neither hemiparesis nor disturbance of sensibility; there was only slight delirium, which had not been present before the hemianopia was observed. After lingering in a very miserable condition, with difficulty in swallowing and vomiting of blood, the patient died of inanition sixteen days after the onset of the hemianopia.

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[1] Archiv für Ophthalmologie, xxviii., 2.

[2] Lancet, August 29, 1874, and May 22, 1875.

[3] Centralblatt für Augenheilkunde, 1879, page 181.

The autopsy showed the ordinary changes in the intestinal tract; inflammation of the intima of the aorta propagated from the œsophagus; a firm embolus of the right brachial artery; finally, in the brain, — while cerebellum, tractus opticorum, fundus of the eyes appeared normal, — a large patch of softening in the right occipital lobe, which extended to the surface and was situated mainly at the median side and apex of the lobe.

Here the slight delirium, of later date than the embolism, and most naturally to be regarded as a result of it, might well have been a consequence of the general condition of the patient, who was practically starving.

Baumgarten's case,[1] previously alluded to, is not so clean as the preceding one.

A strong healthy man, having made a long, cold journey, noticed the next morning on rising a great disturbance of sight. This proved to be a complete left hemianopia, the boundary line of the defect in both eyes sharp and passing vertically through the fixation point. $V = 1$, and perfect color sense. The visual defect persisted unchanged till death, which occurred after some months from failure of heart. In the course of the disease symptoms of severe heart and kidney affection appeared. The one important lesion was an old so-called apoplectic cyst in the substance of the right occipital lobe. This was of the size of a walnut, its lower wall separated from the cavity of the right posterior cornu by a layer of intact white substance several millimetres thick, its upper wall formed mainly of the windings of all three occipital convolutions, which had wholly undergone yellow softening, but whose configuration was still recognizable. There was also a spot of red softening, the size of a pea, in the roof of the left anterior cornu, and a small so-called apoplectic cicatrix, half the size of a lentil, near the centre of the right optic thalamus. Optic nerves and tracts, crura cerebri, corpora geniculata externa and interna on both sides, chiasma and corpora quadrigemina were normal macroscopically and microscopically.

In Haab's case[2] a woman, aged sixty-one, had endo- and pericarditis. This was soon followed by temporary paresis of the left extremities and a left-sided hemianopia which persisted till death, about a year later, from mitral insufficiency. The apex of the right occipital lobe was found somewhat shrunken, the pia passing loosely over a collection of clear serous fluid. Examination showed softening and destruction of a pretty large district of the cortex, involving the whole neighborhood of the sulcus hippocampi over a space of several square centimetres. The anterior end of the defect was six centimetres from the apex of the occipital lobe.

Vertically the degeneration measured two to three centimetres. The sulcus hippocampi together with the bordering gyri were destroyed. The destruction was confined chiefly to the cortex, so that between the cystic softening and the posterior cornu there was a fairly thick layer of white substance. No other pathological change in the whole brain. Region of thalamus, corpora quadrigemina, corpus geniculatum externum, and tractus on both sides completely intact. There was no other lesion to account for the paresis which was present for a short time after the embolism, so that it is to be assumed there was disturbance of the circulation in croscope discovered no atrophy of optici, chiasma, or the motor region of the right hemisphere. The mi- tractus.

Other cases might be cited; these are perhaps the most striking.

From the absence of demonstration of a sufficient lesion within the tractus, and the evidence offered by such cases as have been quoted, it may not unjustifiably be assumed that when homonymous hemianopia occurs as an isolated defect the seat of the injury is to be found in the occipital lobe.

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RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.[3]

BY WILLIAM F. WHITNEY, M. D.

CONTRIBUTIONS TO THE PATHOLOGICAL ANATOMY AND HISTOLOGY OF BERI-BERI.

Scheube[4] has had opportunity to make autopsies in twenty cases of this disease, which is endemic in Japan, Batavia, and Java. In all cases the nerves showed more or less degeneration and atrophy, the degree of this corresponding with the paralysis observed during life. The fresh nerves were hardened in osmic acid, and the microscopic examination of these specimens showed that the medullary sheath was swollen and destroyed by its division into larger and smaller drops. Fatty degenerated cells appeared, which, with the axis cylinders, were finally absorbed leaving simply the empty and collapsed sheath of Schwann. On cross section of the hardened nerves there was seen a more or less marked increase in the fibres, which varied considerably in their thickness, and between which lay groups of degenerated ones. This was shown by the coloration with carmine, which did not permit any distinction between medullary sheath and axis cylinder to be made out, as is seen in normal cases. The number of nuclei of the endoneurium was increased, and there were inflammatory changes about the vessels in the midst of the bundles. In chronic cases there was an increase of the connective tissue trabeculæ within the nerve trunks.

The branches supplying the muscles were the most changed, although some purely sensitive nerves were also affected.

Degeneration of the muscles goes hand in hand with that of the nerves. This is an atrophy and fatty destruction of the fibres with an increase of the nuclei. Frequently it appears as a colloid-like metamorphosis. The fibres become thinned, homogeneous, and have a tendency to break up into fibrilles. In place of the fibres which are destroyed appear newly-formed nuclei and later connective tissue. Thickening of the vascular walls is also present. The final result is a cirrhosis of the muscles similar to that of the nerves The atrophied muscles are marked by their pallor and yellow color.

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[1] Centralblatt f. d. Med. Wissenschaften, 1878, No. 21.

[2] Monatsblätter für Augenheilkunde, 1882.

[3] Concluded from page 253.

[4] Virchow's Archiv, vol. xcv., p. 146.

The spinal cord gave evidence of venous hyperæmia of the meninges with a serous effusion into the peridural and subarachnoidal spaces. It has been usual to regard the cord itself as affected in this disease, but the fact that the intensity of the symptoms noted during life and the amount of softening found after death stand in no direct relations causes the author to regard this as a post-mortem phenomenon due to the hot climate.

In six cases the entire cord was examined. In two there were great numbers of small corpora amylacea throughout the whole extent, but without any other observable change. In another case there was an atrophy and partial disappearance of the ganglion cells of the anterior cornua, but this is regarded rather as secondary. In the other cases the appearance was perfectly normal.

In three cases the nerve roots going from the lumbar region were examined and found normal. In a fourth case, where the process, in the peripheral nerves and muscles was most pronounced, these roots as well as the ganglia belonging to them were infiltrated with nuclei.

From the above observations there is no doubt that there is a multiple neuritis, and the author proposes the name of neuritis multiplex endemica for the disease.

The nerves of the heart were examined, and slight changes detected in them; single fibres in which the medullary sheath had separated into balls. The same was also noticed twice in the branches of the vagus, and once in the recurrent laryngeal and pulmonary nerves. Had the changes in the pneumogastric been as extreme as in the peripheral nerve fibres, there is no doubt but that death must have occurred much earlier in the course of the disease than is usually the case.

In acutely fatal cases there is a sudden distention of the lungs, with an increase of the subjective symptoms. The area of the heart's dullness becomes less, and finally disappears, while the lower boundaries of the lungs extend further backwards accompanied by tympanitic resonance. At the autopsy there was more or less extensive emphysema, especially of the anterior edge and apex. This is thought to stand in some relation to the lesion of the pulmonary nerves already described.

The ordinary condition of the brain was that of venous hyperæmia of the meninges and of the substance of the organ, with œdema of the pia mater. With an increase of the ventricular fluid there was associated œdema of the cerebrum.

The muscles of the heart were fatty in all cases. In seven this was moderate; in the others it was extreme, or even enormous. Usually diffuse, it never presented the marbled, or speckled look characteristic of pernicious anæmia. The right ventricle was more affected thant he left, although the reverse relation occasionally presented itself. Together with this there was twice found a colloid-like degeneration of the fibres. The alterations in the nerves are considered to be the cause of these degenerations. In two uncomplicated cases there were evidences of inflammation either as a diffuse interstitial infiltration, or as small, disseminated foci. The blood was fluid, and the thrombi described by the older writers are probably of post-mortem origin. A light atheroma of the aorta was present in about one half the cases.

Hyperæmia and œdema of the lungs were found, and occupied a varying distribution and intensity.

The liver and kidneys were filled with blood in consequence of the general venous congestion, and there was granular and fatty degeneration of the cellular elements, often to be distinguished by the naked eye Small hæmorrhages in the pelvis of the kidney were twice noted, and in a number of cases a general increase of the nuclei. In the liver these latter lay partly in the interlobular tissue and partly in the acini. In the kidney they were, as a rule, beneath the capsule. In one case, complicated by typhoid, small abscesses were present in the renal substance.

The spleen was always more or less enlarged, but as malaria was present in the region too much weight should not be attached to this fact.

Venous hyperæmia, varying in extent and variety, with occasional small hæmorrhages beneath the mucosa, was seen in the intestinal tract.

Hydropericardium with general œdema was of very frequent occurrence.

The infectious nature of beri-beri is very probable, although as yet no parasite has been found. For this speak (1) the granular and parenchymatous degeneration of the solid organs; (2) the inflammatory foci in the heart and muscle; (3) the existence of a splenic tumor in the acute cases.

A FATAL PEMPHIGUS-LIKE DERMATITIS WITH CHANGES IN THE NERVOUS SYSTEM.

Meyer[1] records a case which can be briefly summarized as above, and of which the following is a short history, with a description of the anatomical changes: —

An apparently healthy man was attacked by what was considered as eczema. At the end of four weeks papules, irregularly distributed, appeared on the nates and lower extremities, and gradually assumed the characteristics of pemphigus. The general condition of the patient was unsatisfactory. The appetite was soon lost, the pulse became rapid, and the temperature exhibited an evening exacerbation; sleep poor, and the urine loaded with urates. The strength declined, and the base of the bullæ did not become covered with epidermis as in ordinary pemphigus; in fact, loosening of the epidermis progressed unrestrained, then the epidermis began to scale off in large flakes without the accumulation of any amount of fluid beneath. It recalled the process in the skin after a severe burn. Within seven weeks death followed. There were symptoms referable to the central nervous system.

Histological Examination. If a section through the periphery of one of the parts deprived of its epithelium be examined with a low power, the corium was the part which had suffered most extensively. Its upper layers from the point where the process began were infiltrated with round cells, most numerous in the neighborhood of the vessels and the papillæ. This infiltration was superficial. The sweat glands were intact.

The papillæ were enlarged, swollen, and clubbed at the extremities. The blood-vessels were partly injected and partly occluded by new cells.

In places where there was deep destruction the papillæ were entirely wanting, leaving a nodular granulating surface, pierced here and there by the openings of the sweat glands.

The horny layer of the epidermis failed entirely over the diseased portion, on the edges of which were

[1] Virchow's Archiv, vol. xciv., p. 185.

irregular-shaped fragments, from the covering of the ruptured bullæ. The separation had evidently taken place at the summit of the so-called stratum granulosum. In places the points of the papillæ projected quite bare, and where the epidermis was preserved pus cells were freely intermingled.

Nearer the edge of the cellular infiltration and also deeper down beneath the glands were met numerous clear spaces without proper walls, or at most covered with a thin endothelium. These were partly empty and partly filled with a homogeneous coagulated mass, and must be regarded as lymph spaces.

Of the small arterioles lying deep in the cutis and subcutaneous tissue a large number were affected to a high degree by endoarteritis or entirely obliterated. In a small nerve trunk nothing but a slight thickening of the sheath could be detected. With higher powers many of the vascular loops of the papillæ or intervening tissue were bloodless with transparent walls, or else filled with a homogeneous or slightly granular mass presenting the appearance of a hyaline thrombus.

The other organs of the body were normal.

The nerves were further examined after treating with osmic acid. In the small subcutaneous nerves of the forearm, of the back of the foot, and of the thigh there were found numerous nearly empty sheaths, containing a number of nuclei and scattered drops of myeline. Some of the fibres were fatty degenerated in a marked degree. In many the medullary sheath was broken up, there was an accumulation of granular protoplasm with an increase of the nuclei about the sheath of Schwann. At some parts of their course the tubes are entirely collapsed, at others filled with granular myeline or a protoplasm rich in nuclei. Here and there had been formed regular granular corpuscles which lined the empty sheaths of the affected nerves.

The sciatic as well as the brachial plexus showed similarly affected fibres, while in the different muscular nerves they were wanting.

The sympathetic as well as the spinal ganglia were unchanged.

On the other hand the cord showed a marked alteration. Gray streaks could be seen along the posterior longitudinal fissure throughout the entire cervical and dorsal region; further grayish-yellow spots in the posterior bundles in the upper cervical, as well as transparent points in the lateral columns of the lower dorsal and lumbar regions. With the microscope the interstitial tissue was found to be everywhere thickened, and the nerve tubes surrounded by a rigid connective tissue, which was strongly colored by carmine but was very poor in nuclei. Lines of sclerotic tissue were found along the blood-vessels, which were thus rendered impervious. The nerve fibres were either affected singly or in groups, and were often so atrophied as to be recognized only as small colored points. This process was confined chiefly to the posterior and lateral portions of the cord while the anterior columns remained intact. In the gray substance the ganglion cells were found to be markedly pigmented, as is often the case in old people.

In this case we are not authorized to assume at once a direct connection between the sclerosis of the cord and the affection of the skin, since there is another process at work which may stand in a causal relation to both: namely, the obliteration of numerous vessels both in the spine and in the skin. This is all the more remarkable as there was not the slightest trace of such endo-arteritis obliterans in any of the internal organs. It may be considered that the alteration in the vessels, which had persisted for a long time, gave rise to nutritive changes, and this led, as is so frequently the case in the cord, to sclerosis of the connective tissue. When this had become dense enough a compression of the nerves resulted, and from this central disturbance changes were set up in the skin, which soon reached an unusual and fatal intensity, from the impairment of nutrition due to the arterial obliteration.

Naturally this is but an hypothesis, and further investigation must show what connection coincident destructive changes in the vessels of the skin and nervous centres can have.

Reports of Societies.

THIRTY-FIFTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THURSDAY, MAY 8TH. THIRD DAY.

THE Association assembled at the usual hour in the morning, and prayer was offered by REV. DR. PARET.

DR. KELLER, on a question of privilege, asked the Association to change the Secretary's Report, thus enabling the Nominating Committee to designate a time for the annual meeting, according to an amendment to the By-laws adopted at the last meeting. This was granted.

A Nominating Committee, as follows, was appointed to fill vacancies in the Board of Trustees of the Association's *Journal:* Drs. Ferguson, New York; Briggs, Tennessee; Reeves, West Virginia; Prewitt, Missouri; Peck, United States Navy; Russell, Missouri; Stormont, Kansas.

MEDICAL MUSEUM AND SURGEON-GENERAL'S LIBRARY.

The Committee on the Army Medical Museum and Library of the Surgeon-General's Office reported that Congress had been memorialized in behalf of a suitable fire-proof building and increased annual appropriations. The only result had been a favorable report from the Committee of the House for an appropriation of $10,000 for the Library. The Committee was continued.

SCIENTIFIC RESEARCH UNDER GOVERNMENT PATRONAGE.

DR. GEORGE M. STERNBERG, U. S. A., offered the following resolutions:—

Resolved, That we earnestly petition the Congress of the United States to make suitable appropriations for the prosecution of scientific researches relating to the causes and prevention of the infectious diseases of the human race, to be expended under the direction of the National Board of Health; and that a permanent detail of one medical officer of the army and one of the navy be authorized for the prosecution of researches of this nature.

Resolved, That a committee of five members of this Association be appointed to present copies of these resolutions to the Speaker of the House of Representatives, to the President of the Senate, and to the chairmen of the Committees on Public Health of the House and of the Senate.

The resolutions were adopted, and the President appointed the following gentlemen the committee: Dr.

Sternberg (chairman), Dr. Albert L. Gihon, U. S. A., Dr. I. M. Hays, Philadelphia, Dr. J. C. Dalton, New York, and Dr. J. E. Reeves, West Virginia.

CREMATION.

Dr. Keller, of Arkansas, presented a resolution to the effect that in a few years the cremation of the dead would be regarded as a sanitary necessity, that the decision of the courts had pronounced this method legal, and that from hygienic, religious, and sentimental stand-points this method of disposing of the remains of the dead was the best. Dr. Keller said that the remains of the late Dr. Gross were now on their way to be cremated, and asked for the adoption of his resolution. The chair ruled that the resolution was out of order because it introduced new business.

THE INTERNATIONAL MEDICAL CONGRESS, 1887.

The Committee appointed to consider a resolution inviting the International Medical Congress to meet in this country in 1887, reported through their chairman, Dr. Billings, a recommendation that a committee of seven (with the President, Dr. Flint) be appointed to invite the Congress to meet in Washington, and, if the invitation be accepted, that this committee act as the executive committee of arrangements, with power to add to its number, elect its own officers, and draw upon the Association for necessary expenses for a sum not exceeding five hundred dollars.

REPORT OF THE TRUSTEES OF THE ASSOCIATION'S JOURNAL.

Dr. J. M. Toner, of Washington, chairman of this board, read a report on the financial condition of the Association and of its *Journal*, now published in Chicago. The *Journal* as now published gave six times as much reading matter yearly as was contained in the former transactions. It was believed there would remain on hand at the end of the financial year $500 over and above the expenses. Dr. Toner thought the receipts had been kept down by the restrictions on advertising. The editor's report, read by Dr. Toner, stated that estimates had at first been made on the basis of 2500 subscribers, but that the actual circulation had been 3436, of which 3271 were among members and subscribers. The advertising had been slowly increasing, and the whole amount received from this source was estimated at $3000. The total income for the year had been $18,547.50. Dr. Davis believed that the financial condition of the *Journal* was such as to enable him, should he continue to be the editor for another year, to widen its scope of usefulness by engaging correspondents in more of the large cities, and to justify him in devoting more time to its editorial management.

In the opinion of the Trustees, the report of the editor showed the *Journal* to be in a satisfactory condition; it had been conducted with economy, ability, and judgment; the best interests of the Association had been kept in view, and its dignity maintained with rare discretion. It is believed that the experience gained during the past year, with the increased funds, will enable the editor to do better work in the future. In April of this year Dr. Davis had presented his resignation, but after correspondence with the Trustees he consented to withdraw it. Dr. Davis had informed them that while he would do the best he could for the *Journal* during the coming year, at the end of that period he would absolutely resign. Bids received from various firms for the publication of the *Journal* for the coming year were none of them as advantageous as those of the present publishers, and they had again been given the contract.

A minority report on the *Journal* was presented by **Dr. John H. Packard**, of Philadelphia, who began by stating his conviction that he could in no other way discharge his duty as a trustee. He did not desire to reflect on his colleagues, and was not hostile to the editor. He was influenced by no personal motive other than the warm interest he had taken in the success of the enterprise for the past four years, and he certainly had no desire to hamper it in any way. He had, however, understood that the financial condition of the *Journal* was really straitened, and that the editor had not drawn his salary. Of this he strongly disapproved. Moreover, he dissented from the majority report not merely from a financial point of view. The *Journal* had not even approached the standard which the organ of the Association should attain. He did not forget the difficulties confronting a new enterprise of this kind, but the defects of this publication were not those of youth, and were not decreasing. The object of the *Journal* should be not merely to spread out the minutes of the Association or papers read over one year. The object should be to make a strong, wide-awake, high-toned periodical, well equipped in every respect to be a medium of communication between members all over the country, and not a sectional or partisan organ of the Association. A thoroughly trained corps of editors is requisite. Access must be had to large libraries, where there is also opportunity to secure auxiliary work, and contributions should be liberally paid for. Facilities for mechanical execution are essential to real success. Of these requirements scarcely any seem to have been possessed. Due respect for the interests of the Association compelled him to state this as his sincere and deliberate judgment. He therefore recommended that the resignation of the editor, Dr. N. S. Davis, be accepted, and the publication of the *Journal* be transferred to some Eastern city, Washington, Philadelphia, or New York.

A motion to lay the minority report on the table was carried by 191 ayes to 74 nays, and a motion to adopt the majority report was put and carried.

OFFICERS FOR THE ENSUING YEAR.

The Committee on Nominations reported through its Chairman, Dr. Hooper, the following list of officers for the ensuing year: —

President. — H. F. Campbell, M. D., of Georgia.

Vice-Presidents. — J. S. Lynch, M. D., of Maryland; D. D. Mercer, M. D., of Nebraska; J. W. Parsons, M. D., of New Hampshire; H. C. Ghent, M. D., of Texas.

Treasurer. — R. J. Dunglison, Pennsylvania.

Librarian. — C. H. Kleinschmidt, District of Columbia.

Chairman of Committee of Arrangements. — S. D. Logan, New Orleans.

Secretary. — W. B. Atkinson, Pennsylvania.

Assistant Secretary. — W. H. Watkins, New Orleans.

Judicial Council, to fill vacancy, 1886, J. K. Bartlett, M. D., of Wisconsin.

To fill vacancies caused by expiration of term of service: J. H. Murphy, M. D., of Minnesota; J. M.

Toner, M. D., of Washington; W. Brodie, M. D., of Michigan; H. D. Holton, M. D., of Vermont; A. B. Sloan, M. D., of Missouri; W. B. Ulrich, M. D., of Pennsylvania; W. M. Beach, M. D., of Ohio.

OFFICERS OF SECTIONS, AND COMMITTEES.

Practice of Medicine. — H. D. Didama, M. D., of New York, Chairman; G. M. Garland, M. D., of Massachusetts, Secretary.

Obstetrics. — R. S. Sutton, M. D., of Pennsylvania, Chairman; J. T. Jelks, M. D., of Arkansas, Secretary.

Surgery. — Duncan Eve, M. D., of Tennessee, Chairman; E. B. King, of Pennsylvania, Secretary.

Ophthalmology. — Joseph A. White, M. D., of Virginia, Chairman; Eugene Smith, M. D., of Michigan, Secretary.

Diseases of Children. — John H. Pope, M. D., of Texas, Chairman; S. S. Adams, M. D., of District of Columbia, Secretary.

State Medicine. — E. W. Schaeffer, M. D., Chairman; J. M. McCormick, M. D., of Kentucky, Secretary.

Oral and Dental Surgery. — A. W. Harlan, M. D., of Illinois, Chairman; J. Ewing Mears, M. D., of Pennsylvania, Secretary.

Trustees of Journal. — H. F. Campbell, M. D., of Georgia; J. H. Packard, M. D., of Pennsylvania; Leartus Connor, M. D., of Michigan.

Necrology. — J. M. Toner, M. D., of District of Columbia, Chairman.

Committee on Necrology. — C. H. Franklin, M. D., Alabama; W. N. Yates, M. D., Arkansas; W. R. Clump, M. D., California; Charles Dennison, M. D., Colorado; C. W. Cranzoni, M. D., District Columbia; J. G. Thomas, M. D., Georgia; J. H. Hollister, M. D., Illinois; J. F. Hibbard, M. D., Indiana; C. V. Motram, M. D., Kansas; D. S. Reynolds, M. D., Kentucky; B. A. Ashby, M. D., Maryland; H. O. Marcy, M. D., Massachusetts; W. F. Brenkey, M. D., Michigan; A. J. Stone, M. D, Minnesota; Dr. Smythe, Mississippi; R. C. Moore, M. D., Nebraska; Stephen Wicks, M. D., New Jersey; J. Lewis Smith, M. D., New York; E. E. Graves, M. D., New Hampshire; F. E. Larrimore, M. D., Ohio; I. Minis Hays, M. D., Pennsylvania; W. E. Anthony, M. D., Rhode Island; T. T. Robertson, M. D., South Carolina; D. D. Saunders, M. D., Tennessee; —— Harris, M. D., Texas; C. M. Chandler, M. D., Vermont; H. M. Clarkson, M. D., Virginia; W. F. Van Kirk, M. D., West Virginia; J. K. Bartlett, M. D., Wisconsin; W. R. Forward, M. D., United States Navy; N. L. Bates, M. D., United States Navy; H. W. Austin, M. D., United States Marine Hospital Service.

METEOROLOGY.

The Committee on Meteorology reported through its chairman, Dr. N. S. Davis, that the observations on the relations of meteorological conditions to acute diseases had been but few, owing to the lack of general interest in the matter. The investigations regarding ozone and organic matter had been carried out systematically in the past year, and the results were published, in part, in the *Journal*. Dr. Davis recommended that the work of the committee be continued.

COLLECTIVE INVESTIGATION OF DISEASE.

As chairman of the committee on this subject Dr. Davis reported in favor of accepting a proposition from a similar committee of the British Medical Association in favor of coöperation, and recommended the appointment of a central committee of seven members, with power to appoint a sub-committee in each State, to correspond directly with the British Committee on Collective Investigation. A sum, not exceeding $300, should be appropriated to enable the central committee to inaugurate the work. The same cards and blanks might be used by the two Associations. The report and recommendations were adopted.

The Judicial Council made a short report on matters of discipline.

The Address in Surgery was read by title only, the subject being The Effects and Results of Operations for the Relief of Gunshot Wounds of the Small Intestine.

The Association then adjourned to Friday.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

SIXTH ANNUAL CONGRESS, HELD IN THE CITY OF NEW YORK MAY 12, 13, AND 14, 1884.

First Day. Morning Session.

The Association met at the hall of the New York Academy of Medicine, and after the roll-call listened to an Address of Welcome by the President, Dr. Franche H. Bosworth, of New York, who at its conclusion read a paper on

THE CLINICAL SIGNIFICANCE OF FIBRINOUS EXUDATIONS UPON THE MUCOUS MEMBRANE OF THE UPPER AIR-PASSAGES.

The following conclusions were arrived at by the author: —

(1.) That a fibrinous exudation which occurs in the crypts of the follicles of the faucial or pharyngeal tonsil or mucous membrane of the lower pharynx has no tendency to extend, and characterizes a disease which is self-limited and not dangerous to life.

(2.) That a fibrinous exudation which occurs upon the surface of the tonsil or of the mucous membrane of the fauces constituting a croupous membrane, so called, presents gross appearances by which it can be unmistakably recognized.

(3.) That a croupous membrane in the fauces of an adult marks the existence of a disease which, while being undoubtedly a blood-poison, is still a self-limited infection, and which involves no danger to life.

(4.) That a croupous membrane forming in the fauces of a child marks the occurrence of the same disease as croupous membrane in an adult, but in the child there is the additional danger of a new centre of development arising in the larynx, where it may involve the greatest danger to life, but entirely as a mechanical obstruction to breathing.

(5.) That a diphtheritic membrane developing in the fauces marks the occurrence of a disease which is dangerous to life, not only from primary and secondary blood-poisoning, but also from the tendency to the development of the same morbid process in the larynx.

Mucous membrane that was in a state of acute catarrhal inflammation offered, he thought, a favorable nidus for the occurrence of diphtheritic deposit without there being any necessary connection between the two processes. The catarrhal condition was not, in his opinion, the prodromal stage of the diphtheria.

Dr. **Beverley Robinson** made some extended remarks in which he took exception to many of the views presented by Dr. Bosworth. Thus with regard to the question of follicular tonsillitis, the pathological appearances of the exudation from the interior of the follicles did not resemble microscopically the condition to which Dr. Bosworth alluded in speaking of the true croupous membrane. There was found simply cheesy masses which were pressed out from the interior of the crypts and did not in any sense partake of the nature of an exudation which was usually regarded as fibrinous. With regard to the question of croupous tonsillitis, he said that while there were, perhaps, many cases in which the membrane itself did characterize the type of a disease which was only of a certain local quality, yet he had seen cases in which the mucous membrane did not seem to be incorporated with the false membrane itself, where the affection seemed to be of mild type, but after a few days they became of a very serious character, the membrane, which at first had been white and easily detached, becoming dark and so firmly adherent to the underlying tissue that he could not then say the case was not one of diphtheria. He thought that there were a certain number of cases ordinarily called croupous tonsillitis, which in all probability began, as stated by several authors (among them Dr. DaCosta), in a herpetic eruption of the tonsils. As to the origin of these affections in the local absorption of certain germs, while the President's views, shared by many others, might have a theoretical basis, they were in his own mind far from being proven. Unquestionably we did find in such affections of the air-passages the presence of bacteria, but the microscope might fail to show the slightest difference in their appearance whether they were present in one affection or another, and we were unable to say whether such germs were active in carrying the poison or whether they were entirely innoxious.

Dr. **W. C. Jarvis** said that he could for the most part substantiate the views of Dr. Bosworth as regards the gross pathology of the exudation met with in the upper air-passages. Several years ago his attention had been first called to inflammation of the pharyngeal tonsil by the occurrence of the affection in his own person. His inference as to the complication of the third tonsil was afterward verified by repeated observations upon numerous subjects of the disease. A feature of acute follicular pharyngitis which did not seem to have received any attention was one in which the secretion was retained, eventually escaping upon rupture of the membrane, and covering the pharynx with a white membrane. Such a change did not occur when the inflamed follicles remained patent.

Dr. **F. I. Knight** said he wished to call attention to an important practical point which he thought was quite apt to escape the attention of physicians, and that was the increased susceptibility to diphtheritic infection during the existence of any simple acute inflammation of the air-passages. Hence, however mild the latter might be, he thought it advisable to give a guarded prognosis.

Dr. **S. W. Langmaid** thought that at the beginning there might be the symptoms of only a simple pharyngitis, while in reality the case began as one of diphtheria, its true nature being masked until later.

The **President** said that the point made in his paper was that a membrane in a state of acute inflammation offered a better nidus for the germ which developed the diphtheritic or croupous process than did the healthy membrane. He felt called upon to take exception to Dr. Robinson's view that follicular tonsillitis was ever characterized by cheesy deposits in the crypts of the tonsils. The resemblance of the pathological characteristics of the exudation to those of croupous membrane on the surface was sufficiently close to warrant us in the conclusion that the two conditions were very nearly allied, if not identical, the difference being only such as we would expect to find from the difference of location in the two deposits. In some cases, indeed, the membrane overflowed the crypts, as it were, and spread out on the surface, constituting a membrane in the true sense of the word. He wished particularly to emphasize the point that we could by examination throw a great deal of light on the clinical tendencies of inflammatory diseases of the fauces. As regards the matter of germinal ætiology, it seemed to him that in the absence of any more definite theory this presented the best explanation of the facts noted.

Dr. **John N. Mackenzie**, of Baltimore, read a paper entitled

A CONTRIBUTION TO THE STUDY OF CONGENITAL SYPHILIS.

In the first part of it he detailed with great minuteness a case which had come under his observation. The child remained in a healthy condition from the first to the third year, when the first trouble to develop was interstitial keratitis of both eyes. Both eyelids also became paralyzed, and there was intense occipital cephalalgia, which lasted over a month. This was before Dr. Mackenzie saw the case, but under intelligent treatment these symptoms subsided, though the child was left with internal strabismus of the right eye and deafness of the right ear. Afterwards it suffered from violent ulcerative inflammation of the pharynx, tonsils, and larynx, and extreme ulceration of the hard palate, with dysphagia, complete aphonia, and profuse and continuous muco-purulent discharge. While all these troubles were still increasing in severity the patient was taken with a mild attack of scarlatina, which had a most salutary effect upon all the lesions and symptoms. There were two features which he thought were of special interest in this case. First, while deep ulceration of the lower pharynx was not rare in congenital syphilis, such a degree of stenosis as existed in this case was very unusual. Second, the paralysis of both upper eyelids, which was undoubtedly of cerebral origin, and probably depending on the presence of gummata.

Further experience, Dr. Mackenzie went on to say, only served to strengthen the force of his convictions on the subject of congenital syphilis of the throat as he had expressed them in an article published in the *American Journal of the Medical Sciences* for October, 1880, in the course of which he had said that a great deal of obscurity still prevailed concerning these palate-pharyngeal ulcerations in consequence of a persistent adherence to the old superstition that referred them indiscriminately to scrofula; an examination of the subject showing that syphilis, tuberculosis, and lupus were all alike ascribed to it. But, excluding lupus, tuberculosis, and certain other rare forms of ulceration, he had maintained that deep palate-pharyngeal destruction in children was nearly always the result of syphilis.

Dr. Mackenzie then announced the following propositions: —

(1.) That in congenital syphilis deep ulceration may invade the pharynx and naso-pharynx.

(2.) That when the eruptions of inherited syphilis are apparently delayed the pharyngeal and laryngeal complications are apt to be more severe.

(3.) That females are more frequently attacked with throat ulcerations than males.

(4.) That ulceration may occur in any situation, but its favorite situation is the palate, and especially the hard palate.

(5.) That when ulceration occurs at the posterior part of the hard palate the tendency is to involve the soft palate and velum.

(6.) That the next most common seats of ulceration in their order of frequency are the fauces, naso-pharynx, posterior pharyngeal wall, nasal fossæ and septum, the tongue and the gums.

(7.) That ulceration, especially that of the palate, shows a disposition to centrality of position together with a special tendency to caries and necrosis of the bone.

(8.) That the tendency to necrosis exists at all periods of life, but especially in early youth, at which period it is more destructive and less amenable to treatment.

(9.) That whilst deep pharyngeal ulceration generally precedes or coexists with similar affections of the larynx, the latter occurs too without evidence of preexisting pharyngeal lesions.

(10.) That laryngeal ulceration does not commonly follow the pharyngeal destruction of so-called latent syphilis, those palato-pharyngeal ulcerations found in tardy congenital syphilis having little tendency to invasion of the larynx, but rather to infiltration of the naso-pharynx and nose.

(11.) That simultaneous or consecutive ulceration of the palate, pharynx, and nose seems to be characteristic of syphilis, or at least seems to occur more frequently in this than in any other disease.

While the throat ulcerations of congenital syphilis showed a tendency to produce rapid destruction of tissue, and were often uncontrollable by medicinal measures, the lesions sometimes subsided as if by magic on the occurrence of severe acute exanthematous disease, the poisons of the two affections being apparently mutually destructive. These remarks did not apply to diphtheria, however, as this disease seemed only to aggravate the existing troubles, and the patient usually succumbed rapidly to its attack; but between congenital syphilis and such acute fevers as scarlatina, measles, and chicken-pox there appeared to be a well-marked antagonism.

The paper was discussed by the President and Drs. Shurley, Hartman, Knight, and Donaldson, and the opinion of the writer in regard to the identity of syphilitic and so-called scrofulous ulcerations of the throat was in the main sustained by the speakers, Dr. Knight calling special attention to the great difficulty, if not impossibility, of getting at a syphilitic history in many cases. In reply to a question of the President, DR. MACKENZIE said that in the treatment he relied mainly on mercurial inunction and the internal administration of iodide of potassium; and DR. BOSWORTH then said that he had of late years been gaining increasing confidence in the use of mercurials, rather to the exclusion of the iodide.

APPOINTMENT OF COMMITTEES.

The Chair appointed on the Nominating Committee Drs. F. I. Knight, of Boston; George M. Lefferts, of New York; and J. Solis Cohen, of Philadelphia; and on the Auditing Committee Drs. J. N. Mackenzie, of Baltimore; and F. H. Hooper, of Boston.

ELECTION OF FELLOWS.

There being two vacancies in the membership of the Association, which is limited to fifty, Drs. Clarence C. Rice, of New York, and J. Solis Cohen, of Philadelphia, were elected Fellows. The thesis submitted by the former was entitled The Diagnostic Value of Pathological Appearances, and that of the latter A Case of Anchylosis of the Left Crico-Arytenoid Articulation.

FIRST DAY. AFTERNOON SESSION.

A paper on

RETRO-PHARYNGEAL ABSCESS

was read by DR. J. O. ROE, of Rochester, N. Y. He said that the post-pharyngeal cellular tissue was specially liable to abscess from its looseness and comparatively low vitality. Retro-pharyngeal abscesses were divided into two varieties: those originating in the soft tissues, and those originating in disease of the cervical vertebræ. The former variety again were divided into classes: those originating in the glandular structure, and those originating in the cellular tissue. Having given a sketch of the anatomy and glandular connection of the parts, he gave a list of the causes to which retro-pharyngeal abscess had been attributed, dividing them into three classes, — idiopathic, traumatic, and secondary. In speaking of the diagnosis he stated that the condition was to be differentiated from croup, the presence of a foreign body, œdema, pharyngeal tumors, and enlarged tonsils, and that by inspection and digital examination the trouble could usually be readily recognized. The prognosis when the abscesses originated from disease of the bone was unfavorable, and when originating in the soft tissues was least fatal in cases of the idiopathic variety. The only treatment was opening the abscess and evacuating its contents, and for this purpose, as a rule, he preferred a small incision at first, as recommended by Albert, as presenting less liability of the pus getting into the larynx and trachea; afterwards enlarging the opening so as to make the evacuation complete.

This affection was one which occurred for the most part in infants and young children; fully one half of those reported having been in the first year of life. Dr. Roe then gave the histories of three cases which he had seen in consultation. The first two of these occurred in infants under one year, and in both the trouble had been attributed to diphtheritic croup. He operated in the way mentioned above, and in each instance complete and instant relief was afforded. The third case occurred in a young man twenty years of age, who died from exhaustion on the third day after the abscess was opened. Here the pus burrowed downwards behind the œsophagus.

DR. DEBLOIS said he had been very much interested in Dr. Roe's paper, evincing, as it did, the result of much laborious research, and particularly because he had himself had three cases. One had been in an adult, and the two others in children, and in one of these the incision had to be carried through the posterior pillar of the fauces. He differed with Dr. Roe as to the size of the incision, and thought that it should be free, so that the pus could be at once evacuted. After the incision the head should be forced down, and if in a child the patient should be inverted. He thought the position of the head, which he had always found carried very far back in retro-pharyngeal abscess, should be laid stress upon as a point of diagnosis.

Dr. George M. Lefferts thought that this affection was much more rare than was generally supposed. He did not believe that it was ever caused by nasal catarrh; for if this was the case it would be very common. Neither did he believe that it was ever due to pharyngeal tuberculosis or injury of the posterior wall of the pharynx. It was probably due to a simple phlegmonous inflammation of the cellular tissue arising from causes which produced abscess elsewhere. The diagnosis was perfectly simple, by inspection and digital exploration, and the treatment was to be founded upon precisely the same surgical principles on which abscess elsewhere in the body was treated.

Dr. George W. Major stated that the first case under his notice occurred in a child four years of age as a sequence of measles. Dyspnœa and dysphagia were very marked, but instant relief followed excision and evacuation of the pus. The second case, which followed after cerebro-spinal meningitis, and was attended by the most urgent symptoms, was also immediately relieved by opening. A third case had been referred to him by an ophthalmic surgeon as one of retro-pharyngeal abscess, and although palpation did not bear out the presence of pus he made an exploratory incision, cutting into an evidently malignant growth. Eighteen months afterward the patient died, when a large sarcoma was found occupying and absorbing a large portion of the base of the skull and pressing on the brain.

Dr. R. P. Lincoln related a case illustrating the fact that other operative interference than simple incision of the posterior wall of the pharynx, in order to get rid of the contents of these abscesses, was sometimes necessary. On incising the abscess in the pharynx this part immediately collapsed, affording prompt relief from threatened suffocation; but there was no perceptible change in the size of two other tumors which caused bulging on each side of the neck under the angle of the jaws, though they seemed to be less tense. By introducing the aspirating needle into each they were readily evacuated, though on the left side it was necessary to repeat the operation twice.

Dr. J. N. Mackenzie called attention to the possibility of confounding a gummy, syphilitic tumor of the posterior pharyngeal wall with a retro-pharyngeal abscess, and related a case referred to him where the mistake had been made by a brother practitioner.

Dr. E. F. Ingals related two cases occurring in his experience: one in a child ten months old, and the other in a man about fifty years of age. The latter came to him because of laryngeal trouble, and the retro-pharyngeal abscess, which developed slowly, opened spontaneously. Soon afterward the patient died of cerebral meningitis, and the cause of the abscess seemed to be the same as that of the latter.

Dr. C. W. Chamberlain had also seen two cases. The first was of the ordinary character; but the second was apparently unique. The abscess was situated posterior to the left tonsil, and as the case was in the country its importance was not at first recognized. When urgent symptoms set in, Dr. Chamberlain was sent for, but did not arrive until too late. The abscess had opened spontaneously, and very profuse hæmorrhage, which quickly proved fatal, had ensued. The autopsy showed that the cause of death was rupture of the internal carotid artery from weakening of its walls by the abscess. The child was probably syphilitic, he thought.

The paper was also discussed by Drs. Jarvis, S. Johnston, and Cohen, and the discussion brought to a close by Dr. Roe.

Dr. T. A. DeBlois, of Boston, read a paper on

CONGENITAL WEB OF THE VOCAL BANDS, WITH CASE.

The case was that of a female patient twenty years of age. Her voice was weak and puerile, and she stated that this had always been the case. She was first under the care of Dr. Farlow, his colleague, at the clinic where she was seen, and afterwards under his own. The patient had a very dependent epiglottis, and the parts were so sensitive that it was a considerable time before any view of the larynx could be obtained. It was then found that the anterior half of each vocal band was covered by a white web which extended between them. The intolerance of the larynx having after a time been in a measure overcome, Dr. DeBlois introduced a Mackenzie forceps with the idea of tearing the web apart, but only succeeded at first in scratching it. Afterwards, however, he was able to split it across, leaving a jagged, dentated edge on each side, but the next day he found, to his chagrin, that the torn surfaces had united. He then introduced a probe to break up the adhesions, and the treatment of expansion was afterwards continued by Dr. Farlow. As a result of these procedures the voice of the patient gained in register three upper notes and four lower ones. Having completed the history of the case, Dr. DeBlois said that the bibliography of the subject was meagre, and that he had been able to find only three similar cases recorded. These he quoted.

Dr. M. J. Asch said that he had met with one case which was not congenital, but the result of inflammatory action, and there was also a web of one eye. The patient refused operative interference.

Dr. J. H. Hartman said he questioned the advisability of introducing and forcibly expanding a pair of lateral forceps in the larynx, and would prefer the use of the covered or tube bistoury for the division of webs.

Dr. Wm. H. Daly, of Pittsburg, read a paper on

GUNSHOT WOUND OF THE LARYNX, INVOLVING THE VOCAL BANDS.

He expected to have presented the patient to the Association, but he had been unable to attend.

Drs. J. Solis Cohen and **M. J. Asch** spoke of the rarity of this accident. The former said that he once had the opportunity of seeing Dr. Daly's case, and at that time he doubted the correctness of the diagnosis; but the subsequent history proved conclusively that he had been mistaken.

Dr. George M. Lefferts said that there was one specimen of gunshot wound of the larynx in his collection at the College of Physicians and Surgeons, but, unfortunately, there was no history with it. The ball had undoubtedly remained in the larynx, as a tracheotomy wound was visible; the operation having probably been performed for the relief of dyspnœa.

The last paper of this session was by DR. J. SOLIS COHEN, of Philadelphia, and was entitled

A CASE OF COMPLETE PARALYSIS OF THE LEFT VOCAL BAND IN EXTREME ABDUCTION, THE RESULT OF AN INCISED WOUND OF THE NECK.

This he considered was a unique and extraordinary case. The wound, although the patient denied this, was undoubtedly suicidal, being made from behind forward. It severed the sterno-cleido-mastoid muscle, was deepest just in the track of the pneumo-gastric nerve. There had been complete aphonia ever since the injury, which was stated to have been received in November, 1883, and the left vocal band was found to be immovable in a position of extreme abduction, while the right band was normal. In forced inspiration the latter did not go as far out as the left constantly remained. The case and the somewhat obscure subject of adductor paralysis brought up by it gave rise to a discussion of some length by the Fellows, in which no great amount of light was thrown upon the matter. Dr. Cohen stated that he regretted very much that some of the gentlemen who had recently been attending the American Medical Association at Washington had not stopped over in Philadelphia, as he had urged them to do, so that they might see the case for themselves.

In the evening the President gave a reception at his house to the Fellows of the Association, at which many prominent medical men of the city were present to meet them.

(To be continued.)

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

MAY 12, 1884. The President, DR. CHARLES D. HOMANS, in the chair.

DIABETIC COMA.

DR. R. T. EDES reported the case. The patient had been in the City Hospital a year ago for the removal of a tumor in the leg, and afterward began passing much saccharine urine, became emaciated, and was admitted to the hospital a week ago. The diet had been rather limited, although the so-called diabetic bread, which is never entirely free from starch, had been allowed. Because of vomiting the diet had been for a short time even more limited.

Yesterday morning the patient got up and then went to bed again, and was found, at half-past nine, partly comatose, breathing deeply, but at the normal rate, with dull eyes, cold extremities, and livid hands and face, the hands being purple, but the face blue. Consciousness was not entirely gone, as an attempt to examine the eyes was resisted. Brandy and ether were injected subcutaneously, and later carbonate of ammonium and brandy were swallowed. Although the patient roused slightly, death occurred at eight in the evening, the temperature at no time rising above ninety-four in the axilla and ninety-five in the rectum. Five ounces of urine were got by the catheter, but it has not yet been examined.

Certain points in the case seemed to the speaker of interest. First, ether given under the skin in the morning was smelt in the breath three and a half hours after. Second, most cases ending in diabetic coma have made rapid progress. Here the disease lasted less than a year. Third, this patient had shortly before the attack had a senna injection which, as it proved, did not prevent its occurrence. Fourth, there had been no narcotic given. Last, the diet had been low and had been almost wholly meat. That had been advanced as a cause of diabetic coma. Dr. Edes had, on the other hand, seen a case in consultation with Dr. Post, in which the patient had been under observation and treatment for but a few days, and who nevertheless died in this way.

DR. BUCKINGHAM said that he had been called to see diabetic coma in a boy, from whose care he had been discharged some time before, and who had meanwhile, for some weeks and quite up to the time of the attack, been living largely on starchy food. The cause of coma cannot, always at any rate, be the exclusive use of an animal diet.

DR. O. F. WADSWORTH read a paper on

HEMIANOPIA.[1]

DR. G. HAY said that he was very glad to have heard this paper. The course of the optic nerve fibres in their continuation through the brain is an interesting subject. First, as a matter of anatomy. It is only recently that they have been considered to extend to the occipital lobe. Such a course of the fibres is not given in some comparatively recent text-books of anatomy. And this is not strange, for he supposes the fibres have not even yet been followed continuously through this course by the anatomical observer. The evidence that they extend to the occipital lobe is derived from clinical observation and pathological anatomy. The conclusion, however, is equally valuable, though arrived at indirectly.

Although at times we may be in doubt whether the cause of an hemianopia is in the optic tract or the occipital lobe, yet the knowledge of the position of the visual centre must contribute somewhat to the solution of the complicated problems of cerebral diagnosis.

A point of interest to him in this position of the visual centre, so remote from the eye, is that this is consistent with the doctrine that something more than the eye is concerned in vision.

This extended course of the optic fibres has some relation to the physiology of vision; and as this latter (vision) is a complex process, it may be, considering this complexity and the extent of the optic fibres, that all the parts of vision are not related in precisely the same way to the nervous apparatus.

Light and color may perhaps have some special relation to the retina, while the conception of form and distance may be more intimately associated with another part of the nervous apparatus. Then we have in vision, he thinks, a conviction of the objective reality of the thing seen, and also it is to be noticed that although memory is to be distinguished from vision and applies to other matters, such as sound and ideas, yet it is essential to the efficiency of our vision. For instance, if in all cases we failed to remember that we had ever seen an object before, such vision, divorced from memory, would be practically very different from what it is at present, and comparatively useless.

Differences of opinion exist with regard to the relation of the mind to the brain, but the subject is an abstruse one, and probably requires for its solution considerations other than what we generally consider as merely physical.

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[1] See page 483 of this number of the JOURNAL.

Dr. Hay desired to express again his pleasure at having heard Dr. Wadsworth's instructive paper, and considered it as one not merely to be listened to once, but as deserving to be studied.

Dr. J. J. Putnam spoke of the importance of the subject of vision to general practitioners. Cases sometimes occur in which early recognition is of value, as, for instance, after injury, when loss of vision may be hysterical, but hemianopia is not likely to be simulated.

He mentioned a gentleman who lost the power not of seeing, but of attaching significance to what he did see; who found that he could not read, and could recognize friends only with difficulty. Here was a lesion, functional indeed, in that part of the brain that attaches ideas to what is seen. The location of function may be of practical use, and ought to be the common property of the profession.

Dr. Edes inquired of Dr. Wadsworth if it is settled that hysterical amblyopia is never confined to one side.

Dr. Wadsworth answered that he would not say that it is universally accepted, but that in all the reported cases examined by competent oculists it has been found to be double. It is usually greater in one eye than in the other.

He also referred to the case of word blindness mentioned by Dr. Putnam, and said he had recently seen, in an article in the *London Medical Record*, the statement that in such a case Charcot had found the only vision to be situated in the angular gyrus.

Dr. W. W. Temple reported four cases of

POISONING BY FUMES OF NITRIC ACID.

The cases resulted from the accidental emptying of a carboy of commercial nitric acid.

Case I. Mr. I. S., aged twenty-four. Health good at time of accident (September 17, 1883). By mistake a carboy of commercial nitric acid (containing one hundred and sixty-five pounds) was brought to the store in which the young man worked. In attempting to get the box containing the carboy back on the truck the stopper came out, and the carboy emptied itself rapidly on the floor, and in attempting its removal the fumes of the acid were inhaled. The sensation was that of suffocation. He would rush out to the air for a moment or two and then return again. This was continuing for thirty to thirty-five minutes, after which the irritating effect passed off. Whilst in the air he felt quite himself. In about three hours he began to have a sense of constriction about the chest, with cough and pain on inspiration. On going home, his wife noticed his paleness and asking what was the matter, his answer was, "Nothing, only I feel so weak." During the afternoon and evening he coughed considerably with increased pain in the chest, and when seen for the first time on the next morning had the same symptoms. The paleness was a peculiar almost lemon tint. Examination of the lungs was negative. On the third day a few moist râles were noticeable all over the chest. Slight cough with pain on full inspiration, together with a feeling of weakness, were the only symptoms; these had left him at the end of the week, and had it not been for a large ulcer in the gluteal region (caused by falling into the acid) he could have resumed his work. As it was, he remained at home ten days.

Case II. Mr. L., aged twenty-seven. Health good at time of accident. History of exposure same as previous case. Slight hæmoptysis twice during the day after the accident; then, as he expressed it, "he had a severe cold," which lasted two weeks. Good recovery.

Case III. A gentleman, aged fifty-seven, exposed to the acid fumes for a few moments, had an attack of pneumonia, which his physician ascribed to that cause.

Case IV. This is the case of special interest in the series.

Mr. C., aged fifty-four. Health always good, and at time of accident exceptionally so. Due to his interest in the store, his exposure to the acid was much more prolonged than any of the others. In endeavoring to remove the open carboy he slipped and fell, his face and mouth coming in close proximity with the mouth of the carboy; he must in falling have inflated the lungs to their fullest extent, and that with the strong acid fumes. He remained in and about the store until the danger was over, and then went to a neighboring clothier's to get new clothing. Returned to the store and resumed his work, feeling well.

About half-past one P. M. (four hours after the accident), not feeling "just right," he concluded to go out and take the air. Took a horse-car and came up to his brother's on Columbus Avenue. Whilst there he was evidently not feeling well, and first began to cough. Coughing was painful, and was increased by deep inspiration. He drank some tea, and at three P. M. walked, with assistance, to Dr. Temple's rooms (a distance of half a mile).

Face pale, and anxious expression. Pulse rapid and compressible, 124. Respirations rapid and shallow. This he explained as being due to the fact that deep breathing caused cough and the cough pain. He got a full dose of ammonium carbonate (ten grains). He asked about the possible dangers from the accident. After resting two hours he regained natural color. Pulse 90; better character. Complained only of feeling weak, and a tightness about chest. Cough much diminished. Then took horse cars to Old Colony Depot. In walking from the car to the depot noticed a dragging step, and that the cough was increased by exertion. Took train to his home at Neponset, driving to his house. In going from his carriage to the house noticed the same dragging step with evident loss of muscular power. During the night he coughed almost incessantly, expectoration being frothy and of a straw color.

Examination of chest negative.

September 18th. Toward morning he was much easier, coughing only occasionally. Took considerable milk (a tumblerful every hour for three hours). Pulse 90; fair character. Respiration 24. During the morning he continued comfortable, and took nourishment often.

Three P. M. Much the same condition. Pulse 94; fair strength. Respirations, somewhat more rapid, 28. Free from pain with the exception of a sensation of tightness about chest.

Half past five P. M. Pulse 120; feeble. Respiration 44. Coarse râles heard all over chest. At 6.15 he died.

Autopsy, forty-eight hours after death, by Dr. F. W. Draper.

Both lungs free.

Heart. Right auricle a little distended, but not engorged. In posterior wall of right auricle four small ecchymoses grouped. Whole heart retains blood which is of dark color and firmly clotted. Size of heart normal. Structure normal.

Endocardium — normal.

Lungs. External color of left lung rather darker than normal, pits on pressure, markedly œdematous and crepitant in every part. Bronchial mucous membrane but little reddened and with no apparent swelling.

Right lung. More deeply reddened, with more tendency to engorgement. Mucous membrane of larynx and trachea injected to a marked degree; just above the bifurcation of the trachea and at the opening of the right bronchus are four minute submucous ecchymoses, the largest the size of a pin's head.

Vocal chords free, and chink of glottis open.

Epiglottis. Its inferior surface shows marked congestion, and at its base several submucous ecchymoses, the size of a pin point.

Kidneys and *liver* injected.

Stomach, intestines, spleen, normal.

Christison and Taylor both report cases that are so similar to the last one that perhaps it would be interesting to review the notes on them.

In March, 1854, Mr. Haywood, a chemist, of Sheffield, England, lost his life under the following circumstances: He was pouring a mixture of nitric and sulphuric acids from a carboy containing sixty-five pounds, when by some accident the vessel was broken. For a few minutes he inhaled the fumes of the mixed acids; three hours after the accident he was sitting up and appeared to be in moderately good health. He was seen by a medical man, and complained merely of some cuts about his hands. Later he coughed violently. In three hours more there was difficulty of breathing with increase of the cough, also a sense of tightness at the lower part of the throat. At times he could scarcely breathe. He died eleven hours after the accident. Autopsy showed congestion of the trachea and bronchi, with effusion of blood. Heart flaccid, and contained but little blood. No record of condition of lungs.

The other case is as follows: A chemical manufacturer, in endeavoring to remove from his store-room a hamper in which some bottles of nitric acid had burst, breathed the fumes for some time, and was seized in four hours with symptoms of inflammation. At night his urine was suppressed, the skin became blue; at last he was seized with hiccough, acute pain in the diaphragm, convulsions, and delirium. Death in twenty-seven hours after the accident.

It had occurred to the speaker that death may have resulted from poisoning with nitrous acid, with which commercial nitric acid is contaminated.

The fact that there seems to be a delay in all the symptoms (in all the cases) of several hours he was at a loss to explain, as the effect from the nitrate as to time is not recorded. We may, however, conclude that the fumes are both local and central in their action; that the action is at first irritant to the lungs with a probably direct effect on the heart and muscular coat of the arterioles, and later a centric action on the cord, and that there is bronchial irritation, hyperæmia, and œdema of the lungs, and later pneumonia; also that in the cases there is a stage when there seems to be marked improvement in all the symptoms, giving, for the time being, hope to the physician and friends, but hurrying on later into disastrous and fatal results.

The treatment after removing the cause must be symptomatic. The post-mortem appearances to be expected are, as a rule, if death occur early before pneumonia has set in, only a more or less marked change in the organs of respiration, hyperæmia, swelling, ecchymoses, œdema of the lungs; sometimes possibly, fibrous membranes in the bronchi.

Dr. F. W. Draper spoke of the great rarity of cases like those reported. He had been able to find only five cases recorded; and it was fair to Dr. Temple to remark that none of them compared with his in fullness and accuracy of detail with regard to the manner of the accident, the subsequent clinical history, and the post-mortem appearances. He regretted, however, that the blood and some of the tissues had not been submitted to chemical analysis. With regard to the writer's ingenious suggestion that the toxic effects might be due to nitrous acid in the system, Dr. Draper admitted that it was in harmony with the clinical data. To those who witnessed the autopsy in the fatal case, the comparatively insignificant changes observed in the air-passages were a surprise, and seemed to indicate that the fatal result had been due more to a general toxic action of the acid than to a simply local irritation.

Dr. Benjamin Cushing thought the treatment must be stimulant, with relief to suffering.

Dr. Charles D. Homans referred to a case of Dr. J. M. Warren's published in the first volume of the Records of this Society. A negress swallowed some nitric acid intentionally, staining the inside of the mouth and fauces yellow, swelling the tongue, and causing some shock. There was at no time fever, and in eleven days she was well enough to be transferred from the Massachusetts General Hospital to the jail whence she had come. Two days later she died from hæmorrhage consequent upon a large rupture of the friable stomach.

INHALATION OF AMMONIA.

Dr. C. W. Swan reported the case for the sake of comparing it with those above.

A man of sixty-three was holding a pound bottle of strong liquor ammoniæ on his knees in a horse car on a hot day, when it exploded. He threw himself on his hands and knees in order to get air, as it seemed to him that the vapor shot upward and then fell in his face. The immediate distress for breath was great, and by the time he had reached the nearest drug store the inside of the mouth and tongue were much burnt and covered with white patches; the fauces were less red. He could hardly have swallowed any of the liquid, but there was burning at the epigastrium as well as severe frontal headache. Treatment was with dilute acetic acid at once, the speaker having been a passenger in the car with him. He lost his speech as well as appetite, and sonorous râles were heard. In a week these symptoms began to decline and œdema of the lung appeared. He fairly recovered in a month or six weeks.

— The fifth International Congress of Hygiene will meet at the Hague, August 21 to 27, 1884.

— To overcome the unpleasant odor of anæsthetics the suggestion is made to add a few drops of oil of cloves to chloroform, or one sixth part of cologne to ether, as they are being inhaled.

Medical and Surgical Journal.

THURSDAY, MAY 22, 1884.

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THE DIAGNOSTIC VALUE OF THE DISCOVERY OF THE "BACILLUS TUBERCULOSIS" IN SPUTUM.

SINCE Koch first announced his discovery of a micro-organism peculiar to pulmonary phthisis much wordy war has been waged as to the real existence of such a specific organism, as to its relation to the disease whether of cause or effect, as to the best methods for distinguishing the organism from others, and much of this discussion has been the offspring of theory rather than of practical experiments and observations. The determination of the diagnostic value of the presence of these bacilli in sputum is one practical point, and that of the degree of contagiousness of phthisis another, solutions of which would be a grateful conclusion to these discussions, and we welcome any practical work contributing to such ends. In malignant disease of the lung, chronic pleurisy, or chronic pneumonia, bronchiectasis, incipient phthisis, phthisis accompanied by extensive bronchitis, or by deep-seated changes obscured by surrounding emphysema, difficulties are met with by the diagnostician in dealing with which another arm of precision besides auscultation and percussion would be very gratifying.

Dr. Henry S. Gabbett publishes in the *British Medical Journal* (April 26th) a series of observations on the sputa in 110 cases of diseases of the chest made at the Royal Hospital for Diseases of the Chest, London, with a view to ascertaining the presence of Koch's bacilli.

The number of observations is, to be sure, not large upon which to base generalizations, but it is large compared to those hitherto offered by many taking part in discussing these questions, and the material at command and opportunities for discovering the precise condition of the patients were favorable.

Of the observations sixty-five represent those in which bacilli were found in the sputa, and forty-five those in which no bacilli were found. Of the first division fifteen were instances of the last stage of pulmonary phthisis, thirty were less advanced cases in which, however, "there could be no question as to the nature of the disease," and the remaining twenty were either examples of incipient phthisis or cases in which the diagnosis was very doubtful at the time of examination.

The forty-five observations of the second division represent instances of other diseases than phthisis, in all which the sputa were searched in vain for bacilli. Dr. Gabbett does not undertake to say that they did not exist, but that they could not be found.

The broad result of his experiments Dr. Gabbett states to be this: —

"The great majority of specimens of bacilli-containing sputa were from undoubtedly phthisical patients, and the remainder from persons who, in all probability, suffered from the disease; while the specimens of sputa free from bacilli were, as a rule, from cases where the lungs weere either healthy or affected by some totally distinct morbid process. The few exceptions to this latter assertion, and the instances in which the bacilli were repeatedly sought for in vain, and at length found at some later period, lead me to the conclusion that, while the presence of these organisms is, in all probability, positive evidence of phthisis, their absence under certain circumstances does not negative the existence of the disease. In this inquiry pulmonary phthisis was considered as one disease — the disease which, with great variations in its mode of onset and the acuteness of its course, tends to attack both lungs, commences with localized consolidation, passes on to softening and excavation, is attended by the train of symptoms known as 'consumption,' and presents certain common appearances after death."

The circumstances under which bacilli are not found in phthisical sputa are stated to be mainly as follows: (1.) When the patient is directed to cough and expectorate, very commonly the result of the examination will be negative; in all cases for examination it is well to wait for natural expectoration, that is, till the reflex action of coughing is excited by the accumulation of the contents of the bronchial tubes. When the cough is "dry," definite results are not to be expected. (2.) Bacilli are probably not present in the sputum at a very early stage of phthisis before there is any actual breaking down in the lung. (3.) The existence of general bronchial catarrh in a severe form may make it difficult to find the organisms.

If bacilli are found in the sputum the diagnosis of phthisis may be ventured upon, if they are not found its existence cannot absolutely be denied. If, however, they are not found after repeated searches under favorable conditions, in a case where there are definite signs of lung damage, or in a case whose duration would cause such disorganization to be expected somewhere, then one is justified in suspecting that some other than the phthisical process is at work or that the phthisical process has been arrested.

The conclusions that may be drawn from these experiments are thus summarized: —

"(1.) Koch's bacilli occur in the sputa of pulmonary phthisis, acute and chronic, in all its forms.

"(2.) They do not occur in the sputa of other common diseases of the chest.

"(3.) They may probably be found in every case of phthisis which has advanced to the stage of breaking down of tissue.

"(4.) The discovery of very few bacilli in the sputum conveys no certain information as to the gravity of the case. Their occurrence in enormous swarms in all probability denotes excavation."

SOME OLD EDINBURGH SURGEONS.

The addresses which some of the elders of our profession have the ability and the inclination to give regarding their personal experience of long-departed scenes and men often possess a charming quality. The jealousies, the triumphs, the asperities, the eccentricities of these heroes of a former generation come down to us mellowed by the recollection of their aged witnesses with something of the rich flavor of an old vintage. We make no apology for having from time to time outlined for our readers some of these sketches. The latest such record of personal reminiscence of old-time worthies that we have met is in the address by Dr. Alexander Keiller, President of the Harveian Society, delivered at the annual meeting, April 14th. It is devoted to memories of the Edinburgh physicians of fifty years ago, among them some whose names have become world-wide. The address is to be found in the *Edinburgh Medical Journal.* Dr. Keiller speaks from his own knowledge of the "Burke and Hare" matter, which in its time created such a furore. The obtaining of subjects for dissection was a difficult matter, and in the absence of anatomy acts the graveyards were often forced to give up their dead. Popular feeling was strong against the doctors. The carriers of boxes or chests in the vicinity of the University, especially after dark, were apt to be set upon. The cry of "*a shusey! a shusey!*" (vulgate for *sujet*) was always potent to raise a mob, and the porter (though perhaps bearing a perfectly innocent burden) was sometimes beset with such vigor that he might consider himself lucky not to be made a "shusey" himself. Burke and Hare were guilty of the horrible crime of waylaying, stupefying, and suffocating some thirteen victims, whose bodies were sold at £10 to £15 apiece for dissection to Dr. Knox. Hare turned king's evidence, and though Burke was apparently the lesser scoundrel he alone was hung. It was freely charged that Knox was cognizant of the source of his subjects, but no evidence of such knowledge was given. He was the object of great hatred, and was hung in effigy. Burke's body was exposed for two days to popular execration on a dissecting table of the University, and his tanned skin was made into purses which (hear it, ye shades of Tewksbury!) were in great demand, especially among the ladies.

The "field days" for operations in the amphitheatre were Sundays, and the numerous church-going students were wont to attend divine service in a church directly opposite the infirmary, where they sat in a gallery set apart for them. The minister was the most popular preacher in the city, and took a deep interest in the students' professional success. When the infirmary bell was heard, indicating that the operations were to begin, he (perhaps making a virtue of necessity) sat down until the gallery was emptied. The noise of the unceremonious stampede would probably have drowned his voice if he had attempted to continue preaching. "The rush from the gallery of that church," says the writer, "to the pit of the surgical theatre, in order to get a comfortable front seat so as to narrowly see the whole performance, was anything but calculated to increase the earnestness of our devotional exercises or more deeply impress us with the Gospel truths we had just listened to."

Liston and Lizars were the rival surgeons of that day. They gave a conjoint course on operative surgery, and when subjects were scarce there was some competition between them. Lizars was an exceedingly bold operator, and his attempts, even at that early day, in the line of ovariotomy made him very unpopular. He was nick-named "Ovary John," and was freely abused as being little better than a murderer. Yet in spite of abuse and opposition, of which Dr. Keiller remembered to have heard him bitterly complain, he persevered in what he believed would become a means of saving many lives, and is entitled to the honor of being foremost among the practitioners of that operation. Some basis for his butcherly reputation seems to have lain in his operating costume, which was, if not antiseptic, at least antihæmorrhagic. It consisted of a pair of very loose overalls, an old long-sleeved topcoat, buttoned up even beyond the throat, the better to prevent any possible spurting of blood reaching his shirt collar or necktie, which was never of the white choker stamp. His style of operating was very business-like, and his hangman garb was not out of keeping with the sanguinolent appearance customary to that small part of him which was uncovered by it.

Liston was, unlike Lizars, of a very powerful physique. A burly carter was brought into the amphitheatre one day with an unreduced dislocation of the shoulder. An attempt had been made by the other surgeons to reduce it, but had failed on account of the resistance which the fellow had made to every effort on their part. The man was finally led like a wild beast into the ring, when Liston pounced upon him, and at once firmly grasped the immovably dislocated extremity, which he proceeded to pull and twist, while the patient stormed, cursed, fought, and kicked. "Liston, however," says our author, "was quite equal to the awkward situation, and as every kick with dangerous force was launched at him in front, he knew his anatomy too well not to swing round so as to receive them on amply cushioned parts behind, until his own time came to return the madman's blows and imprecations with confounding, and, at the same time, most successful interest; for, while engaged keeping up the extension required to overcome, if possible, the muscular contraction in order to facilitate the reduction aimed at, Liston knowingly and cleverly seized his opportunity, the most precious opportunity in such cases, of staggering the muscles into comparatively flaccid abeyance. Liston, while keeping up the extension with one of his big and powerful fists, and fiercely eyeing his still cursing and kicking surgical victim, loudly exclaimed, 'You d——d scoundrel, what are you swearing at?' and with one momentarily-released mighty right hand struck him a bang between the eyes, when immediately, through Liston's masterly manœuvering, in popped the stubborn joint of the now bunged-up-eyed carter, who obviously failed to appreciate either the laughter or the applause of the audience."

Liston seems to have had besides the strength of a lion something of that beast's disposition. He resented anything that seemed to compromise his dignity. In one of his summer clinical lectures he was speaking of the tourniquet, and its best and most applicable forms, and then exhibited a specimen which he had newly invented, and the power of which he set about showing on his own person. The instrument was on the principle of an ordinary double-padded hernial truss, with an unusually strong spring. This he managed, by using considerable force, to bend round his enormous thigh so as to reach the region over the femoral artery, and, after showing both before and behind how well the two pads fitted, it caused him no small difficulty in again releasing himself from their firm pressure; and when striving with considerable force to rebend the powerful spring, the back pad got hold of the gluteal region of his thin, light-colored, drawerless trousers, it so extensively gave way as to show, and that in the most bare-hipped fashion, the enormous extent of his lower and posterior proportions, which unlooked-for exhibition could not and did not fail to receive rounds of applause as well as side-splitting laughter. One luckless youth near the lecturer was detected stuffing his handkerchief into his mouth to suppress his laughter. A few days later this young man was invited to hold a limb of a subject which had attained a green old age, while Liston amputated. The latter did not care to touch the limb save with his amputating knife, which, however, played about the fingers of the merry young man till it accidentally drew blood. The youth looked woefully at the surgeon, who laughingly exclaimed, "The more you bleed the better." Whether the young man was right in his opinion that this was done in retaliation for his own ill-timed hilarity was never known, but it is pleasant to learn that a cleverly-drawn water-color of one of Liston's most noted operation cases presented by the young man to the surgeon made the two friends.

Liston and Lizars often had difficulty in getting subjects for their conjoint course, and, it would also seem, in dividing the subjects they did get. Once it was agreed that Liston should have the next one that arrived. It came in a "chest of tea" all the way from Ireland. Lizars knew it was on the way, but said nothing. Liston would not have discovered its arrival had not a mob seen it, and attacked the carrier, who was protected only by the arrival of a constable. Of this part of the story Lizars was ignorant. He told one of the students if Liston came to the building to say that he (Lizars) had gone away, and would not return for some time. Liston arrived to claim his subject, and even while the lying message was being given, Lizars, with incautious haste, peeped over the stairs in his dissecting gown, and said "Is he away?" Of course the cat was out of the bag at once. Liston, with a "You lying little devil," threw the offender over his shoulder, and carrying him up to the dissecting room landed him with a shake in the middle of the floor, to the amusement of the students and of Lizars.

Such a story shows as well as anything the change in public sentiment from a day when such petty tricks could be resorted to between two leading teachers in a great university. So does also the fact, which our author considers not only true, but a matter of no surprise, that Syme *bought* the chair of clinical surgery from its former occupant, Russell, for £300 a year. That is, he paid that sum to have Russell retire at a time when the latter's influence would be able to put Syme, to the exclusion of any of his rivals, into the professorial chair.

We may at some future time give our readers the benefit of more of Dr. Keiller's reminiscences.

TESTAMENTARY CAPACITY.

During the last week in April two interesting will cases were contested in our Massachusetts courts. One was that of Cooley Dickenson, and the other that of James Fitzgerald.

An unsuccessful effort was made to break both of these wills, chiefly on the score of mental unsoundness.

The charge of the judge to the jury in each trial was well stated. In the case of Fitzgerald, Justice Field held that: —

A man whose mind is sound can make a will, no matter how feeble his body, but feebleness of body by age, loss of faculties, or disease is to be inquired into for the purpose of throwing light upon the condition of his mind. It is the condition of mind that you are to look at and determine, but you are to take into consideration all the facts in order to determine his mental condition. Of course the condition of a man's mind can only be determined by its manifestations, and it is for that purpose that so much evidence has been introduced, showing what Mr. Fitzgerald said, what he did, what his conduct was, in order that he may be brought before you as far as possible by the testimony; that you may see him as far as you can, and determine by his appearance, his physical condition, his conversation and conduct, what he said and what he did, what the condition of his mind was at the time he executed this instrument. The law makes a distinction between witnesses. Ordinary witnesses can only testify to facts, what they saw and observed; and you have had those before you who have told what they heard Mr. Fitzgerald say, what they saw him do, and have described his appearance as well as they can, but they have given no opinion as to his condition of mind. Some witnesses, in addition to that, are permitted to give an opinion as to whether or not a person was of sound mind at the time they saw him. The attesting witnesses to the instrument, those persons who were present and subscribed the instrument in the presence of the testator, are allowed to give an opinion as to the soundness or the unsoundness of his mind at the time. The family or attending physician is permitted to give an opinion, and experts on insanity are permitted to give an opinion as to the soundness of mind of the person, and also on certain hypothetical questions, whether certain facts would prove mental disease. The weight to be given to this opinion is for you to determine, just as with the other evidence. A man may be insane or subject to certain delusions, or he may be imbecile or idiotic by reason of the decay of the mental faculties. The first you have often seen instances of in madmen; the second in cases of idiots from birth, or persons whose minds from decay have become idiotic, or from disease and old age. It is immaterial what the cause is; it is the condition of mind.

Now, how much mental capacity is necessary in law to enable a man to make a valid will? Well, in general there must be mind enough to understand, in the ordinary sense, what he was doing. [Reads from an authority presented by counsel.] He must have mind enough to understand what he is doing, to know the extent of his property, what his connections are with his relatives and other persons; his obligations and duties to them, if he has any; he must be able to comprehend the scheme of the instrument he is executing, and to understand it. He must be able to understand his relation to persons and property, and to understand the disposition of it. If he has that amount of capacity he is of sound mind within the limits of the statute. If he understands that it is his will, and is capable of understanding what the will is to be, and where the property is to go; if he has such an understanding of the business he is doing, that is capacity enough to make a will. It is impossible to describe these things with mathematical exactness. It is sometimes said that a man must be capable of attending to his usual business, but a man's business may have been large, and the demands for a successful operation of it may have been of the very highest character. He may be able to have a perfectly clear understanding of his property and estate, and a perfect understanding of their condition, but not be able to attend to the ordinary duties of his business. A man may understand and know the extent of his property, and know what disposition ought to be made of it, but he may not be able to make contracts where there are competing interests, and he might be easily over-reached, but still might understand perfectly what his property consisted of, who his relatives were, how he liked or did not like them, and what disposition he wished to make of his property. It is not capacity for doing other business, but it is the capacity to do the business itself, namely, to make a will, and the capacity to understand what he is doing, and what the effect will be. A man may also be unsound of mind by reason of disease, or insane delusions, or insane impulses. It is possible you might think a man unsound to some extent, and yet he might have a certain knowledge of the extent of his property. A man might say that the sun went around the earth, and you might think that this was an insane delusion, and yet possibly not one of you could demonstrate to him that the earth really did revolve around the sun rather than the sun around the earth as he contended, but you still might find him perfectly sane as to his connection with all persons related to him. We all know perfectly well that men differ in opinion on certain questions, and do not draw the same conclusions from the same evidence, that it does not prove the same thing to them. Therefore it is not difference of opinion or eccentricity of behavior that can be said to constitute insanity or insane delusions. It is for you to say whether these were insane delusions or merely differences of opinion, and, in order to be an insane delusion, it must go to the extent of being without rational foundation.

As the ordinary practitioner is liable to be called upon to give expert testimony in cases of mental disease it is important for him to carry in his mind what constitutes insanity under varying circumstances. The above charge makes this clear in regard to will-making.

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MEDICAL NOTES.

— A correspondent of the *British Medical Journal* relates the case of a farmer, deaf for many years, in whom the membrana tympani was wholly wanting, who got a grass seed into the affected ear while loading hay. As the seed could be seen with its root end lying innermost the attendant thought that its removal by forceps would drive the barbed fibres into the integument of the canal and cause much irritation. He therefore syringed out the passage, and examination by the speculum failing to show the seed, supposed he had washed it out, but about forty-eight hours afterwards the patient discharged the greater part of the grass seed from the left nostril.

— The initial number of the *American Meteorological Journal*, published at Detroit, Mich., is at hand. This is the first American journal to be devoted to this subject. The first number contains several original communications, besides notes and translations of interest to students of meteorological science. The importance of the subject and the impetus which its study has received of late years are sufficient warrant for the appearance of a journal of meteorology.

— The *British Medical Journal* says that a parliamentary paper issued February 25, 1884, gives the number of lives lost by drowning or other accident in British merchant ships registered in the United Kingdom in the several years from 1871 to 1882 inclusive. In the twelve years the total loss of life was 38,722, of which 35,660 were crew, and 3062 passengers. The largest numbers were in 1873 and 1874, this being mainly due to the great number of passengers drowned in those years, 1167 in the former, and 572 in the latter.

NEW YORK.

— The seventy-seventh annual commencement of the College of Physicians and Surgeons took place at Steinway Hall on May 13th, when Dr. John C. Dalton, President of the college, conferred the degree of M. D. on 105 graduates. Brief addresses were made by Dr. Dalton and President Barnard, of Columbia College, and the principal address to the class was delivered by the Rev. Howard Crosby, D. D. The

Alumni Association Prize of $500, open to alumni of the college for the best essay on any subject in medicine or surgery showing original research, was awarded to Dr. Moses Allen Starr, and the usual prizes to students were announced.

— On the same date diplomas were conferred upon seven graduates of the Training School for Nurses connected with the Mount Sinai Hospital. An essay was read by one of the graduates, and addresses were made by Judge Brady and Dr. E. G. Janeway.

— The corner-stone of the New York Cancer Hospital was laid on the 17th of May by the Rev. William F. Morgan, D. D., rector of St. Thomas' Church. An address was delivered by Dr. William H. Draper, and Mr. John E. Parsons, President of the Board of Trustees, announced that the building about to be erected was the absolute gift of Mr. John Jacob Astor. He said that the fund of the institution now amounted altogether to $360,000, and that it owned twelve city lots of land in addition. The building, which is to be of pressed Philadelphia brick, will have a frontage of 120 feet on Eighth Avenue, and will extend sixty feet on One Hundred and Sixth Street. It will be after the French renaissance style of architecture, and will consist of three circular pavilions connected by a central building.

Correspondence.

INVITATION TO INSPECT THE NEW TECHNOLOGY BUILDING.

138 BOYLSTON STREET, *May* 14, 1884.

MR. EDITOR, — Will you kindly grant space in the columns of the JOURNAL for the following invitation to the physicians of Boston from the Boston Society of Arts, received this day, and greatly oblige

Yours truly, ALBERT N. BLODGETT,
Secretary of Section for Clinical Medicine, Pathology, and Hygiene, Suffolk District Medical Society.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY,
BOSTON, *May* 14, 1884.

DR. A. N. BLODGETT, *Secretary*: —

Dear Sir, — I beg to inform you that at the next meeting of the Society of Arts, to be held on the evening of Thursday, May 22d, at eight P. M., Mr. S. H. Woodbridge, Instructor of Physics in the Institute, will read a paper on The Heating and Ventilation of the New Building of the Institute of Technology, and the Special Principles Involved. The paper will be illustrated by plans of the building, and a full description will be given of the apparatus, together with the results attained, which have proved in the highest degree satisfactory. The Society will, at the close of the lecture, be shown into the new building, where the apparatus will be in operation.

As this meeting will be of interest to members of the medical profession, I have the honor, in behalf of the executive committee of the Society of Arts, to tender to your Society, as a body, a most cordial invitation to be present, and should be greatly obliged to you for any suggestions which will aid me in bringing the meeting to the further attention of medical men.

Very respectfully, GEORGE F. SWAIN,
Secretary Society of Arts.

P. S. You are doubtless aware that the method adopted of warming and ventilating this building is in some degree novel, and presents many points of interest, such as justify considerable interest in the results obtained. Very truly, G. F. SWAIN.

Miscellany.

1884. MASSACHUSETTS MEDICAL SOCIETY.

ONE HUNDRED AND THIRD ANNIVERSARY.

THE annual meeting will be held at nine o'clock A. M., Wednesday, June 11, 1884, in Huntington Hall, at the Institute of Technology, Boylston Street (between Berkeley and Clarendon), Boston. The necessary arrangements have been made for the preceding day, Tuesday, June 10th.

By order of the President, FRANCIS W. GOSS,
ROXBURY, *May* 10, 1884. *Recording Secretary.*

TUESDAY, JUNE 10, 1884.

Ten o'clock A. M. The Fellows of the Society are invited to visit the Massachusetts General Hospital, in Blossom Street; the Boston City Hospital, on Harrison Avenue; the new Children's Hospital, on Huntington Avenue, near West Chester Park; and the Lying-in Hospital, 24 McLean Street.

Twelve o'clock M. At the New Harvard Medical School Building, corner of Boylston and Exeter Streets, the following communications will be presented: Methods of Instruction and Research in Physiology, with Demonstrations, by Prof. H. P. Bowditch. Modern Methods in Anatomy, with Demonstrations, by Prof. Thomas Dwight.

In Huntington Hall. Three o'clock P. M. The following paper will be read: The Plaster Posterior Splint in the Treatment of Fractures of the Leg, with its Practical Application, by G. W. Gay, M. D., of Boston.

Four o'clock P. M. The Society will hold an adjourned meeting, in accordance with the vote passed at the last annual meeting.

Invitation. The Medical Faculty of Harvard University invites the Fellows of the Society to visit the new Medical College, Boylston Street, at five o'clock P. M. The building will be exhibited, and there will be a collation at the service of the guests.

WEDNESDAY, JUNE 11, 1884.

Nine o'clock A. M. The One Hundred and Third Annual Meeting. (1.) Secretary's Record and Report. (2.) Treasurer's Report. (3.) Medical papers and communications: A Case of Chylous Deposit in the Abdomen, by F. Nickerson, M. D., of Lowell. The Pitch of the Percussion Sound, by L. Huntress, M. D., of Lowell. Sanitary Forest-Culture, by J. F. A. Adams, M. D., of Pittsfield. Weight as an Indication of the Character of Risks for Life Insurance, by J. Seaverns, M. D., of Roxbury. Communications from the Reporters of the District Societies. (4.) Introduction of Delegates. (Intermission of fifteen minutes.)

Twelve o'clock M. The Annual Discourse, by John Crowell, M. D., of Haverhill. The hall doors will remain closed during the delivery of the discourse.

One o'clock P. M. The Annual Dinner will be served in the Skating Rink, on Clarendon Street, near Boylston, to which place the Fellows, called in the order of seniority, will walk in procession.

Councilors' Meetings will be held during the ensuing year at the Medical Library, No. 19 Boylston Place, Boston, as follows: (1.) The annual meeting, at seven o'clock P. M., Tuesday, June 10th. (2.) A stated meeting, at eleven o'clock A. M., Wednesday, October 1st. (3.) A stated meeting, at eleven o'clock A. M., Wednesday, February 4, 1885.

The Annual Conference of Censors will be held at 2.30 P. M., Tuesday, June 10, 1884, at No. 19 Boylston Place, Boston.

Censors' Meetings. The Censors for Suffolk District, officiating also for the State Society, will meet in Boston, for the examination of candidates, on Thursday, June 5, 1884, and on the Thursday before the last Saturday of September and of February. But they cannot examine any candidate who is already a resident, or in practice, in any district other than Suffolk. Their meetings will be duly advertised in the *Boston Medical and Surgical Journal.*

In the other Medical Districts the Censors will hold their meetings for the examination of candidates residing in their respective districts, and none other, at the same place and on the same day as the stated meetings of the District Societies themselves.

Memorandum. The District Medical Societies are simply Sections of the Massachusetts Medical Society, and their composition is determined by geographical considerations. They are not original and independent, but derived and *subordinate*, bodies; authorized to establish rules for their particular government, not repugnant to the By-Laws of the general Society, but "subject to the regulations of the general Society in all matters wherein the general Society shall be concerned."

REPORTED MORTALITY FOR THE WEEK ENDING MAY 10, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	595	212	20.16	17.82	1.14	5.96	2.68
Philadelphia	927,995	347	102	17.40	15.37	2.87	5.51	4.64
Brooklyn	644,526	208	76	12 48	13.44	1.44	3.36	2.40
Chicago	632,100	223	101	24.08	9.81	2.68	7.58	3.12
Boston	423,800	170	55	35.28	17.64	1.77	4.70	2.94
Baltimore	408,520	149	59	22 78	14.07	1.34	7.37	1.34
St. Louis	400,000	117	31	12.83	9.40	2.66	4.07	—
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	158	71	20.25	12.03	.63	1.26	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	76	34	14.52	14 52	5.28	5.28	2.64
Milwaukee	142,400	49	27	10.20	8.16	—	2.04	4.08
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	33	9	24.24	18.18	—	3.03	9.09
Nashville	54,400	—	—	—	—	—	—	—
Charleston	52,286	—	—	—	—	—	—	—
Lowell	71,447	29	5	3.45	17.25	3.45	—	—
Worcester	69,442	21	5	9.52	19.04	—	9.52	—
Fall River	62,674	16	7	18.75	—	—	18.75	—
Cambridge	60,995	12	4	16.66	50.00	—	—	8.33
Lawrence	45,516	9	3	22.22	44.44	11.11	11.11	—
Lynn	44,895	11	1	9.09	—	—	9 09	—
Springfield	38,090	12	7	25.00	8.33	—	16.66	8.33
Somerville	31,350	5	0	—	—	—	—	—
Holyoke	30,515	3	0	33.33	—	—	—	33.33
New Bedford	30,144	6	1	16 66	16.66	16.16	—	—
Salem	29,503	14	5	7.14	7.14	—	7.14	—
Chelsea	24,347	5	1	—	—	—	—	—
Taunton	22,693	10	3	10.00	—	—	10.00	—
Gloucester	21,400	—	—	—	—	—	—	—
Haverhill	20,905	6	1	16·66	16.66	—	—	—
Newton	19,421	4	1	—	25.00	—	—	—
Brockton	18,323	7	1	—	57.12	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	5	0	20.00	40.00	20.00	—	—
Fitchburg	13,433	4	1	50 00	25.00	25.00	25 00	—
Eighty-three Massachusetts towns	458,584	72	7	8.34	11.12	4.17	2.78	1.39

Deaths reported 2376 (no reports from Cincinnati, Buffalo, District of Columbia, Nashville, and Charleston): under five years of age, 830; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 417, consumption 343, lung diseases 315, diphtheria and croup 121, scarlet fever 65, measles 57, typhoid fever 47, diarrhœal diseases 42, whooping-cough 20, malarial fevers 19, cerebro-spinal meningitis 15, erysipelas 15, puerperal fever eight, small-pox five, typhus fever three. From *measles*, New York 21, Chicago and New Orleans 12 each, Baltimore seven, Brooklyn, St. Louis, Pittsburg, and Milwaukee one each. From *diarrhœal diseases*, New York nine, New Orleans seven, Philadelphia and Baltimore six each, Chicago five, Boston four, Brooklyn and St. Louis two each, New Haven one. From *whooping-cough*, Boston five, New York and Brooklyn four each, Chicago and Baltimore three each, St. Louis one. From *malarial fevers*, New York eight, New Orleans five, Philadelphia and Brooklyn two each, Baltimore and St. Louis one each. From *cerebro-spinal meningitis*, New York four, Philadelphia, Chicago, and New Haven two each, St. Louis, Haverhill, and Fitchburg one each. From *erysipelas*, New York seven, Brooklyn two, Philadelphia, Chicago, Baltimore, St. Louis, New Orleans, and New Haven one each. From *puerperal fever*, Philadelphia three, New York, Chicago, Boston, Baltimore, and Milwaukee one each. From *small-pox*, New Orleans four, Philadelphia one. From *typhus fever*, New York three.

Cases reported in Boston: scarlet fever 48, diphtheria 16, measles four, and typhoid fever two; in Milwaukee, scarlet fever 18, and diphtheria three.

In 100 cities and towns of Massachusetts, with an estimated population of 1,313,531 (estimated population of the State 1,955,104), the total death-rate for the week was 15.88 against 13.67 and 15.63 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending April 26th, the death-rate was 22.3. Deaths reported 3751: acute diseases of the respiratory organs (London) 327, measles 193, whooping-cough 189, scarlet fever 76, fever 40, diarrhœa 30, small-pox (London 12, Sheffield three, Liverpool two, Birmingham, Manchester, Sunderland, and Newcastle one each) 21. The death-rates ranged from 15 in Norwich to 28.4 in Leeds; Leicester 18.1; Birkenhead 18.9; London 21.6; Nottingham 21.6; Bradford 21.7; Sunderland 22; Sheffield 23.6; Birmingham 24.3; Manchester 27.1; Blackburn 27.4; Liverpool 28.1. In Edinburgh 22.2; Glasgow 29.2; Dublin 28.8.

For the week ending April 26th, in the Swiss towns, there were 40 deaths from consumption, typhoid fever 31, lung diseases 21, diarrhœal diseases 14, diphtheria and croup five, whooping-cough three, erysipelas two, puerperal fever one. The death-rates were, at Geneva 15.3; Zurich 27.6; Basle 19.4; Berne 33.3.

The meteorological record for the week ending May 10th in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 4	30.122	57	70	43	60	34	61	52	W	W	SW	7	15	10	C	O	C	—	—
Mon., 5	30.017	54	58	50	86	89	96	90	W	N	SW	4	6	5	R	O	F	—	—
Tues., 6	30.078	45	53	43	84	100	86	90	NE	NE	E	12	15	13	O	O	R	—	—
Wed., 7	30.176	43	46	40	76	87	100	88	NE	NE	NE	24	29	20	O	O	R	—	—
Thurs., 8	30.050	41	43	40	100	99	100	100	NE	NE	NE	18	20	12	R	R	O	—	—
Fri., 9	29.812	49	63	40	91	86	98	89	NW	E	SW	7	5	8	O	O	O	—	—
Sat., 10	29.534	55	66	49	93	57	80	77	SW	W	W	7	10	11	O	F	C	—	—
Mean, the Week.	29.973	49	57	43				84										42.00	0.83

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 10, 1884, TO MAY 16, 1884.

Waters, William E., major and surgeon. Ordered to report for temporary duty to the commanding officer at Plattsburg Barracks, N. Y. Paragraph 4, S. O. 90, headquarters Department of the East, May 10, 1884.

Hubbard, Van Buren, major and surgeon. Relieved from further duty at Fort Stanton, N. M., and ordered to Fort Bayard, N. M., for duty. Paragraph 3, S. O. 96, headquarters Department of the Missouri, May 12, 1884.

Moseley, E. B., captain and assistant surgeon. Assigned to temporary duty at Vancouver Barracks, Washington Territory. Paragraph 6, S. O. 59, headquarters Department of the Columbia, May 8, 1884.

Wilcox, Timothy E., captain and assistant surgeon. Assigned to duty at Washington Barracks, D. C. Paragraph 2, S. O. 90, headquarters Department of the East, May 10, 1884.

Wales, P. G., first lieutenant and assistant surgeon. Assigned to duty at Old Fort Colville, Washington Territory, until further orders. Paragraph 3, S. O. 58, headquarters Department of the Columbia, May 7, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 17, 1884.

Kindleberger, D., medical inspector, to be fleet surgeon of Pacific Station.

Leach, Philip, assistant surgeon, detached from U. S. S. New Hampshire and ordered to Naval Hospital, Chelsea.

Bertolette, D. N., passed assistant surgeon, detached from Naval Academy and ordered to Practice Ship Dale.

MASSACHUSETTS MEDICAL SOCIETY. ANNUAL CONFERENCE OF CENSORS.

The annual meeting of the Censors of the Massachusetts Medical Society will be held at 19 Boylston Place on *Tuesday, June 10, 1884, at 2.30 o'clock.* The several District Societies are earnestly requested to send a full representation by delegates to this meeting, as matters of general interest are to be presented for discussion.

Albert N. Blodgett, M. D., *Secretary.*

AMERICAN NEUROLOGICAL SOCIETY.

New York, *May* 16, 1884.

Dear Sir, — The Tenth Annual Meeting of the American Neurological Association will be held in this city June 18th, 19th, and 20th. Papers have been already promised by Drs. Putnam, Walton, and Webber, of Boston, and Drs. Seguin and Rockwell, of New York.

R. W. Amidon, *Acting Secretary,*
18 West Twenty-First Street.

OBITUARY.

Dr. Charles H. Hildreth, of Gloucester, died suddenly, Sunday, May 18. He was called to breakfast about eight o'clock, and, not responding, was found sitting on the bed partly dressed. He said, "I am dying," and remained unconscious until his death, at eleven o'clock the same morning. He was in his fifty-ninth year, was a son of the Rev. Hosea Hildreth, a former pastor of the First Parish Church, brother of Richard Hildreth, the historian, and the last of his family. He was a graduate of the Harvard Medical School in 1851, and practiced for a time at Deer Island. He had a large practice in Gloucester, where he has resided nearly all the years of his professional life. He was a member of the Massachusetts Medical Society since 1853. At one time he was surveyor of the port. He was a man of much public spirit, greatly interested in schools and educational interests, served many years on the school committee, and was a member of the Board at the time of his death. He leaves a widow and one son.

Died. — In Danvers, Mass., May 1, 1884, Edgar O'Meara Fowler, M. D., M. M. S. S., aged thirty-five years.

Books and Pamphlets Received. — The Pedigree of Disease. Being Six Lectures on Temperament, Idiosyncrasy, and Diathesis, delivered in the Theatre of the Royal College of Surgeons in the Session of 1881. By Jonathan Hutchinson, F. R. S. London: J. & A. Churchill. 1884.

Claims of the Sick Poor. Paper read before the Middlesex North District Medical Society. By Nathan Allen, M. D. Lowell. 1877.

The Refraction of the Eye. A Manual for Students. By Gustavus Hartridge, F. R. C. S., Assistant Surgeon Royal Westminster Ophthalmic Hospital. With Eighty-Seven Illustrations. London: J. & A. Churchill. 1884.

Fifty-Fourth Annual Report of the Inspectors of the State Penitentiary for the Eastern District of Pennsylvania. 1883.

State Board of Health of New York. Report on the Unsanitary Condition of the Village of Bath, and Remedies Therefor.

Eleventh Annual Report of the Board of Health of the City of New Haven. 1883.

Therapeutische Notizen der Deutschen Medizinal-Zeitung 1880–1883. Herausgeber Dr. Julius Grosser. Berlin: Verlag der Deutschen Medizinal-Zeitung.

Reports of the Executive Committee, Physician, Treasurer, and House Committee of the Sea-Shore Home for the Summer of 1883. Boston. 1884.

Clinical Lectures on Mental Diseases. By T. S. Clouston, M. D. Edin., F. R. C. P. E., etc. To which is added an Abstract of the Statutes of the United States and of the several States and Territories relating to the Custody of the Insane. By Charles F. Folsom, M. D. Philadelphia: Henry C. Lea's Son & Co. 1884.

Tragbahre auf Federn und Unterlegellatten. Separat-Abdruck. Berlin. 1884.

Transactions of the New York Medico-Chirurgical Society. 1883. Vol. III.

Lectures.

LECTURE IN THE COURSE ON TOPOGRAPHICAL ANATOMY.[1]

BY THOMAS DWIGHT, M. D.,
Parkman Professor of Anatomy at the Harvard Medical School.

A NEW DEMONSTRATION OF THE AXILLA.

To-day, gentlemen, we begin the region of the shoulder and axilla. In the shoulder I will call your attention to some points that have already been more or less noticed — points that may be felt. You know that we can feel at the outer side the acromion overlapping the end of the clavicle and making the prominent point. I spoke last time of the motions between these parts, and now that there has been more uncovered I may be able to show them better.

You see a long pin driven into the outer extremity of the clavicle and one into the acromion near it. You see that as I move the shoulder back there is a distinct motion between the pins. When I press upon the clavicle so as to hold it fixed and raise the arm I get some little movement between the two, but without that I get less, and in general there seems to be a very slight movement up and down. If, however, I carry the arm back and upwards at the same time, you then see a much freer movement between the two.

Below is the prominence of the humerus, which is not the head, strictly speaking, but the tuberosities. You must remember that these tuberosities are in life by no means so distinct as in the bone, because the deep groove which separates them is filled up by the long head of the biceps. The more prominent tuberosity is the outer one — the inner is placed anteriorly. You know that if we place any plane surface — a book for instance — at the side of the arm when the arm is vertical we cannot touch the edge of the shoulder-girdle if the head of the bone is in place. It is said that the groove between the tuberosities can be felt, but I think pretty unsatisfactorily, in the living subject. By deep pressure at the inner side of the head you can feel the coracoid process. On this side, where the dissection of the last time has been carried rather farther, I can show you from the base of the coracoid process these two parts of the coraco-clavicular ligament, the trapezoid and the conoid. This one outer and anterior is the trapezoid; the other posterior and internal, the conoid. Between them is a small synovial bursa. As this anterior one runs upward and forward it is easy to understand that this is the one which limits forward motion of the clavicle, because as the clavicle goes forward it carries its upper attachment away from the other one. The converse is true of the conoid. Looking now at the back, before we go any farther, I will call your attention first to the great thickness of the skin, which depends, not upon the subcutaneous tissue, as in some parts, but upon the thickness of the derm proper. Here it is that Dr. Warren discovered his fat canals. You can easily see how exceedingly thick that is. You can contrast it with the delicate skin on the front. Beneath is subcutaneous tissue which has been removed. Here you see the deep fascia which binds down the parts in the region of the shoulder very closely. By this line you make out the posterior border of the deltoid, and you see that this fascia which I cut at its posterior edge is continued over the outer surface of the muscle that I am cutting, which of course is the infraspinatus. The fascia splits into one, the denser, layer going over the deltoid, and into another following the infraspinatus. The supraspinatus also has a pretty well-marked fascia, and this accounts for the pain felt in these parts when they are distended.

The deltoid seen on this side is, perhaps, a larger muscle than we are at first inclined to imagine, coming from the outer third of the clavicle and about all the spine of the scapula. It is made up of very coarse fibres, and these are arranged so as to run for the most part towards a tendon which before its insertion is made up of three or four radiating bands of fibrous tissue. In the middle part of its origin, that is, from the acromion, the muscle arises by means of a number of fibrous bands, from either side of which there go off muscular fibres that are again inserted into the divisions of the final tendon so that the extent of origin is very much increased.

It presents a general resemblance in the coarseness of its fibres to the gluteus maximus. This muscle raises the arm, but, as I have shown you on the living subject, this movement is by no means so simple as we have supposed. It has been generally taught us, or at least we have been led to infer, that when the arm is raised outwards it is brought to a horizontal position by the deltoid and then the movement is continued by the muscles moving the scapula. In point of fact, as Mr. Cathcart, of Edinburgh, has shown, the scapula takes a part in the early stages, and even in the latest there is motion between the arm and the shoulder girdle. This is an instance of the advantage of the live model. The supraspinatus, which is supplied by the same nerve as the deltoid, helps also in raising the arm — it is not merely an external rotator.

I have here a demonstration of the axilla, and incidentally one of the shoulder, that I hit upon some years ago, and as far as I know it is new, that is, inasmuch as it concerns the axilla.

The deltoid having been laid bare, a V-shaped cut is made over the outer aspect of the shoulder and the flap turned up. The capsule is then divided close to the humerus, and that bone sawn through at the lower end of the axilla. The parts in the bottom of this cut are slightly cleaned, the bone then fastened on to the shaft, and the flap replaced. We now turn up the deltoid and show the humerus. If the dissection had been made before you so that the parts should be perfectly fresh, you would see a glairy space over the bone between the periosteum and the areolar tissue of the under side of the deltoid. You get some hints of it in the glistening appearance of the lower fibres, which show a large synovial bursa which is continued under the acromion. (See how the acromion hangs over the joint.) This bursa is one of many in this region.

You see here the head of the bone, or, more accurately, you see its greater tuberosity — the one with three facets. Here is a groove which I can follow now very distinctly, in which rests the long tendon of the biceps. Almost directly in front I feel the lesser tuberosity, and as I put my finger around I feel the smooth surface of the head of the bone. This long head of the biceps going in this deep groove of course does a great deal towards holding the bone firmly. Let us consider incidentally the action of the muscle. The biceps bends the arm, and therefore we infer illogically that if the arm is not bent the biceps is doing nothing. Imagine the arm thrown forward as in fencing or boxing, and although certain muscles of the chest throw the upper arm forward and the triceps extends the elbow so that the arm is not in the least bent, nevertheless the biceps is in firm contraction, and one object of that is that this long head being made tense keeps the arm perfectly firm in this position, so that it cannot rotate nor " wabble " to one side or the other. Here is the capsule, and in that are the insertions of the supra and infraspinati, the teres minor, and the subscapularis. It is well to point out how very high up these extend over the head of the bone. The external rotators are closely united to the capsular ligament, but can be separated by careful dissection. Not so this one which can be seen on the inside, going to the lesser, internal tuberosity, the subscapularis. It is perhaps an exaggeration to say that it perforates the capsule, but it is so intimately connected with it that if you pass around from the inside of the synovial membrane you see unmistakable signs of its tendon, and there is beside it a bursa which very frequently communicates with the joint. That being opened we see here the cavity of the joint, and in this case you see something that is not seen every day. It is, no doubt, abnormal, but still it is something that may occur. It probably occurs more frequently than we are aware of. I refer to the way in which the capsule is inserted into one side of the glenoid cavity. This shallow cavity is deepened, as you know, by the glenoid ligament, which is a band of fibro-cartilage continuous above with the long head of the biceps and passing around the joint. From the outside of that we have the outer part of the capsule arising, but, according to some authorities, on the inside the capsule arises not from the edge of this but outside of it, that is, away from the middle of the joint. Sometimes it rises a quarter of an inch or more, or, according to Morris, it may be as far out as the base of the coracoid process, so that all this part to the inner side of the head and neck of the scapula is really inside the cavity of the joint, and that is precisely what occurs here. The capsule on the inner side has not been destroyed, and I put my finger here upon the synovial membrane and carry it far along to the inner side of the glenoid cavity and carry it up to the base of the coracoid process, and am still in the undisturbed synovial cavity.

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[1] Delivered March 27, 1884. Reported verbatim by Messrs. Pomeroy and Smith of the Harvard Medical School, and revised.

I would call your attention once more to the front of the humerus. You see a part of the long head of the biceps, which was cut both above and below, left in this gutter, where it is surrounded by a prolongation of the synovial membrane, as you see when I remove the tendon.

Now we pass down to the consideration of the axilla. The axilla, which I will show you presently on the other side in the usual classical way, is generally described as a pyramidal cavity, bounded in front by the pectoral muscles, behind by the scapula or the subscapularis lining it, and the borders of the latissimus and teres major, on the inside by the chest covered by the serratus anticus, and on the outside by the humerus with the coraco-brachialis and biceps. When handsomely dissected in that way it is a pyramidal cavity without any base to the pyramid, and consequently you have no guide to the relative distances from the surface of those structures which you see passing through it like telegraph wires. It is a handsome dissection, but the view is false anatomically.

It occurred to me that this might be obviated, and a view given which would be useful in some ways if we were to approach it from the other side in the manner described. In this case the bone has been divided a little above the lower border of the axilla, the cut running through the middle of the insertions of the latissimus and teres major. That being done we pull out the head of the bone, and now we look at the axilla from above. We see no pyramidal space; we see simply the reverse of the skin and fascia from this side, and here I have between my thumb and finger the bundle of arteries, veins, and nerves. The skin is closely adherent to the fascia so that it cannot sag out of place. At the last lecture I pointed out the continuity of the fascia with that of the neck, and mentioned how a process of it has been termed the suspensory ligament of the axilla.

Now let me return to the classical description of the axilla.[1]

We now return to the view from behind. Showing you once more the capsule that has been cut and reflected, I now pull out here from the front of the scapula the subscapular muscle, and you see distinctly how the vessels and nerves rest upon its anterior surface. Lower down I show you the cut ends of the latissimus and teres major. And here in this bundle of vessels and nerves one white band is particularly evident, and that is, of course, one of the posterior branches of the plexus, the great musculo-spiral. From it is given off a nerve which runs inward to accompany the ulnar nerve, and which has the peculiarity of running down in its sheath without any interchange of fibres until it gets near the elbow. Here is an artery which is shown remarkably well, namely, the posterior circumflex, and beside it the circumflex nerve. They come out above the long or scapular head of the triceps so as to curve around the neck of the humerus to appear at the outer side. Here they are quite undisturbed until they were cut after they had made the circuit and reached the posterior surface.

The veins can be seen very well, and by pushing them apart we may see the artery, and to the inner side I get the ulnar nerve. The internal cutaneous is farther in front, and I doubt if I see it in this dissection, but here, very prettily shown, are one or two little nerves at the under side of the axilla, close above the fascia, branches, no doubt, of the intercosto-humeral nerve. Deep in is the artery. You may see it as I press upon the skin below and bring it out. And pushing these veins aside we come to a nerve lying on its outer and anterior surface, that is the median. Without any particular trouble another nerve can be made out at the outer side which plunges at once into the muscle, that is the external cutaneous. Pressing this a little aside you see a strong fascia, the axillary fascia, and in it can be seen clear white fibres which seem to strengthen it in a transverse direction. I press this upwards with my fingers, and have once more the whole bundle of vessels and nerves between my thumb and finger, and as I put up the arm you can see just where they are at the lower part of the axilla. They lie somewhat nearer the anterior than the posterior fold, and are felt along the line of the biceps and coraco-brachialis. The merit of this demonstration consists in showing the floor of the axilla, and above these important structures with their relations almost undisturbed.

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[1] See text books.

It seems to me that possibly it would be well for me now to cut through the joint between the acromion and the clavicle, then passing the knife underneath, above the coracoid process, to divide the coraco-clavicular ligaments, and then the muscles attached to the coracoid process. I next turn the scapula back, and am able to give you a freer view of the same thing, though the relations are no longer undisturbed. Here you see one very large vein and here another which lie on the two sides of the artery, and rather behind it, so much so that I am inclined to suspect that there is a third, the real axillary, in front, and that these are two large venæ comites. The arrangement is an irregular one. You can see here more clearly the first nerve, the musculo-spiral, and cutting now these veins you see below them here the artery, and pressing it aside we see the median nerve close to it. Here is the ulnar farther to the inside; here some branches of the intercosto-humeral; the internal cutaneous here; and, indeed, here is the lesser internal cutaneous. It is worth while now to look up from this space towards the neck, and see the areolar tissue, which is the fascia, plus fat, which follows these vessels. That can be seen in these plates from Braune's frozen sections.

I have one other experiment to show to-day, and that is to exhibit the action of the coraco-clavicular ligaments. The first thing that you notice on cutting them on the other shoulder is the falling of the arm. That is, of course, natural, — that the coracoid should fall down when its attachments are severed, — but I fail to see that the amount of movement in a horizontal plane is materially changed. In a vertical plane it is distinctly increased, for you remember we found before it was exceedingly slight, now it is much better marked.

Address.

EXTRACTS FROM THE ADDRESS AT THE ANNUAL MEETING OF THE PENNSYLVANIA STATE MEDICAL SOCIETY.[1]

BY HENRY H. SMITH, A. M., M. D. U. P., PRESIDENT.

SHALL PENNSYLVANIA HAVE A STATE BOARD OF HEALTH?

The creation by *our* Legislature of a State Board of Health, whose duty it shall be to supervise and recommend such measures of drainage, water supply, etc., as will promote health and ward off disease, is a question that has often been discussed in this Society. During the past ten years this object has been strongly urged by many of our most valuable and energetic members, who have freely given their time and money to secure a proper law for this purpose.

Although they have repeatedly failed in convincing our law-makers of the importance of such a bill for the public good, may we not hope that, like the mythical Antæus, they will receive new strength each time they are cast down on the legislative grounds? The cause of these repeated failures is variously explained; but the main reason is that suggested by our Committee on Medical Legislation, namely, the ignorance of our people in regard to the importance and utility of such a law.

The organization by this Society of the proposed "Pennsylvania Association to secure a State Board of Health" will probably do much towards creating judicious public sentiment. Let each county society make arrangements to hold several meetings of citizens before the next session of the Legislature, at which brief papers may be read by its members, and speeches made by the local lawyers, divines, and prominent candidates for public office; or let special speakers be invited from other sections to address a meeting for such a purpose, and the public will soon become aware of the necessity of a State Board of Health to protect their own interests. Let each county society urge the introduction into their schools of instruction in the elements of human physiology, and each child will soon introduce the subject of the lesson to each family and knowledge will be extended. Let health tracts be widely distributed through every avenue of trade or travel. Let the masses be made to understand by these means, and especially by public meetings, that it is *their* welfare that is sought, and not that of the medical profession, and *they* will influence the candidates for office. The Latin proverb says, "Docendo disces" — by teaching others you are taught; and as he who teaches also learns, he will probably be the more impressed with the importance of legislative action for a State Board of Health.

Teach every one the importance of a Board to regulate such general sanitary measures as the heating and ventilating of large buildings, especially factories, public halls, and schools; the proper means of removing excreta; the prevention of the spread of small-pox, scarlet fever, diphtheria, whooping-cough, etc., so that children and others residing in infected localities shall not be allowed to attend funerals, come to schools, or otherwise be brought in contact with those who are well.

Let there be an inspection and regulation of vaccine farms, now that competition is rendering bovine virus in some instances dangerous. Let there be such an inspection of food and medicines, particularly the "artificial foods" of infants, as is given every sailor and soldier by our government laboratory at Washington. Let the farmer especially be made to realize that it would be the duty of a State Board of Health to protect his stock against the extension of hoof and mouth disease, pleuro-pneumonia, glanders, or hog and chicken cholera. Let every one be taught that the object of such a law is the appointment by the Governor, with the sanction of the Legislature, of such a capable board, not all physicians, but containing lawyers, sanitary engineers, and other citizens, as may be proved by the nominations of organized scientific institutions or local boards of health to be capable of executing this important trust. In the interval that elapses before the next session of our Legislature the mere circulation of such information would do much to create a sound popular sentiment on this question, especially if our collegiate faculties and school teachers are invited to aid us in instructing all in the laws of hygiene and the necessity of enforcing them by legal statutes.

The wording of such a bill as might become a proper law is a matter demanding very careful consideration. In drawing it, as has been well shown by Dr. Foster Pratt, of Michigan,[2] "experience teaches the importance of careful determining in advance what and how much power you can induce your Legislature to grant."

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[1] Concluded from page 483.

[2] MS. of Dr. Pratt.

"The practical question," says Dr. Pratt, "in the beginning of such attempted legislation, is not so much what you would like to have as what you can get. It is easy to defeat a measure by asking too much." Experience also shows, according to Dr. Pratt, "that you are sure to defeat your movement by asking for legislation that recognizes only *regular* physicians."

"Those of us who are sincerely and unselfishly desirous of promoting the sanitary interests of the public cannot too soon, nor too fully, recognize one fundamental fact, that under our form of government a *State medicine*, direct or implied, is as impossible as a *State religion*, and that all denominations of practice, like all denominations of religious belief, are and must be equalbefore the law."

The Judicial Council of the American Medical Association have also decided "that in questions of legislation and governmental policy, on which every physician as well as citizen must be allowed full liberty of opinion and expression, a conference with homœopathic or irregular practitioners is not a consultation at the bedside as contemplated in the Code of Ethics."[1]

Dr. Pratt's experience and success in obtaining legislation on this question, and his study of the subject in various States, make his opinion very valuable, and I commend it to your careful consideration. . . .

THE METHOD OF INFLICTING CAPITAL PUNISHMENT.

It may not be inappropriate in connection with the subject of State Medicine also to call attention to the propriety of memorializing the Legislature to modify the present mode of capital punishment and make it correspond with the scientific progress of the age.

Without discussing the necessity of such punishment we may justly urge, that as its main object is the removal from society of those whose lives are detrimental to its best interests, this should be accomplished in the least painful manner, and it does seem as if death by means of electricity should at present receive due consideration.

It has frequently happened in the incautious handling of wires connected with electric lights, etc., that instantaneous loss of life has ensued, and it is not surprising that the inventive genius of our people should have already suggested the application of electricity to executions.

I feel, therefore, that I advance the cause of humanity when I direct attention to this subject with a view of obtaining legislative sanction.

The history of the invention is as follows[2]: —

"Mr. H. B. Sheridan, of New York, applied last year for a patent on what he termed 'An improved device for executing criminals condemned to death,' and proposed to assign the right to use his invention to the United States Government.

"His apparatus, he says, causes instantaneous death, without pain to the criminal and without disfiguring his body.

"It consists of an ordinary arm-chair, with legs containing some substance that will *insulate* the body of the chair from the floor. The arms end in two brass knobs, on which the hands of the criminal will rest, and the chair has a foot-rest in which is fitted a brass plate. The back of the chair is as high as a man's shoulders. At the top is a small knob with a hole for a peg. The *positive* wire of a dynamo-electric machine running up the back of the chair ends in the knob. The *negative* wire runs to a resistance coil under the chair and thence to a brass plate in the foot-rest. Another *positive* wire runs to one of the brass knobs on the arms of the chair, and a second *negative* wire to the other knob. These wires can be connected with a dynamo-machine, miles away, by conducting wires.

"The chair may be used in two different ways, as the two sets of wires are not operated together.

"If the foot-rest wire is used, some previous preparation is needed, and a small silken collar is fitted tightly on the neck of the criminal. This has on the inside, at the back, a small brass button which fits closely against the spinal process. This is connected with a small silk cable which hangs down loosely and ends in a brass peg. This collar being put on the criminal in his cell, he is then brought out in his bare feet and seated in the chair. Straps fasten his arms to the arms of the chair, and his legs to the chair legs. The brass peg of the silk cable is inserted in the hole on the brass knob at the back of the chair, and is there held by a screw. The bare feet of the criminal rest on the brass plate of the foot-rest, and the circuit would now be complete were it not that the positive wire is broken at a short distance from the chair, but connection can be at once established by turning a switch or pressing a button. When this is done the full charge of electricity enters the criminal's body at the spinal cord and passes out at his feet, the resistance coil which it meets under the chair increasing its force and preventing it from injuring the dynamo-machine on its return; the criminal being killed instantaneously and without pain, as the electricity acts much more rapidly than the nerves of sensation.

"The second method of using the chair is to discharge the current into the palms of the hands through the large brass knobs. In this case no collar is needed, and the criminal need not be barefooted. In either case all the wires and apparatus excepting the small collar would be out of sight, and the criminal would see nothing but an ordinary chair. The sheriff can signal the executioner to turn the switch or he can press a button on the floor, and in a second all would be over."

Mr. Sheridan says he does not wish to make money out of this machine, but has invented it solely in the interest of humanity, and thinks there is no possibility of its failing to do its work quickly and well. Should his suggestion recommend itself to the approval of the Society, it remains for you to urge the passage of such a law as will justify its use as a substitute for hanging. . . .

In reverting to the work done by our Society, and comparing the present with the former condition of the profession, it is instructive to note, that whilst the great aim of the Society is yet the improved treatment of disease, and the elevation of the standard required for a medical diploma, our opinion of what is most feasible in the latter is the fruit "of the association of kindred spirits in the development of one great purpose."

— A professional correspondent seeks information as to the effects, injurious to health, if any, of roller skating.

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[1] Transactions American Medical Association, vol. xxviii., 1877, p. 60. Minutes of Judicial Council.

[2] Philadelphia Evening Telegraph, May, 1883.

Original Articles.

SOME OF THE DANGERS AND DISADVANTAGES OF ANÆSTHESIA.[1]

BY DAVID W. CHEEVER, M. D.,

Professor of Surgery in Harvard University, Surgeon to the Boston City Hospital.

THE form of anæsthesia considered in this paper is that produced by the inhalation of sulphuric ether. Unconsciousness of pain in surgical operations is the greatest boon bestowed on man.

What victim of surgery who, under ether, sinks into a calm and dreamless sleep during which his abdomen can be cut open, his bowels taken out, handled, and replaced, his nerves cut, his veins or arteries tied, and his skin sewed up, and who wakes so absolutely oblivious as to ask "Are you not ready to begin?" but concedes with gratitude on realizing the result that this is the greatest discovery ever made for the happiness of mankind? Speed of locomotion, electric transmission of speech, the preservation of the printed thought of all the centuries seem at such a moment small in comparison.

Any one about to suffer the agony of an amputation, who was told that if he would take a considerable risk in breathing ether he should feel nothing, would choose the risk and the oblivion.

But the second great quality of this Letheon is that it is almost free from danger. Deaths from ether are rare. Having used it for twenty-six years I have never seen one. The largest statistics give one death in 23,204 cases.

It would take a long list to exhaust the benefits ether has conferred on surgery. The domain of justifiable and beneficent surgery has been greatly enlarged by anæsthesia. The patient seeks an operation with but little dread. He is operated on earlier and better. Many conservative operations are now done which could not be thought of before ether. Many examinations and diagnoses can be made with it which could not be made without it. Many simulators and malingerers are detected under its potent spell.

These vast advantages and this wonted safety have masked the disadvantages and obscured the dangers which may arise.

Ether can kill, and there are operations which can be better done without it.

Hitherto all that I have said is trite and axiomatic. It is the object of this communication to point out what is the danger and what the disadvantage in breathing sulphuric ether.

(1.) The danger in breathing ether is chiefly from impeded or failing respiration. The heart outlasts the lungs. Suffocation, or coma at the breathing centre, are the causes of death. Temporary paralysis of the palatine muscles causes the stertor or snoring respiration, and the falling back of the *tongue* carries with it the epiglottis, and closes the larynx. When this condition threatens the operator opens the mouth, and perhaps draws forward the tongue. When, however, he sees the tip of the tongue out to the incisor teeth he thinks it safe, but in this he is mistaken. The tongue in this position still blocks the entrance of air on account of the falling of the palate, and it is only when the tongue is forcibly drawn out of the mouth that the air-passage is opened, and suffocation averted. The larynx can also be opened by placing from behind the two thumbs under the angles of the lower jaw and pressing forwards. The muscles of mastication being relaxed the jaw subluxates over the *eminentia articularis* or, rather, on to it, and carries forwards the tongue, and with it the epiglottis, and thus opens the larynx, the mouth being already open.[2]

(2.) In some persons, and we cannot foresee in whom, the mucous membrane of the throat and air-passages is very sensitive to the irritating fumes of ether. This sensibility first shows itself in croupy respiration, a spasmodic stridor followed by an incessant dry cough. Letting in more air relieves the spasm of the glottis, and the narcotism of more profound etherization soon quiets the tickling cough. In many persons there soon follows a new peril from a great *secretion of frothy mucus.* The mouth, pharynx, and nares bubble with fluid, and soon the same over-secretion pours out in the bronchi, fills the air-passages, and finally approaches a capillary bronchitis. Slow lividity ensues, the arteries spout venous blood, and the patient is on the verge of suffocation, drowned in his own secretions. This is a very tiresome complication. Etherization has to be entirely suspended for a considerable time.

(3.) Tetanic symptoms are often annoying, and if not relieved by appropriate treatment become dangerous. Obstinate pronation of the fore-arm and wrist, inversion of the thumbs, opisthotonos, boring by boring the head back in the pillow, these are evidences of suffocation, and are relieved by removing the ether, and allowing of a few inspirations of air. Once I saw this condition in a child terminate in a convulsion, which, however, was not fatal. A most dangerous complication is *tetanic setting of the inspiratory muscles of the chest.* No air enters; respiration with the diaphragm fails to fill the lungs, and the patient dies as in true tetanus. I once saw this condition in a middle-aged man. It came on instantly without warning. The mouth and larynx were free, the tongue out, the position good. Respiration absolutely ceased, but the pulse continued. Artificial respiration, forcibly, by the Sylvester method, restored the breathing, and the chest again inspired. In this case there was no stridor at the glottis. The operation was continued and completed without ether, and the patient recovered well. This condition must not be confounded with that where the diaphragm is seen laboriously pumping on a collapsed lung, the glottis being closed by the tongue or by spasm.

(4.) *Simple exhaustion* is another source of danger in anæsthesia. Death may occur from slowly failing respiration, so gradual as not to attract notice. Such a case of threatened death from pure debility occurred to me where a feeble woman insisted on an immediate operation for the removal of a cystic tumor of the breast. Sulphuric ether was inhaled quietly, and complete anæsthesia produced, without spasm, frothy secretion, or lividity. The breathing was especially quiet, but both diaphragm and intercostals were working, the mouth open, and the tongue out. After several imperfect sighing respirations a deathly pallor spread over the face, ears, and neck, the pupils dilated, the jaw fell, the breathing ceased. The pulse continued beating very feebly. The aspect was that of death. Artificial respiration and stimulation restored life. The tumor was removed without ether, and the patient evinced no consciousness until the sutures were being passed. She made a slow but good recovery. A momentary inattention on the part of the surgeon and assistant would have insured a fatal result. A second case like the above occurred to me in operating for a tumor of the jaw. The fauces were free of blood and mucus; there was no obstruction, but breathing gradually ceased. This patient was restored by artificial respiration, and did well. The latter case was being operated on in a chair, and faintness may have contributed to the result, but the former case was lying in an easy position on her side in bed. In neither case was there evidence of pulmonary or cardiac disease.

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[1] A paper read before the American Surgical Association, April 30, 1884.

[2] The relaxation of the muscles in complete anæsthesia being similar to that in death the manœuvres to open the larynx were illustrated by the reader on a wet preparation of the head and neck of the *cadaver*, of which appropriate sections had been made by Dr. Thomas Dwight, professor of anatomy in Harvard University.

(5.) *Disease of the heart* may cause death during the inhalation of ether. Well marked valvular disease, pericarditis and effusion, or a fatty and feeble heart, may contribute to a fatal result, and yet I have repeatedly etherized patients with valvular disease with safety by using caution, and giving them plenty of time. Sulphuric ether is a stimulant to the circulation, and if given slowly, well mixed with air, and not pushed either to lividity or exhaustion, may be given safely in many cases of heart disease.

A middle-aged man was brought into the hospital with retention and urinary extravasation. Immediate incisions and perineal section were imperative. He was etherized, and as I was about to cut breathing ceased. The pulse stopped also. Artificial respiration and stimulation revived him. The operation was done without ether. He lived ten days. At the autopsy I found extensive and old valvular disease of the heart.

(6.) *Apoplexy*, sanguineous or serous, may follow the coma of etherization in the old, or in drunkards. Atheromatous vessels may give way under the great congestion produced by full anæsthesia; and the "wet brain" of alcoholism may succeed the stupor of ether.

Having reviewed the dangers, we now pass to the disadvantages of anæsthesia.

Does etherization diminish shock?

Primary shock it does lessen. It removes apprehension, and it annuls pain. But it does not remove the secondary shock which follows an operation. Etherization is primarily stimulating, and acts like alcohol in enforcing the heart and filling the pulse.

Secondarily, or long continued, it is exhausting. Long etherization prostrates the patient. A frequent pulse, lowered temperature, drenching sweats, and nausea are the sequences of an anæsthesia which lasts more than from half an hour to one hour.

(7.) One of the marked *disadvantages* of anæsthesia is that it decoys the *operator* into *delay* and *slowness* in his work.

Before ether the skill of the surgeon was estimated by his celerity. A good operator was a brilliant and a quick one. The agonies of the patient enforced haste. Every means was used to shorten his suffering. Now all is changed, — largely to the surgeon's comfort, largely to his increased care and prudence, and as largely to delay, to deliberation over the steps of an operation, and to a too cautious and sometimes puttering execution. The patient may benefit by greater skill and by more conservatism; but he suffers from prolonged exposure, tedious narcotism, greater secondary shock.

(8.) Drunkards and steady drinkers succumb slowly to the narcotism of ether. They pass through a long period of excitement and delirium before they get the sleep; they have an equally long and violent delirium on coming out. They are subject during etherization to *persistent* and *recurrent tremors*, which delay an operation or jeopardize its safe execution. It is frequently not until the surgeon has finished that they become quiet and narcotized.

(9.) *Vomiting* and *lasting nausea* are among the disadvantages of etherization. The larger proportion of patients vomit during anæsthesia or after it, or both. This is especially disastrous in abdominal sections, in operations for hernia, and in section of the cornea and iris.

Vomiting during the operation may expel the vitreous humor. Vomiting after an operation I have seen extrude a strangulated intestine anew into the hernial sac. Vomiting after an operation equally is liable to disturb the stump of an ovariotomy and bruise peritoneal and omental adhesions, or, in an amputation, to burst the congealed mouths of small vessels, and lead to secondary hæmorrhage under the flaps of a stump. Nausea may last two days, and may turn the scale against successful rallying from secondary shock. We know of no agent to arrest it.

(10.) *Intoxication and delirium* on coming out of ether are especially injurious after a simple, or worse still, a compound fracture, has been set. Except in a child, or to settle a diagnosis, the setting of broken bones is better done without ether. In nervous women the delirium assumes the form called hysterical. I have seen it last for twenty-four hours.

The following operations are better done without anæsthesia: —

Extraction of cataract, already spoken of.
Tracheotomy for disease.
Paracentesis thoracis.

In tracheotomy for croup and diphtheria the little sufferer is already partially narcotized with carbonic acid. The cut frightens him no more than the ether would. The incisions through the skin comprise most of the pain. On the other hand, when etherized he often stops breathing, and the operation has to be done precipitately and not so well. It is absolutely essential, if you open the trachea in a child without anæsthetics, that you have abundant, cool, and competent assistants.

Tapping the chest and pumping off the pleural effusion has frequently been perilous, and sometimes fatal, with an anæsthetic. It is a safe operation without it.

There is no reasonable doubt that complete anæsthesia during parturition leads to tardy contraction of the uterus after labor, and hence increases the risk of flooding.

Deaths from inhaling sulphuric ether are rare. It is a noteworthy fact that most of them occur during operations on the rectum, perinæum, or in the vagina. The reason is not far to seek. The surgeon is too far removed from the anæsthetic to notice the mouth, the tongue, the respiration, the chest, the diaphragm. An incompetent assistant or a nurse holds the ether sponge, and the patient may die before her peril is discovered. The operator should watch the levator ani muscle, which moves with the diaphragm. This may be called perineal or pelvic respiration.

What are the essentials for giving ether safely?

An empty stomach.
A loose neck.
A free abdomen; no corsets or skirt bands.
Removal of artificial teeth.
An easy, semi-recumbent position.
A sponge wrapped in towels for the ether.
A gag, and forceps for the tongue.

When stertor occurs the patient should be tipped forward, the cheek opened with two fingers, the tongue drawn out, the fauces swabbed. To *insure* safety the surgeon should hear every respiration of the patient.

Anæsthesia from sulphuric ether is of two forms:—

(1.) Primary anæsthesia, which is a moment of confusion coming on after a very few inspirations. At this moment a felon can be opened without pain, and the patient wake at once.

(2.) Comatose anæsthesia, for prolonged operations. Ether *may* be given almost indefinitely. To relieve the hopeless agony of tetanus I have had it administered for twenty-four hours.

If you would avoid asphyxia, nausea, and headache, and be *safe*, use only the best and the purest anhydrous sulphuric ether.

Reports of Societies.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

SIXTH ANNUAL CONGRESS, HELD IN THE CITY OF NEW YORK MAY 12, 13, AND 14, 1884.[1]

Second Day. Morning Session.

Dr. F. H. Hooper read a paper entitled

A RARE FORM OF TUMOR (CAVERNOUS PAPILLOMA) OF THE VOCAL BAND.

On account of the ease with which the growth described was removed, as well as its rarity and pathological interest, the case, he thought, was deserving of the attention of the Association. The patient, who was a clergyman thirty-two years age, was first seen by Dr. F. I. Knight, November 22, 1882. At that time he refused any operative interference. In 1883 he was referred to Dr. Hooper. He said he had always been healthy, and that in September, 1882, he suffered from a cold, with hoarseness. At the end of three weeks the cold left him, but the hoarseness had remained ever since, and had been so troublesome that he feared he would be obliged to give up preaching. Apart from the hoarseness and a tendency to "scrape" the throat there was no symptom referable to the larynx. A laryngoscopic examination showed the presence of a small, nodular, sessile growth on the anterior part of the left vocal band, of about the size of a number seven shot. It was thought to have some of the characteristics of a cystic tumor, but the diagnosis was very doubtful. On the occasion of the patient's second visit, with a view rather of testing the tolerance of the larynx than the idea of actually removing the growth, Dr. Hooper introduced a Fauvel forceps, but on withdrawing the instrument and placing it in a glass of water it was seen to have been detached, and adhered to one of the blades. The hæmorrhage was insignificant, and a subsequent examination with the laryngoscope showed that the entire mass had come away. The tumor was submitted to Dr. W. W. Gannett, who pronounced it cavernous papilloma. Its cavity was filled with red blood corpuscles, and he expressed the opinion that the growth had consisted of cavernous tissue from the start. The voice of the patient was at once restored to its natural tone, and there had been no return whatever of the trouble since. He had recently held special services daily for six weeks, and notwithstanding this unusual strain upon his voice had remained in good condition all the time. The only case resembling this which had thus far been reported, so far as Dr. Hooper knew, was one published by Fauvel. Drawings representing sections of the growth were presented for inspection.

Dr. Carl Seiler said that he had met with a case very similar, with the exception that the epithelial structure was not as far developed as in Dr. Hooper's case, the growth being more of an angioma. The patient was a student of elocution, and all that he complained of was hoarseness.

Dr. Morris J. Asch, of New York, read a paper entitled

A CASE OF ECCHONDROSIS OF THE LARYNX.

Having mentioned that cartilaginous tumors of the larynx were rare, and referred to the literature of the subject, he said that there were only two cases on record in which the true character of the growth had been recognized during life. The patient in whom this occurred was forty-two years of age and an amateur vocalist of some ability. He complained of constant irritation of the throat, and also of continued hoarseness. Before operating Dr. Asch made a correct diagnosis of the character of the tumor, which sprang from the inner surface of the thyroid cartilage, on account of its hardness. He removed it with a modification of Stoerk's guillotine, the ring being made of well-tempered steel, with a cutting edge on its upper border. The growth was pronounced by Dr. George L. Peabody, pathologist to the New York Hospital, to be a cartilaginous tumor undergoing calcareous degeneration. There had been no return of the trouble, and since the operation the patient had gained two notes in his vocal register. The case was of interest as showing, *first*, that tumors of this character came under the care of the laryngologist not only for diagnosis but for cure, and, *second*, that they could be cured by endo-laryngological methods.

The paper was discussed by Drs. Cohen, Seiler, and Langmaid. The latter expressed the opinion that the increase in the vocal register after the operation was due, *first*, to the removal of the irritation, and, *secondly*, to the moral effect on the patient by the relief thus afforded him, and in this Dr. Asch concurred.

Dr. W. C. Jarvis, of New York, read a paper on

A NEW METHOD FOR THE REMOVAL OF LARYNGEAL GROWTHS.

The agent which he employed for this purpose was chromic acid, and the form of growth for the destruction of which it was specially adapted was papilloma. As, according to Mackenzie, sixty-seven out of one hundred tumors of the larynx were papillomata, and Cohen had found forty-eight out of sixty-six tumors of this character, it would be seen, he said, that its field was quite an extensive one. He was aware that there was a deep prejudice in the minds of laryngologists against this agent; but he felt convinced that it was not deserved, since it had arisen from its abuse and not its proper use. He did not wish, however, to exclude the forceps and the snare. The case in which he had first employed it was a very bad one, a large papilloma filling up almost the entire larynx, reducing the voice to a discordant whisper, and causing dangerous spasm and dyspnœa. In nine days, on five of which no applications were made, the voice was restored to its natural tone, and in nineteen days the patient was pronounced cured, and the treatment discontinued. Having explained the action of the remedy and the method of application, Dr. Jarvis summed up his views as follows: —

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[1] Continued from page 495.

(1.) Trioxide of chromium, or chromic acid, locally applied, has a self-limited action.

(2.) It is a safe and reliable means for the removal of large and small soft laryngeal tumors.

(3.) It also has the effect of preventing their return.

(4.) It is best employed fused on the point of a probe.

(5.) An instrument to act as a protector and guide may be used with it. (This was exhibited by Dr. Jarvis, and consisted of a tube provided with a trigger and a spring, the force of which could be accurately regulated. Its objects were, *first*, to prevent the acid from coming in contact with the tissues before reaching the growth to be removed, and, *secondly*, to surprise the larynx.)

(6.) Its use is not necessarily attended with pain or spasm.

(7.) It offers a substitute for tracheotomy and thyrotomy in certain cases where these measures are ordinarily judged necessary.

The paper was discussed by Drs. Cohen, Roe, Seiler, Ingals, and Major, and the discussion brought to a close by Dr. Jarvis, after which a number of

NEW INSTRUMENTS

were presented. Among these were a nasal speculum devised by Dr. J. N. Mackenzie, a tonsillotome with three blades, and a uvulatome by Dr. C. E. Sajons, and an apparatus for artificial feeding by Dr. D. B. Delavan.

SECOND DAY. AFTERNOON SESSION.

Dr. D. Bryson Delavan, of New York, read a paper entitled

PERMANENT UNILATERAL PARALYSIS OF LARYNGEAL ABDUCTORS, FOLLOWING CEREBRAL HÆMORRHAGE. UNIQUE CASE.

He had been able to find no recorded case of this character, and the only reference to the condition met with which he had seen in medical literature was in Nothnagel's article on cerebral hæmorrhage in Ziemssen's Cyclopædia, where he simply remarked that unilateral paralyses of the vocal cords (as a result of such hæmorrhage) were exceedingly rare.[1] The paralysis had occurred in connection with paraplegia, the result of cerebral hæmorrhage in a patient sixty-nine years old, and had now lasted since 1877; though all the other paralytic trouble had long since disappeared. Dr. Delavan said he had no theory to advance in connection with its ætiology.

Dr. F. I. Knight reported a case, which he said was very pertinent to Dr. Delavan's, where a patient, as the only injury from falling down stairs and striking his head, suffered from unilateral paralysis of the abductors. There was probably some lesion either of the nerve or at the nerve-centre.

Dr. R. P. Lincoln, of New York, read a paper describing a case of

STRICTURE OF THE ŒSOPHAGUS.

The stricture was due to medullary cancer, which involved the larynx, trachea, œsophagus, and cervical glands, and death was due to implication of the cardiac branches of the vagi nerves. No sounds or bougies could be used without exciting inflammation; and on only one occasion was a bulb-pointed catheter passed without producing this result. This was but a very short time before the patient's death.

In the discussion, which was participated in by Drs. Roe, Knight, Donaldson, Daly, and Ingals, Dr. Roe suggested that Krishaber's method of leaving an œsophageal tube *in situ* might perhaps have been tried, and Dr. Daly said he thought that there might perhaps have been a chance for gastrotomy.

Dr. Lincoln closed the discussion. In reply to Dr. Roe's criticism he said that it was to be borne in mind that any attempt at interference with the œsophagus, at least any sufficient to pass a sound, was always followed by great inflammatory reaction. Moreover, there was a prompt improvement that attended the soothing treatment at first instituted which seemed to justify its continuance. In regard to Dr. Daly's suggestion he wished to say, that while the statistics of operations so far reported gave but little encouragement for adopting the method, in any case, certainly the sequel in this case showed that it would have been useless; the cause of death having been pointed out to have been due to implication by the disease of the cardiac branches of the vagi nerves.

Dr. E. Fletcher Ingals, of Chicago, read a paper on

TRACHEAL STENOSIS,

in which he related the histories of three cases which had come under his observation during the past year, all of which were of syphilitic origin. In one tracheotomy was performed. He advocated large doses of iodide of potassium as of special value in this affection.

The paper was discussed by Drs. DeBlois, Shurley, Langmaid, and Delavan, most of whom mentioned cases that they had seen. The President remarked that the opinion generally expressed by the Fellows seemed to be in favor of the iodide. For himself he preferred mercurial inunctions, as he believed the iodide a dangerous remedy in this affection, on account of its tendency to produce œdema. In the treatment of syphilis in general, even in the later stages, he had gradually come to use the iodide less and less, and to rely more and more fully upon mercury.

Dr. Ingals replied that he believed it to be a fact that the iodide was not nearly as likely to produce coryza, œdema, etc., in large doses as in small ones. Thus, he knew of a physician who suffered from iodic coryza if he took five grains of it, but not if he took ten grains or more.

THIRD DAY. MORNING SESSION.

Dr. T. A. DeBlois, of Boston, read a paper, in which he gave the histories of two

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[1] American edition, vol. xii., p. 116.

CASES OF BUCCAL TUBERCULOSIS,

both of which speedily proved fatal. He thought the affection sufficiently rare to deserve mention whenever it was met with, either where the tubercular deposit first showed itself in the mouth, or where, after manifesting its presence in other parts of the body, it finally extended itself into that region. He did not believe there was any good reason to doubt that tubercles always existed in the lungs before they appeared either in the pharynx or the larynx, and he was fully prepared to admit the same in regard to buccal tuberculosis.

The paper was discussed by Drs. Langmaid and Bosworth.

Dr. C. E. Sajous, of Philadelphia, read a paper on

HAY FEVER AND ITS SUCCESSFUL TREATMENT,

in which he set forth the following propositions: —

(1.) That there was an idiosyncrasy existing in certain individuals to become influenced by certain emanations or irritating substances.

(2.) That the idiosyncrasy was accompanied by a chronic hyperæsthesia of that part of the nasal mucous membrane covering the anterior and middle turbinated bones, the middle meatus, the floor of the nose, and that part of the septum between the limits of the olfactory membrane.

(3.) That organic alteration of these parts annulled that hyperæsthesia, preventing, at the same time, what symptoms the patient might be liable to in case of an access.

(4.) That any destructive agent would induce that organic alteration, but the galvano-cautery was by far the best, being painless, effective, and devoid of all danger when used in practiced hands.

He said that until after he had finished the paper he had not been aware of Dr. Roe's articles on the ætiology and treatment of hay fever.

A long discussion followed, in which Drs. Shurley, Roe, Mackenzie, Robinson, and S. Johnston took part. The President then expressed the opinion that in every case of hay fever there were three essential elements: a neurosis, a structural change in the nasal cavities, and a special sensitiveness to dust, pollen, or other source of irritation. If any one of these factors were removed the case would undoubtedly be cured, and it did not make the slightest difference which one of the elements was done away with, the result would be the same. The discussion was brought to a close by Dr. Sajous.

Dr. E. L. Shurley, of Detroit, read a paper on

THE COMPARATIVE VALUE OF THE GALVANO-CAUTERY IN DISEASES OF THE NASAL AND PHARYNGEAL CAVITIES,

in which he gave his preference to this method of destroying tissue, as a rule, over mechanical instruments and chemical agents. The tendency of the present day, he thought, was to destroy too much tissue, and he therefore advised that as little as possible should be injured or destroyed, and that as narrow a tract as would suffice should be cut through the neoplasm to be removed. The paper was discussed by Drs. Jarvis, Sajous, Roe, Mackenzie, and Bosworth, the President remarking that there could be no doubt that American laryngologists were now beginning to do much better work than their brethren in Europe. Dr. Shurley closed the discussion.

Dr. Beverley Robinson, of New York, read a paper entitled

A CONTRIBUTION TO THE STUDY OF ADENOID VEGETATIONS AT THE VAULT OF THE PHARYNX,

which was mainly derived from his own experience. In it he stated that he had found this to be a much more rare affection than was commonly supposed, and that it was not nearly so frequently associated with aural disease as many authorities stated. He had never yet met with a single instance in which pressure of the growth over the Eustachian tubes gave rise to deafness. He also took exception to follicular pharyngitis being considered of an adenoid character, although he acknowledged that the two affections were not infrequently associated. In the treatment he had employed the method of Meyer, of Copenhagen, to some extent. Also the Thomas uterine curette, followed by applications of nitrate of silver or the galvano-cautery, and, in the case of pedunculated growths, the snare.

In the discussion which followed, which was participated in by Drs. Langmaid, Mackenzie, Major, Roe, Asch, and Jarvis, it seemed to be the prevalent opinion that disease of the ear was perhaps more frequently associated with adenoid vegetations than Dr. Robinson believed. In closing the discussion the latter remarked that the most important point which he wished to bring out in his paper was that the galvano-cautery, the snare, and other violent measures were really of no use in one half of the cases of nose and throat disease in which they were employed, and that not infrequently they did harm.

The last paper of the session was read by Dr. Louis Elsberg, of New York, on

SPASM OF THE GLOTTIS.

This he defined to be the spasmodic contraction of one or all of the laryngeal muscles. The spasm might be simple or complicated (with similar contraction of other muscles), unilateral or bilateral (the latter being almost universally met with), and might occur in the domain of either the superior or inferior laryngeal nerves. Again, the spasm might be expiratory (including the phonatory), inspiratory, or deglutitory.

In considering the ætiology, he said that the most important predisposing cause was morbidly increased irritability of the nervous system. Age was also a very important factor, the affection occurring most frequently between the ages of four months and two years. It was a mistake, however, to regard it as exclusively a disease of childhood. Male children were more subject to it than females, but in adult life it was more frequently met with in females than males. Heredity, as well as the general condition, had considerable bearing in the causation. Children badly nourished, and living in unhealthy and badly-ventilated apartments, were especially liable to it, and rachitical and hydrocephalic children were frequently attacked with it. It often came on at the time of weaning, and, as a rule, it was more common in hand-fed than in nursing infants. Enlargement of the thyroid had formerly been supposed to be the only cause of it, but in reality this was not a cause at all, though it was frequently present in cases in which it occurred. Among the other causes he mentioned were hysteria, injuries from food getting into the larynx, catarrhal inflammation of the respiratory mucous membrane, gastric disturbances, enlargement of the tonsils, and emotions like anger and fright.

The symptoms varied according to the set of muscles affected. In abductor spasm there was insufficient closing of the rima glottidis. There were several forms of adductor spasm: —

(1.) Deglutitory. The attacks were usually short, with complete immunity from dysphagia in the interval, but in one case which he had seen there was complete spasm of all the adductors for a week, so that the patient was actually threatened with starvation.

(2.) Inspiratory. This was characterized by closure of the rima glottidis, and might be mistaken for paralysis, though this might coexist.

(3.) Simple phonatory. In this there were no symptoms until the patient attempted to use the voice, which would be choked in sound. If phonatory efforts were persisted in, however, dyspnœa was liable to result.

(4.) Simple expiratory. Here the attack came on if the patient attempted to whisper as well as to speak or sing. It had been known to come on in the acts of blowing out a candle, of coughing, and of laughing.

(5.) Complicated expiratory. This was the form sometimes called "curious cough." In regard to its mode it might be paroxysmal or continued. In the continued the hacks were not as severe as the cough, and they observed a certain rhythm. Chorea was sometimes noticed in connection with it, and this was the kind of spasm that had given rise to the name of "laryngeal chorea." Such terms as "laryngeal chorea" and "laryngeal epilepsy," however, he said, ought never to have been employed, and he trusted that they would soon be dropped forever from medical literature. The acoustic characteristics of this variety were very peculiar, and the sound might resemble barking, quacking, lowing, or crowing, while it was often very loud.

(6.) Complicated inspiratory. This was the most common and dangerous, and was the form ordinarily known as laryngismus stridulus. The graphic description of it by Morell Mackenzie, in his work, gave a true and striking picture of its characteristics. In speaking of the prognosis Dr. Elsberg quoted from Mackenzie the statement that the longer the interval was between the attacks the greater was the chance of recovery.

The treatment, he said, often required great promptitude, sometimes operative skill, and always good judgment. The ordinary means for relaxing spasm, he thought, would occur to all, and for lack of time he would not dwell upon them. It was often necessary to thrust the finger into the throat to see if the epiglottis was impacted, and catheterization of the trachea was sometimes required. This he preferred to tracheotomy.

After the paper had been briefly discussed by Drs. Ingals, Jarvis, and Roe, and Dr. Elsberg had replied, the officers for the ensuing year were elected as follows: President, Dr. E. L. Shurley, of Detroit; first Vice-President, Dr. S. Hartman, of Baltimore; second Vice-President, Dr. William H. Daly, of Pittsburg; Secretary and Treasurer, Dr. D. B. Delavan, of New York; Librarian, Dr. T. R. French, of Brooklyn; and Members of the Council, Drs. F. H. Bosworth, of New York, and F. Donaldson, of Baltimore.

The time and place of the next meeting were left to the decision of the Council.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.[1]

ALBERT N. BLODGETT, M. D., SECRETARY.

Dr. T. A. DeBlois read a paper upon

TONSILLITIS.

Dr. J. W. Farlow opened the discussion upon this subject as follows: I agree with Dr. DeBlois in thinking that it is not possible to draw so sharp a line as is generally done between follicular, parenchymatous, and phlegmonous tonsillitis. When the parenchyma is affected the follicles are also liable to be, giving rise to the secretion, more or less of which we find in most cases. Of two cases which begin and continue alike for several days, one may remain an ordinary case of tonsillitis while the other goes on to the formation of an abscess.

The difficulty of knowing whether diphtheria or some other disease is to follow what looks at first like simple tonsillitis has been well described by the reader, as also the need of "hedging" in communicating the diagnosis to the friends of the patient.

In cases seen early where there is much fever I am in the habit of ordering a Dover's powder or aconite, to be followed by a saline in the morning. I have never satisfied myself that I had benefited a case by the use of guaiac or chlorate of potash.

I have never found astringent gargles of more use than very hot water. I direct the patient to fill his mouth at frequent intervals with hot alkalized water and hold it for several minutes. He is then to let the water run out by holding his head over a basin. This serves to remove the thick, tenacious secretion of which patients always complain, and which they find great difficulty in expectorating. Gargling is always a painful process in such cases.

I find relief from scarification, especially when the uvula is œdematous. When the presence of pus is probable, a deep incision, whether pus is found or not, makes the patient much more comfortable.

Dr. Prince thought it was a very interesting paper, and agreed with the reader in what he had said regarding the efficacy of the different varieties of treatment that were in use. For himself, he took a different view of the pathology of the affection from the reader, and believed in the *constitutional nature of the disease.* This was a point of considerable importance from the stand-point of treatment. He did not mean to say that every case of follicular tonsillitis was the expression of a constitutional fever. On the contrary, as in inflammations in other parts of the body, there was a local as well as a constitutional form.

Specialists who principally have to do with cases in dispensary and office practice meet with the former variety, while general practitioners see the constitutional form. The latter class of patients are usually too ill to leave their beds, much less the house, and are not found in out-patient departments of hospitals, or at least not till the disease has run its course. In this way the difference of opinion regarding the pathology of the affection can be explained. He thought that specialists were more inclined to see in follicular tonsillitis only a local affection, while general practitioners more commonly thought it of constitutional origin.

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[1] Concluded from page 472.

His own views of the constitutional nature of the affection are based upon various facts; among others, the severity of the constitutional symptoms observed. Even when associated with insignificant local inflammation, it is not uncommon to see high fever, great prostration, severe backache, sweating, headache, anorexia, and stupor, followed by protracted convalescence, though the local trouble was so slight as hardly to induce the patient to use the gargles, etc., prescribed.

As a result of his studies he has found: —

(1.) With slight local inflammation high fever and severe constitutional disturbance, and *vice versa.*

(2.) Slight local inflammation and slight increase of temperature combined with severe constitutional symptoms, showing that the latter were not dependent upon the fever.

As "hospital sore throat" the disease was very common amongst internes and nurses in hospitals. He had found as a result of his inquiries that sixty-three per cent. of the internes in the Boston City Hospital had the disease, and that fifty-nine per cent. of the nurses in the hospital at the time the inquiry was made had already had it. Many more would probably have it before their term of service was finished. Under these conditions the disease was usually very severe, more so than could be accounted for on the theory of a simple local inflammation.

The disease also occurred in epidemics, of which several had been reported. He had recorded two in a paper on this subject read before the Society about two years ago. In the epidemic form it was certainly constitutional.

The reader had said that he himself was liable to the disease and was frequently affected, but Dr. Prince believed that while this might be true of simple catarrhal sore throat, such as is met with in dispensary practice, the form to which he referred he believed usually occurred but once in the same individual.

In regard to treatment of this form, he had found the best to be painting the throat frequently, every hour or two, with co. tinct. benzoin. The tonsils must be thoroughly covered each time so as to leave a deposit of the yellow gum upon the surface. This always relieved the pain, and enabled the patient to swallow with comparative comfort. He had not yet met with a case which was not benefited by this, though of course it could not be inferred that the remedy would never fail. An ice bag around the neck gave great relief to the head symptoms, while sponging the body with alcohol and water did the same for the backache. He also gave Dover's powders at night and sometimes during the day. The constitutional symptoms in his experience called for more active treatment than the local manifestations.

Dr. Cobb mentioned a case of tonsillitis occurring in a Swedish girl, accompanied with the appearances of abscess. On puncture, a small amount of pus was liberated, but the entire quantity was not evacuated. Within a week the girl was admitted to the City Hospital with scarlet fever. The question was asked if such cases were frequent.

Dr. DeBlois stated that one such case had recently come to his notice. The case was one of follicular tonsillitis with much depression and exhaustion of strength. The prognosis was of a grave character from the threatening nature of the symptoms, which led to the apprehension of some other more serious disease, and a few days later the patient suddenly expired while being brought down stairs to be taken to the City Hospital.

The following particulars in this interesting case were communicated by **Dr. George G. Hayward**, the physician attached to the Dispensary District in which the patient lived.

DIPHTHERIA WITH COMPLICATIONS.

Patient, male, nineteen years of age, laborer, single, born in Ireland, had only been in this country a few months, was a strongly built man, of temperate habits. He first came under my charge December 12, 1883, and was treated at that time for dyspepsia and a heavy cold, from which he soon recovered, and after a few days went about his work again. I next saw him February 2, 1884, and learned that the day previous he had been to the Boston Dispensary Throat Department, where he had been treated, and that diphtheria had been suspected. At this time there was high fever. Temperature 105° F., rapid pulse, tongue heavily coated, and all the soft parts covered with a distinct membrane, some of which was with difficulty removed. On further examination the body was found covered more or less thickly with a fine rose-colored eruption, more especially marked upon the lower part of the abdomen and thighs (where he was actually the color of a boiled lobster).

Diagnosis, was made of diphtheria with scarlatina. I afterwards learned that there had been scarlet fever in the house a few weeks previous.

Treatment, was Dover's powder at night, hot gargles, or rather douches, steamed flannels externally, changed often, and replaced by dry ones, steam inhalations, and as much steam as possible kept in the room, carbolic sprinkled about the floor. The mouth was swabbed out three times daily with hot water applications.

Diet. Milk, beef tea, ice. Stimulants in milk occasionally. Nourishment was taken fairly well until the last day, so much so that it was only given by the mouth.

February 3d. Temperature 104° F. About the same condition, breathing well, however; treatment continued.

February 4th. Temperature 103.5° F. Seemed somewhat improved and brighter; more membrane removed, and it was stated that some more had been coughed up during the night.

February 5th. Was called early on account of alarming symptoms. Temperature 104° F. Face flushed; skin dull color; pulse slow and feeble, but breathing was good; voice very feeble. There was no indication for tracheotomy, which I had supposed might be required from what was told me of the symptoms.

The trouble seemed to be rather failure of the heart's action than anything else.

Dr. Kingman saw the case with me in consultation, agreeing with me as to diagnosis, and we decided it was best to send the patient *at once* to the hospital.

The heart was examined at this time as it had been several times previously, and no organic trouble could be detected.

Digitalis was at this time given, followed later by carbonate of ammonia, and the patient was ordered to the hospital. On leaving him he seemed considerably improved, and roused himself enough to shake hands and ask me to come and see him.

Brandy in milk was ordered before starting.

Instead of taking him at once he was left three hours, and while being carried down stairs, having just reached the lower landing, he fell and died soon after. This would seem to indicate failure of the heart, and had it not often been previously examined, I should have been inclined to suspect organic disease.

The case seems to me doubly interesting, —

(1.) As a rare combination of disease.

(2.) As to the cause of death.

Dr. Farlow asked if any member had been able to observe any beneficial result from the employment of chlorate of potassium in tonsillitis.

In answer to Dr. Farlow's question as to the curative effect of chlorate of potassium in tonsillitis, Dr. V. Y. Bowditch said that he had no faith in its curative effect, but believed that hot gargles containing it often gave great relief both from the grateful sense of warmth and from the fact that it seems to cleanse the mouth from the thick secretions and disagreeable taste which are present. He also testified to the efficiency of the guaiac lozenges in relieving soreness of the throat, and recommended those of the London Hospital Pharmacopœia as being pleasant to the taste.

Dr. Disbrow asked Dr. DeBlois if there was any means of aborting the disease in its early stage. Speaking from his own experience, having suffered for many years with attacks of tonsillitis, he found by painting the tonsils with tinct. iodine comp. two or three times a day in its early stage, he prevented the formation of pus and cut short the disease. He had also found a strong solution of nitrate of silver useful, and he had used the comp. tinct. guaiacum, but had not found any benefit from it. He had used, to hasten the formation of pus, an old domestic gargle composed of vinegar, water, sugar, and capsicum, in conjunction with hot poultices externally. In follicular tonsillitis he had found painting with tinct. iron very useful. In regard to the guaiacum troches, they have been very useful in a case of irritative cough after other means had failed.

Dr. DeBlois thought that patients often swallow with less difficulty after the use of chlorate of potash, and this is certainly of benefit as far as it goes. If we can remove the pain and discomfort the inflammation will in many cases take care of itself. Scarification is often of service in the same way. Troches containing guaiacum are also often of service in tonsillitis.

Dr. Harlow stated that in the opinion of an eminent Boston physician, now dead, guaiacum never did anybody any good except the apothecary.

Adjourned at 10.05 o'clock.

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PHILADELPHIA CLINICAL SOCIETY.

G. BETTON MASSEY, M. D., REPORTING SECRETARY.

Stated meeting, April 25, 1884. The President, Dr. Henry Beates, Jr., in the chair.

Dr. Hannah T. Croasdale reported a case of

VESICO-VAGINAL FISTULA WITH INVERTED BLADDER.

The record which is brought to your notice this evening is that of a case which perhaps is possessed of more than ordinary interest from two circumstances: first, from the enormous size of the opening in the septum, and secondly, from the fact that from the orifice a bright round body protruded, which was discovered to be the bladder inverted. The patient, M. F., aged forty-seven, was admitted to the Woman's Hospital October 11, 1881. She was married at the age of twenty-five and had one child stillborn. The labor was instrumental, and incontinence of urine occurred soon after it, thirty years ago.

For this trouble and great discomfort the woman never sought relief, and speaks only of her present suffering having begun one year before admission. This suffering had been so intense that she had been obliged to keep her bed for that length of time. The journey from her home had been made on a bed. Her appearance was deplorable. She had constant pain in the lower part of the abdomen; bowels were constipated, appetite poor, face anxious, and she was constantly distressed lest the bed or her clothing be moved and thereby her sufferings be increased. It seemed almost hopeless to expect to do anything for the poor woman's relief, so disturbed was her health from her desperate condition.

Nausea and vomiting were almost constantly present. Her pulse on the day following that of her admission was 65; temperature 99° F.; and respiration 26. The quantity of urine in twenty-four hours could not be ascertained. The color was pale yellow; specific gravity 1000; reaction alkaline, and there was a trace of albumen. After ineffectual attempts she was finally etherized and thoroughly examined October 29th.

The tumor which was so exquisitely sensitive was the inverted bladder, and the exposed mucous membrane was greatly inflamed and bled readily on being touched. The openings into both ureters could be distinctly seen. The mass was grasped and by gentle taxis was reduced and retained by the slight support afforded by one of Skene's glass stylets made to pass through the urethra with the distal extremity resting upon the upper edge of the fistulous opening. A vaginal glass plug was introduced into the vagina to aid in supporting the bladder. The inflamed condition of the parts forbade any further procedure at this time.

On the 30th of November she was again etherized and placed in the lithotomy position, and the edge of the fistula, which was about five centimetres in diameter, was carefully pared, beveled from the vesical margin giving a broad surface on the vaginal septum, and twelve sutures of silver were introduced. It was necessary, before closing the fistula, to liberate adhesive bands at either angle, and then the margins of the opening were closed by the sutures and secured by perforated shot. A self-retaining catheter was introduced, to which was attached a piece of rubber tubing for conveying the urine to the urinal. The patient was then placed in bed and one sixth grain morph. sulph. given hypodermatically; she was ordered lime water and milk every two hours.

The following day, December 2d, there was much vesical tenesmus, which gradually subsided, and nothing especially worthy of note occurred until December 7th, when the sutures were removed. Union was not perfect at either angle, and in the centre there was a small orifice which admitted the passage of urine.

January 6th the patient was again etherized, the edges of the three minute openings freshened, and fine silver wire suture introduced. The central and right openings promptly closed after this second operation, but the left, just at the site of the ureter, admitted the passage of a Snelling's probe.

Then January 20th, February 3d, and March 28th I operated, hoping to close this minute orifice which still remained, and which still allowed of the passage of urine when the bladder was filled. Not one of these efforts was followed by any better success. These attempts were always made with a probe carried through the urethra into the opening in the ureter in order to prevent wounding or closing the latter.

It was now thought best to send the patient home and encourage her coming again in the autumn, as her stay had already been much prolonged beyond the usual time for keeping patients in the hospital, and she was discharged May 8, 1882, quite content on her part with the result of the many operations — six in all. After several months, however, the urine ceased to pass through this opening, probably from the contraction of cicatricial tissue.

I find many contributions to the surgical literature for the relief of vesico-vaginal fistula, but nowhere have I found any record of a case of an inverted bladder through the fistulous orifice.

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THIRTY-FIFTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

Friday, May 9th. Fourth Day.

The meeting being called to order by the President, Dr. J. C. Dalton, chairman of

THE COMMITTEE ON EXPERIMENTAL MEDICINE,

offered resolutions supplementary of those previously reported to the following effect: That the Association desires to express its earnest conviction that experimentation on animals is most useful for the promotion of medical science, and should be intrusted only to members of the medical profession. That the committee be continued and empowered to fill vacancies. Adopted.

RESOLUTION CONCERNING NOMINATIONS OF JOURNAL TRUSTEES.

Dr. Grissom, of North Carolina, then offered a motion, which was carried, that in future nominations to vacancies on the Boards of Trustees of the Association's *Journal* be made by the Committee on Nominations.

REPORTS OF COMMITTEES.

The Committee on the President's Address reported through its chairman, Dr. N. S. Davis, that several members had left the city; that no declarations or explanations concerning the Code should be made without careful consideration; that the committee be continued with instructions to report at the next meeting. This was adopted, and the President was added to the committee.

The Committee on Nominations then reported the names of W. W. Allport, of Illinois, as chairman, and Edward C. Briggs, of Massachusetts, as secretary of the Section on Oral and Dental Surgery.

INTERNATIONAL MEDICAL CONGRESS.

A permanent committee on the invitation to the International Medical Congress was appointed with the following members: Drs. H. F. Campbell, President-elect, Hays, Sayre, Christopher Johnson, Engelmann, J. M. Browne, Billings.

MEDICAL EDUCATION.

Dr. Von Klein, of Ohio, gave notice of a proposed amendment to the By-laws, as stated in two resolutions: —

Resolved, That no person who shall hereafter graduate from a college where an educational test is not a prerequisite to admission shall be a delegate to the Association.

Resolved, That all delegates shall present as a part of their credentials a certificate, from the county or State society they represent, showing from what college and when they graduated, excepting delegates from the army and navy.

RESOLUTIONS AND AMENDMENTS.

Dr. Pratt, of Michigan, proposed an amendment that each Section nominate its own chairman and secretary. He also made a motion, which was carried, that a pamphlet containing the minutes of the Association, with its Constitution and By-laws, be prepared by the publishers of the *Journal* for distribution among members at the next meeting.

A resolution was adopted urging upon Congress the importance of providing for a Museum of Hygiene.

Resolutions by Dr. Pratt requesting Congress to legislate for the prevention of the immigration of the insane and pauper classes to this country, which had been ruled out of order earlier in the day, were brought up again and voted.

Dr. Seiler, of Philadelphia, offered an amendment to the Constitution dividing the Section of which he was secretary into (1) Ophthalmology, (2) Laryngology and Rhinology, Otology.

The Treasurer's annual report showed a balance on hand of $2212, and it was voted to continue the annual dues at $5.

Resolutions were offered and adopted urging Congress to provide for the publication of a new edition at cost of all the volumes of the Medical and Surgical History of the War of the Rebellion, and others urging more stringent laws against pleuro-pneumonia.

A resolution, offered by Dr. Von Klein, of Ohio, to abolish the opening of sessions with prayer, was rejected.

A resolution protesting against the indorsement by members over their signatures of mineral waters and pharmaceutical preparations was carried.

Resolutions from the West Philadelphia Medical Society in earnest support of the Code of Ethics, and resolutions from the St. Louis Medical Society condemning professional advertisement through medical colleges, were all referred to the Judicial Council.

Dr. A. L. Gihon, of the United States Army, brought forward a motion, which was carried, that a committee be appointed to further the erection in that city of a monument to Dr. Benjamin Rush.

A large number of delegates were appointed to the International Medical Congress; and, after the passage of votes of thanks to all individuals, institutions, and corporations which had extended hospitalities and courtesies to the Association, and of a vote of thanks to the presiding officer, the thirty-fifth annual meeting of the Association was adjourned.

— *The Archives of Pediatrics*, a medical monthly devoted to the diseases of infants and children, will henceforth be issued from the New York office of John E. Potter & Co., publishers.

Recent Literature.

History of the Discovery of the Circulation of the Blood. By HENRY C. CHAPMAN, M. D. Philadelphia: P. Blakiston, Son & Co. 1884. 8vo. 56 pages.

In these days of restless research and experiment, when a new and specific bacterium may be had almost for the asking, and the highest culture is brought, as it were, to the very doors of the bacillus, it is a pleasure to record evidence of an interest in the history of any portion of medical knowledge. Such is to be found in this lecture by Professor Chapman, which relates the gradual development of our acquaintance with one branch of physiology.

The tercentenary of Harvey's birth (April 1, 1578) naturally called attention to his relations to this discovery. Not only in England was a fresh interest in this subject awakened; the Italians were astir to advocate the claims of their countrymen to a share of the merit. This national rivalry has provoked not a little acrimonious discussion, but the field has been freed of much prejudicial rubbish, and the true relations of Harvey to this question are becoming clearer.

Until very recently it was a tremendous heresy to doubt his claims to the completest originality as a discoverer and his superiority as a man. Now our estimate of him has been much modified and corrected, and although the idol have lost something of its glory, the honor due to others has been more wisely distributed. A portion of the literature of this dispute is in Italian, some, and not the least valuable, is in German, of which that contributed by Tollin is the most important; even the English portion is not too readily accessible to the American reader, and many will be grateful to Dr. Chapman that he has been led to put the tale into a handy form in English, and one convenient for the student. In this he has succeeded well, and the fair-minded reader, even though unfamiliar with the history of the discussion, will probably agree with him in his judgment that the discovery of the circulation of the blood belongs to no one man or age, but that many men have builded thereon, sometimes perhaps better than they knew, and that even in our times important additions are made.

Dr. Chapman fortifies his position with numerous references to the authorities, and considerable quotations from the works of those who have a claim upon the discovery. He has refrained from any too detailed account of Harvey, and the curious (and as some believe misguided) English enthusiasm for him. In this he has doubtless done wisely, but a fuller bibliography of this portion of the subject would have been very acceptable. The printer, however, has made a sad mess of many of the quotations, touching, apparently, no language to adorn it. Such as we have been able to verify present numerous and curious slips of the type-setter, which need not be noted here. It is, perhaps, well to remark that the reference to Haeser (p. 15) is to the first volume of the third edition, and that Berengar de Carpi is the more common form, not Berenger; Mundini (p. 13), Guntherus (p. 25), and Rumi (p. 38) are of course *lapsus oculi* for Mundinus, Guintherus, and Ruini. These are slight oversights, easily corrected in the work on Physiology which Professor Chapman is preparing, and of which this lecture will form a chapter. In the allusion to Erasistratus (p. 11) the hope is incidentally awakened that other subjects as well will receive historical treatment in the larger work. Should this prove to be the case we shall have a book of unusual interest and value.

Handbook of Vertebrate Dissection. By H. NEWELL MARTIN, D. Sc., etc., and W. A. MOALE, M. D. Part III. How to Dissect a Rodent. New York: Macmillan & Co. 1884.

This is the third part of the eminently practical work now appearing. It is not a text-book of comparative anatomy, nor precisely what we call a "dissector," though partaking of the character of one. In short, it teaches the student how to dissect a rat, which is chosen as a representative of the class of mammalia, and special attention is accordingly given to the characteristics of the class rather than to those of the genus or species, or to minute points of structure. This is the plan, and it only remains for us to say that the work strikes us as excellent.

A Course of Instruction in Zoötomy (Vertebrata). By T. JEFFERY PARKER, B. Sc. London, Professor of Biology in the University of Otago, New Zealand. With Seventy-four Illustrations. London: Macmillan & Co. 1884.

This book reaches us together with that just noticed, and is very similar to it in method, but is of a wider scope, giving directions for the study of the lamprey, the skate, the cod, the lizard, the pigeon, and the rabbit. The choice depends somewhat on the prevalence of these animals in New Zealand. The author has been demonstrator to Mr. Huxley, and acknowledges his assistance in looking over parts of the work written in England. We have nothing but praise for the execution of the work.

Legal Medicine. By CHARLES MEYMOTT TIDY, M. B. F. C. S., etc. Part II. Philadelphia: Henry C. Lea's Son & Co. 1884.

The promise and hope held forth in the first volume of this work, that the author would give to his readers, as the full result of his labors, a complete treatise on legal medicine, is not disappointed in this the second part of the series. The same care is manifested in the composition, the same remarkable industry in the critical review of the medico-legal literature of the world is illustrated. To many students of forensic medicine this second volume may, indeed, prove more attractive than its predecessor on account of the range and nature of the subjects discussed, and because those subjects are of more practical interest, as the following necessarily brief analysis will show.

In Chapter I., under the general head of Legitimacy and Paternity, are discussed the topics of impotence and sterility in the male and the female, hermaphrodism, the medico-legal relations of utero-gestation, and the signs of maturity in the newly-born child.

In the second chapter the medico-legal aspects of pregnancy are studied; the signs of pregnancy and of recent delivery, in the living and the dead, are given, including a full discussion of the vexed questions relating to the value of the *corpus luteum* as evidence of conception.

The third chapter is devoted to abortion and fœticide, followed by a full and discriminating treatment of the subject of rape and its related topic, the signs of virginity.

The legal and physiological difficulties connected with "live birth," with a consideration of the evidence by which the medical jurist proves the child to have been dead at birth, are fully elaborated in the next chapter, and serve to introduce the reader to the study of infanticide.

The last five chapters are given to the discussion of asphyxia in its general relations, and to special examples of that process as they are illustrated in death by drowning, by hanging, by strangulation, and by suffocation.

This bare outline will serve simply to indicate the variety and scope of the medico-legal topics treated in this volume. It can furnish no hint of the attractiveness with which they are presented, or of the intelligence, good judgment, and erudition, which the author has displayed in this encyclopædic work. As in the first volume, so in this, the plan of attaching to each chapter a copious appendix of illustrative cases drawn from all sources, and referred to in the text by means of parenthetical numerals, is a source of great convenience; the cases thus cited are of the latest as well as of older date, and in themselves constitute one of the most valuable features of the treatise. Another useful innovation is the grouping, at the end of each section, of specific directions for the practical application of the rules and principles previously discussed.

Many quotations might be made to illustrate the conservative and judicial tone which pervades the author's writings. In his preface to the work he expresses a sentiment which every medical expert would do well to include among his golden texts: "For the medical jurist, whose object should be the interests of justice, to hesitate where science is positive is as unjustifiable as for him to speak without reserve on those details of our science where the limits of exact scientific knowledge are undefined. There is a scientific certainty which only the coward treats as uncertainty, and there is an uncertainty which only the boldness of ignorance ignores." Of this suggestive and thoughtful statement the author makes just application in his volumes, and his pages are therefore remarkably free from misleading dogmatism.

Medical Annals of Baltimore from 1608 to 1880, including Events, Men, and Literature. By John R. Quinan, M. D. Baltimore. 1884.

The Medical Annals of Baltimore contain an interesting record of medical sayings and doings from 1608 to 1880, and a short biography of the practitioners of Baltimore, whose labors in the cause of suffering humanity endeared them to their contemporaries. We do not know of so complete a work in reference to the other cities of this country. Dr. F. H. Brown has given us an account of the members of the Massachusetts Medical Society, and we learn when they entered the profession, and have a list of their publications. Dr. Quinan tells us of those who have lived as well as of those now living, and of their works, giving a list of those who have served their country in the army and navy, and tells us of all medical institutions and boards of health. We congratulate the Medico-Chirurgical Society of Maryland on having so complete a history of members of the medical profession practicing in Baltimore, so full an account of medical publications during so long a period. The profession in Baltimore cannot be accused of neglecting to put in writing their experience and their opinions, and exhibit commendable industry in writing as in practicing. The younger members of the profession in that city have a powerful stimulus to well-doing in so many examples of patient and faithful work.

The Field of Disease. A Book of Preventive Medicine. By B. W. Richardson, M. D., etc., etc. Philadelphia: Henry C. Lea's Son & Co. 1884.

Whatever may be said in praise of the beneficence of the healing art unquestionably applies with far more than double force to the beneficence of the preventive art, or more properly, science, against disease. As soon as men allowed themselves to doubt if diseases were a portion of the necessary sufferings of humanity the first step was taken toward prevention, and that was not very long ago. Preventive medicine, in so far as it exists to-day, is, with the exception of isolated movements, such as the introduction of vaccination against small-pox, the growth of the last thirty years. Its basis rests upon a rational and reliable system of registration and of vital statistics, the development of which, in England, dates back less than fifty years. It was only last April that the name of William Farr, the founder of this system of registration, to a great degree the model for those of other countries, passed through the office of the registrar of deaths, and was added to the sixty million names whose registration had passed under this official supervision.

Just as in curative medicine there is the theory and the practice, the first step being to elucidate the nature and the locality of the disease, and the second to select, on rational principles, the appropriate remedies, so in preventive medicine we must first have vital statistics to show us when, where, and how men are sick and die before we can undertake to remove the causes of sickness and death except in so far as this may be accomplished by a fortunate empiricism.

The practitioner of to-day is looked to by his regular clients quite as much to shield them from the approach of disease as to relieve them from its consequences, and as larger demands are and will be made upon the State to prevent causes of sickness, so a gradually increasing number of medically educated men will devote themselves exclusively to that part of State medicine which falls under the head of hygiene.

In the present work the author investigates first the nature, secondly the causes, and afterwards the prevention of those calamities afflicting mankind which have received the title of diseases. In other words, he strives to trace diseases from their actual representation, as they exist before us, in their natural progress after their birth, back to their origin, then to seek the conditions out of which they spring; and, further, in investigating the conditions, to see how far they are removable, and how far they are avoidable. The curative side of medical learning thus forms part of his scheme.

The book is an octavo of 740 pages, and though addressed to the general reader must prove a very useful one to the general practitioner. Parts of the subject, as those concerning poisons and injurious trades, have undoubtedly been much more fully dealt with elsewhere, but the book, as a whole, is a good one, and the point of view deserves still higher commendation as indicative of an excellent tendency in modern medicine.

The Diseases of Children. A Handbook for Practitioners and Students. By ARMAND SEMPLE, B. A., M. B. Cantab., M. R. C. P. London, Physician Northeastern Hospital for Children, Physician to the Royal Society of Musicians, Author of The Voice Musically and Medically Considered, Aids to Medicine, etc. New York: G. P. Putnam's Sons, 27 and 29 West Twenty-Third Street. London, 25 Henrietta Street, Covent Garden. 1884.

In the preface to his work the author seems, strangely enough, to be under the impression that he has done something original in stating that a difference exists between the diseases of childhood and those of adult life. The chapters devoted to diseases of the skin are especially unsatisfactory, though they perhaps represent pretty well the general character of the book, which is that of a compendium, possibly useful to a student preparing for an examination, but markedly deficient in important details of treatment and useful clinical facts.

A Companion to the United States Pharmacopœia. Being a Commentary on the Latest Edition of the Pharmacopœia, and Containing the Descriptions, Properties, Uses, and Doses of all Official and numerous Unofficial Drugs and Preparations in Current Use in the United States, together with Practical Hints, Working Formulas, etc. Designed as a Ready Reference Book for Pharmacists, Physicians, and Students. With over 650 Original Illustrations. By OSCAR OLDBERG, Phar. D., and OTTO A. WALL, M. D., Ph. G. New York: William Wood & Co. 1884. viii. 1216 pages.

This work, the design of which is plainly set forth on its title-page, is the latest and one of the best commentaries that the appearance of the Sixth Revision of the Pharmacopœia of the United States has yet called forth, and is issued by the publishers of that work. The illustrations are nearly all from original drawings from actual specimens. It states plainly, where any exist, the difference in strength and other respects between the last and the previous edition of the Pharmacopœia, and gives concisely the medical properties and uses of all the medicines of which it treats, with the dose. It contains practical information relative to the preparation and use of hypodermic and other injections, as well as inhalations, baths, and other forms of medication, with much other information not usually referred to in books of similar description. It contains very valuable chapters or articles upon the use of the microscope in pharmacognosy, the microscopic structure of plants, the administration of medicines, extemporaneous prescriptions, weights and measures, and specific gravity and volume. By specific volume is understood the relative volume of any weight of a substance as compared with the volume of the same weight of water. The tables given furnish convenient means of converting quantities by weight into volumes by a simple multiplication. Thus as the specific volume of glycerine, U. S. P., is 0.800, 1000 grammes of that fluid measures 800 cubic centimetres, or 1000 avoirdupois ounces will measure 800 imperial fluid ounces.

The work is one which all physicians and pharmacists would find it greatly to their advantage to have for ready reference. B. F. D.

Second Biennial Report of the State Board of Health of Iowa, for the year ending June 30, 1883.

The State Board of Health of Iowa, now in the fourth year of its existence, shows a commendable activity in its last report. Among the more important topics treated are Contagious Diseases, reports of which are tabulated from the returns of clerks and health boards throughout the State.

The distinction between reports of prevalent diseases and mortality reports are not clearly stated in the reports of some of the more recently organized health boards of States. It is encouraging to note progress in this direction in the Reports of the Iowa Board. Reports of prevalent diseases are usually voluntary, and when well done evince a desire to promote the public welfare. On the other hand, mortality reports are commonly made in response to legal enactments, as in Massachusetts, Michigan, Iowa, Rhode Island, and many other States.

Dr. Justin M. Hull, a member of the Board, contributes a paper on Ventilation, in which are briefly summed up the opinions of the best writers upon the subject.

Another paper on Hospitals for Contagious Diseases has a special value, since it reproduces in a concise form the conclusions of a recent English commission relative to the location of small-pox hospitals. It was found on inquiry that after the establishment of such hospitals in thickly-settled districts the disease occurred in their immediate neighborhood, its frequency bearing a tolerably close relation to the number of cases admitted to the hospitals, and hence the necessity for establishing them at places remote from habitations and lines of travel.

Sepulture: Its History, Methods, and Sanitary Requisites. By STEPHEN WICKES, M. D. Philadelphia: P. Blakiston, Son & Co. 1884.

The title of this book is a fair description of its contents. In writing the history of sepulture the author has taken some pains to consult such authorities as are accessible in this country. He confines himself to the duties of a historian, and does not indulge in the advocacy of a system. Much of the book is devoted to portraying the consequences of unsanitary sepulture. The question how and where the dead shall be disposed of is tersely answered in the statement that they should be so buried that the living may not suffer.

The disposal of the dead by cremation or by chemical destruction is not considered. Dr. Wickes very sensibly says in regard to this: "Each method, like the slower processes of decomposition in the earth, resolves the body into its original elements. If good hygiene made it necessary these methods would doubtless be accepted as reasonable and proper. In our own country the question of their adoption upon sanitary grounds is not an urgent one. It may become so in the generations to come. Inhumation commends itself to the traditional sentiments of the people, and an innovation upon these is not demanded. Rural cemeteries, properly regulated, under wise control, guarded by good laws, and permanently extramural, afford all necessary protection to the public health."

Medical and Surgical Journal.

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TREATMENT OF ULCER OF THE STOMACH.

At the Société Médicale des Hôpitaux, session of April 25th, there was an interesting discussion on the treatment of ulcer of the stomach, in which Drs. Debore, Duguet, Bucquoi, and Gerin Roze took part.

The discussion was opened by Debore, who remarked that the ordinary treatment of simple gastric ulcer by an exclusive regimen of milk and lime water, or milk and Vichy water, often fails. One of the inconveniences attending this treatment is that large quantities are required to sustain the patient, that is, a gallon a day or more, from which irritation and even dilatation may result. The attempt has been made to give an equivalent of milk in smaller volume by using milk powder or condensed milk. These preparations have not been successful in Dr. Debore's practice. The same may be said with regard to the meat powders so much employed in "glevage" or forced feeding, which are ill borne in gastric ulceration, and often occasion vomiting. In view of this want of success, Debore asked himself if it were not possible to find some other alimentary regimen, which while nourishing the patient would suspend for a time the action of the stomach and suppress the secretion of gastric juice, whose injurious influence on the march of the ulceration is universally conceded. Certain authorities have vaunted the benefits of enemata of peptones, substituting for alimentation by the stomach rectal alimentation, but this means does not enable the organism to be sufficiently nourished, especially if it be necessary to prolong for some time feeding by the rectum.

In view of the impossibility of suppressing the secretion of gastric juice Debore has endeavored to modify its acid reaction by neutralizing it. The acidity of the gastric juice is so characteristic and so necessary for stomach digestion that one may truly say that gastric juice when rendered alkaline has lost all its properties. There is equal reason to believe that it is to this acidity that this secretion owes its power of preventing the healing of the simple ulcer. The problem, then, consists in finding how so to neutralize the gastric juice that azotized food may be given to patients in such a way that the digestion shall be accomplished, not in the stomach, but in the small intestines. With this end in view Debore administered to his patients a certain quantity of meat powder associated with a large dose of bicarbonate of soda; twenty grammes, for instance, of meat powder with ten grammes of the bicarbonate at each meal time. Several trials assured him that the theory which he had adopted was correct; on withdrawing, for example, by the flexible tube the contents of the stomach in patients to whom he had previously given the mixture of meat powder and soda he ascertained that there was no trace of peptones. He treated in this manner four patients affected with ulcer of the stomach; in all these the intolerable pains from which they were suffering and the vomiting disappeared.

At the present time Dr. Debore relies on the following procedure: During the first few days he washes out the stomach to free it of acid matters which it may contain. This operation has never in his practice provoked hæmatemesis, and is regarded as safe; he uses a soft flexible tube, whose extremity if it should hit against the seat of the ulcer could do no harm. In the next place he administers to his patients, three times a day, twenty-five grammes powdered meat, suspended in milk and mixed with ten grammes bicarbonate of soda. This mixture is administered at meal time, and by means of the stomach tube, as it is very disagreeable when taken in the ordinary way as food. The patient is given, besides, a quart of milk a day, rendered alkaline by lime water. The facts go to show that these four patients have taken every day for several months thirty grammes (one ounce) of bicarbonate of soda, and this treatment has never given rise to any of those symptoms which characterize what has been called the "alkaline cachexia."

Dr. Jaccoud, moreover, affirms that he has been able to give to certain patients for a very long time twenty grammes a day (more than half an ounce) of bicarbonate of soda without the least harm resulting. Dr. Charcot has also given from thirty to forty grammes a day of this alkali without noting any sign of cachexia. If it is well established that bicarbonate of soda long continued does not produce cachexia, it is no less true that its employment is attended with certain inconveniences; besides its disagreeable taste its action on the stomach is somewhat irritating, and by its decomposition under the influence of the digestive secretions it sets free a considerable quantity of carbonic acid, which occasions painful eructations. Another reason which has prompted Debore to seek a substitute for the bicarbonate in other alkalies is that the former by reason of its great solubility may be too speedily absorbed, and consequently fail sufficiently to neutralize the gastric juice. He has tried successively to replace the bicarbonate of soda by lime water, saccharate of lime, and magnesia. All these substances have equally their advantages and disadvantages, and he now uses that combination which has given the best results. At each meal, which consists of twenty-five grammes of meat powder well stirred into milk, he adds a small package containing a mixture, in about equal proportions, of calcined magnesia and bicarbonate of soda. He also orders the patient to drink each day a quart of milk to which one gramme of saccharate of lime has been added.

In the discussion which followed, Dr. Duguet did not share the opinion of Dr. Debore as to the innocuousness of lavage of the stomach in patients affected with chronic ulcer. He cited an instance of frightful hæmatemesis and death following the use of the sound, which "had produced aspiration at the surface of the ulcer," and provoked the hæmorrhage.

Dr. Gerin Roze did not agree with Dr. Debore in the affirmation that dilatation of the stomach is likely to follow a milk diet in ulcer of the stomach. Every day we see cardiac or nephritic patients put upon a milk diet, and we seldom or never witness dilatation of the stomach in such patients.

Dr. Bucquoi had never observed death from the use of the sound and from lavage in gastric ulcer; he had, however, seen the liquid siphoned out of the stomach in this operation present a decidedly bloody appearance, and he was inclined to ascribe the source of the blood, in part at least, to the aspiration produced by the sound. Hence he was disposed to be very cautious in the use of the stomach tube in these cases. As for dilatation of the stomach, he could not bring himself to consider it as the result of treatment by milk diet; all chronic affections of the stomach, whatever treatment may be pursued, are accompanied by dilatation of this organ. It is the lesion of the mucous membrane, and the paralysis consecutive to the long sojourn of alimentary substances, which causes this augmentation of volume of the stomach. He thought it proper to emphasize this fact in connection with ulcer of the stomach, because the milk treatment, which is on the whole the most certain and reliable, has been, as he believes, wrongly blamed for the dilatation which accompanies the lesion.

Dr. Debore, in closing, said that he did not pretend that the milk regimen gives rise, in all cases of ulcer of the stomach, to dilatation; there are, in fact, some patients who take their milk in small quantities at a time, and who can thus ingest several quarts a day without danger; there are others who have only two or three meals a day, and who drink a bowlful or two of milk at a time, thus forcibly dilating their stomachs. He has, moreover, seen a number of cases of dilatation of the stomach in which the dilatation disappeared when the dietary regimen was modified, and this fact he regarded as a striking confirmation of his thesis.

— At a collision on the New York Central and Hudson River Railroad, near Rochester, on the night of May 22d, unusual nerve was displayed by Frederick Parish, a sleeping-car conductor, who, finding his right arm so crushed as to render its loss certain, coolly ligated the limb near the shoulder-joint with a strap, and amputated it just below with his pen-knife.

THE CEMETERIES AND WATER-SUPPLY OF PANAMA.

THE sanitary condition of such a city as Panama, situated as it is upon one of the great natural highways of the world's commerce, should be at all times a matter of more than local concern and importance, but its bearing upon health and disease in other countries become much more intimate with the prosecution of the work upon the interoceanic canal and the employment upon the isthmus of large numbers of laborers. It is well known that Panama itself has a very trying climate and is a very dirty city. The picturesque impression received when approaching by water is rudely dispelled upon entering the streets. It will probably be long before the unwholesome operations of nature and custom are antagonized by public conscience awakened to hygienic laws. There are, however, two conspicuous and correlated sources of the propagation and dissemination of disease at Panama which are as patent and amenable to correction as they are loathsome, — we mean the cemeteries and the water-supply. The present condition and dangers of these have been described before in these columns in plain language, and we reproduce the following paragraph from a letter by Dr. Heffenger, written in March, 1882, from Panama, and published in the JOURNAL of April 20th of that year: —

"One who has not traveled through Spanish America can form no idea of the happy-go-lucky, indifferent, and general slip-shod state of government. Records are seldom kept, and when they are, cannot be relied upon. After vainly seeking mortuary statistics from physicians and public officials, I paid a visit to the various cemeteries, and by overhauling burial books and questioning the keepers, ascertained that the Catholic (native) interments amount to one hundred monthly, and the foreign to ten, giving an annual death-rate of eighty-eight per one thousand. Of these deaths at least one half are due to malarial (yellow?) fevers, one fourth to small-pox, and the remainder to pulmonary and intestinal diseases, syphilis, accidents, etc, etc. I carefully inspected the cemeteries, and cannot pass on without remarking upon the largest one, the immediate property of the bishop. It was built by the Spanish government nearly two hundred years ago upon a boggy piece of land, a mile to the westward of the city. It consists of three hundred and sixty-five niches arranged in three tiers, forming a hollow square. Only the wealthy can indulge in this ultimate luxury, and upon the demise of one of these favored sons of fortune the body is deposited in one of the niches, sealed up by a suitably engraved tablet, to remain so long as cadaveric rent is paid to the church; but let the defunct's relatives fail to satisfy its rapacious demands, and soon the remains in its coffin is tossed into the swamp, just to the rear of the cemetery, where at all times may be seen the unsightly remnant of ancient and recent dead, old Spanish hidalgos, proud doñas, fair señoritas, and new-born babes lying in a promiscuous heap of putrescence ten feet high, their white staring, tongueless skulls mutely protesting against such barbaric desecration of the dead. My nerves are well tempered, but I confess this sight filled me with uncontrollable disgust and repugnance. Such a constant source of disease germination and dissemination within a mile of the city, of course, must contribute greatly to its unhealthfulness. Will the new health authorities dare interfere with this right of the church? I think not."

The same story is told, though more at length, in a letter to the *Panama Star and Herald*, April 5, 1884, from Dr. Wolfredhelson, late member of the Panama Board of Health. The statements of the letter are editorially indorsed, and show plainly enough that the conditions portrayed are no better, if not worse, than when our correspondent wrote, and verify his prediction that the old church would prove too strong for the young Board of Health. While the Jewish, the Chinese, and the "foreign" cemeteries are in excellent order, and offer nothing for comment or censure, the two native cemeteries — that owned by the bishop and rented in niches to the rich, and that used for general burial of the poor — offer nothing for commendation, and offend all the senses. In regard to the general cemetery it is simply necessary to state that it covers only three fourths of an acre of ground for an increasing population of 20,000 people, and that it is dug over at least once every year, to give an idea of the centre of disease which it must be.

The condition of the church cemetery is even worse than described by our correspondent, for in September, 1882, an earthquake loosened the walls, and cracked many of the *bovedas* or niches, which in the climate of Panama are veritable ovens filled with putrescent humanity — as long as rents are paid. But the poisonous influences of these two cemeteries are not confined to the air; within a few hundred feet of each of them are wells from which water is drawn and sold for drinking purposes through the city, and from which washerwomen draw their supplies for cleansing and infecting the soiled linen of the inhabitants.

The correspondents of the *Star and Herald* may well exclaim: "This whole isthmus wants sanitary reform, at once, to make it a fitting place for human beings to live on, and to prepare it for the great future that lies before it. Let us hope that some plan of combined wisdom and hygiene will bring about such an ending. Humanity and science demand it."

MEDICAL NOTES.

—It is a wonder that a competent, sensible practitioner has any respect for humanity at all. People are constantly revealing their nonsense in medical matters to him, and he has to grin and bear it as best he may. He finds himself supplanted by a man he knows to be a quack, and is assailed with a series of therapeutic experiences by a larger percentage of the elderly females he is thrown in contact with that is calculated to set an unhardened man crazy. The separation of the true from the false among physicians is truly one of the great social problems. — *St. Louis Globe-Democrat.*

— Our readers doubtless remember an article in an English periodical some time since, by Frances Power Cobbe, making the most sweeping charges of immorality and licentiousness against the medical profession. It has generally, and with reason, been considered beneath the notice of the profession at which it was aimed. But the somewhat inflammable Mr. Punch (whose heart, despite his kyphotic malformation, seems to be in the right place) thus vents his feelings: —

> "She shames her sex, who charges with false tongue
> A great profession with all license lewd:
> Doctors disdain — their withers are unwrung —
> The stingless insults of a prurient prude!"

NEW YORK.

— The twenty-fifth annual commencement of the Long Island College Hospital was held at the Brooklyn Academy of Music Wednesday evening, May 21st, and degrees were conferred upon forty-four candidates. The valedictory was delivered by George L. Hutchinson, and the address to the graduates by the Rev. Albert J. Lyman.

— At a hearing of two large companies before the Brooklyn Board of Health on the charge of poisonous adulteration of coffee, held May 17th, Dr. Elias E. Bartley, chemist to the department, made an elaborate report in which he stated that at the works of one of them the following coloring agents were used: French chalk, gum arabic, charcoal from wood, drop black, yellow ochre with a mixture of clay and hydrated oxide of iron, chrome orange, celestial blue, and turmeric; and at the other: Venetian red, yellow ochre, quinia, indigo, indigo extract (a sulphate of indigo, or indigo carmine), and Persian berries with ochre. Of these coloring matters, he said, chrome orange and celestial blue should be prohibited at once. The others, while not so injurious as these, were used to deceive the public, and should be regarded as adulterations. Coffee which had become spoiled or discolored from sea water, or in any way rendered unsalable, was sent to these mills and made to appear like a good article, and green and unripe coffees was there given the brown color of age and rushed into the market. On examination of the coffees themselves lead was found to adhere in considerable quantity to the pans, and the examination of twenty samples of polished coffee from the market showed that the use of Prussian blue, as well as lead, was very common in coloring coffee. After a prolonged discussion of the matter, Health Commissioner Raymond decided to issue an order prohibiting the use in coloring coffee of chrome yellow or orange or any substance containing lead, celestial blue, or Prussian blue.

— The steamship Polaria arrived from Hamburg on the 23d of May with five cases of small-pox on board, and was detained at quarantine. The surgeon stated that on May 19th the first case was discovered, and that though the patient was immediately isolated, three other cases developed the same day. No other case was noted until the day the port of New York was reached, when one additional case developed. All the ship's passengers were immigrants. The five small-pox patients were sent to the Riverside Hospital on Blackwell's Island, and all the other immigrants were at once vaccinated. The immigrants will be kept on the ship (which was thoroughly fumigated) until all danger of their communicating the disease is over.

— In the amphitheatre of Bellevue Hospital, on May 22d, Dr. William F. Fluhrer, one of the visiting surgeons, described before a number of the profession a successful operation for the removal of a pistol-ball from the brain through a counter-opening in the skull, and exhibited the patient upon whom the operation was performed. The patient shot himself in the forehead with suicidal intent, and hemiplegia with a semicomatose condition was caused by the injury. Dr. Fluhrer ascertained the direction of the ball by probing, and then extricated it by means of a counter-opening made at the back of the head, after which drainage was secured by passing a rubber tube through the entire wound. The paralysis gradually cleared up, and the patient is now, three months after the shooting, in apparently excellent health. An unpleasant feature of the demonstration was the publicity given to it, as an account of it appeared in all the daily papers.

— The late Matthew Vassar left in his will a considerable sum of money for the erection and endowment of a hospital at Poughkeepsie on condition that his brother, John Guy Vassar, should contribute an equal amount. The latter willingly consented to do so, and having taken an active interest in the matter the arrangements have now been nearly completed for the establishment of the institution. The trustees have purchased an entire block in a desirable location, and the plans and specifications for the buildings, which will be of brick trimmed with terra cotta, have been agreed upon, and proposals invited for the work of construction. The name will probably be the Vassar Brothers' Hospital.

Correspondence.

CONTAGIOUSNESS OF TYPHOID.

Astoria, Oregon, *April* 29, 1884.

Mr. Editor, — It is a matter of astonishment to me that so much difference of opinion should exist in regard to the contagiousness of enteric fever, when so many medical men have seen cases about which the evidence is as strong as any proof can be to establish the fact.

On the 18th of December my son was brought home with typhoid fever, having been sick three weeks, four days only having been spent in bed previous to his return. He drank water from a well which was dug through sandy soil which was within a few feet of the door of a boarding-house kitchen, from which slops had been thrown for many years. Four other cases occurred in the family with whom he boarded, and no case had ever been in the house before. The well had been dug three months. A beef had been killed within forty feet of this well a few weeks before. My son was put into a well ventilated room, and no precautions were neglected to disinfect the discharges and keep the patient and his room clean. The discharges were buried immediately. The water which was used for cooking and drinking purposes was taken from a tank, and this was continually supplied by rain. There was no possible way for the water to become contaminated by fæcal matter. The rest of the family were kept out of the sick-room as much as possible, though when the young man died, which he did in seventeen days from perforation of the bowel in consequence of his having, contrary to my directions, been allowed to get upon the night chair, his brothers gathered around him, and kissed him. Three weeks after a boy twelve years of age was attacked, and was sick five weeks. Two weeks after this one left his bed a boy aged sixteen and one six were attacked, and remained in bed six weeks. The eldest had diarrhœa three or four days, the younger one was constipated during the whole time. The fever was continued for four weeks, and then became intermittent rather. Rose spots were distinct.

The treatment was a *great abundance of air from the Pacific Ocean through the windows*, the temperature being modified by a fire in the room, milk, *coffee* instead of alcohol, and *warm baths*. Injections of tepid water were used to open the bowels, and when this failed I had to give two compound cathartic pills at night, which were followed by one stool the next day. These were given *late in the disease*, however, *after all tenderness had gone.*

It is an opprobrium upon our profession that such vast difference should exist in the opinions of medical men in regard to the treatment of this disease, and as to how it is propagated.

Very truly yours, T. T. Cabaniss, M. D.,
Late Acting Assistant Surgeon, U. S. A.

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RETAINED PLACENTA OF ABORTION.

Newton, *May* 10, 1884.

Mr. Editor, — The discussion in your columns of this week upon retained placenta of abortion leads me to say — what I have often said to medical friends — that I have followed a uniform scheme of treatment with such cases for the last thirteen years; a scheme not of direct interference, but, as I may say, of expectant and protective treatment. I cannot remember that I have had a case that did not turn out well in the end. I have had cases that kept me anxious for days together, — and of what other line of practice must not this be said? — but they turned out right.

Given an abortion at about three months in a reasonably intelligent and obedient patient; the fœtus has been discharged, the secundines retained, and the womb is closed against all but forcible dilatation. The condition to be controlled is hæmorrhage, and this can be controlled. I have reason to know that septicæmia, under these circumstances, is an exceedingly rare condition, and have reason to believe that it is more rare than many physicians think. Thus far I have never seen a case, and I suppose in the thirteen years I have had as much experience in this trying complication — early abortion — as falls to the lot of the average general practitioner.

For the hæmorrhage, present or expected, the patient is instructed to lie quietly in bed, and told how to use suppositories, with which she is provided, the suppository being of *vaginal* size, and made of pure butter of cocoa containing each a scruple of tannin. When the hæmorrhage occurs these, one or two at a time, are passed well up to the os uteri; a firm clot is speedily formed, and thus a soft but effective tampon provided, which is, in a measure, antiseptic also. This can be broken up and removed at any time, but I have generally found it better to allow it to remain, a new suppository being forced in whenever bleeding returns until, finally, the whole contents of the vagina are expelled with the fœtal envelope attached to its upper portion.

Subordinate points of treatment, for example, the use of ergot, opium, food, stimulant, etc., require careful attention, but do not need to be detailed.

I am disposed to defer to my friend, Dr. Mundé, on matters of gynæcology, but I am also disposed to believe that Dr. Mundé would make less of a task of opening and evacuating a uterus which is high up, is in an early stage of evolution, and is obstinately closed, than I should. Moreover, I think I recognize on the part of the present school of gynæcologists an undue tendency to suggest surgical device, and resort to surgical interference.

Yours faithfully, Henry M. Field.

Miscellany.

THE HISTORY AND PRESENT STATUS OF THE WAVERLEY CONVALESCENT HOME.

It is always pleasant to notice favorable observations upon our own institutions from the pen of foreigners. We therefore extract from the *Lancet* the following notice by Mr. Burdette, secretary of the General Hospital Fund in London, in regard to the Convalescent Home of the Massachusetts General Hospital at Waverley: —

"The first convalescent institution ever established for hospital purposes in America was opened on April 25, 1882. It is called the Waverley Convalescent Home, and is worked by the trustees of the Massachusetts General Hospital. This home has been erected from a fund of $100,000, which was specially raised for this purpose, $30,000 being spent on the building and furniture, and $70,000 being invested as an endowment fund for the permanent maintenance of the home. The home is intended mainly for the use of the patients at the Massachusetts General Hospital, and both free and paying patients may be admitted. It contains thirty beds for patients, and has two wards of nine beds each, one with three beds, two with two beds, and four single-bedded rooms. The proportion of accommodation for paying to free patients is about one to five, but as the object of the trustees is first to benefit the poor who are unable to pay the expense of procuring fresh air and change, so far none but free patients have been received. This is remarkable, and shows how easily the combined pay and free system works in the general hospitals of America. The whole arrangements at the Waverley Home are admirable, and the cheerful and cleanly appearance of everything fills the visitor with gratification. Every ward, every room, every office, from roof to basement, is admirably arranged and perfectly kept. Indeed, I have never seen a more model institution than the Waverley Convalescent Home. The sanitary arrangements have been very carefully planned, and reflect great credit upon Dr. Whittemore, the able superintendent of the Massachusetts General Hospital. Waverley is about seven miles from Boston. The country around is hilly and well wooded, and the site selected for this convalescent home is a singularly beautiful spot. With all the progressive genius for which the Americans are famed, for some unexplained reason they have not heretofore recognized the advantages of convalescent hospitals. This, the first convalescent home in America, is well worth a visit, and I have little doubt many others will soon be erected."

ABDOMINAL SECTION FOR EXTRA-UTERINE PREGNANCY.

Dr. Angus Macdonald opened the discussion before the Edinburgh Obstetrical Society[1] on the recent paper of Dr. Freund on Extra-uterine Pregnancy by a report of two cases of his own, in one of which he operated; the account of this operation is of much interest. The menstruation of the patient ceased in October, 1882. The other symptoms of pregnancy followed. In April, 1883, while working hard she overstrained herself, and had pains like those of labor, followed by swelling of the abdomen and a deep-seated pain in its lowest part. A sanguineous discharge from the vagina ensued with swelling of left leg from the ankle to the hip.

Physical examination in May showed the abdomen generally distended. Resonant all over, except just above the symphysis pubis and toward the right flank, where it is relatively dull. Left flank was quite clear. Measurement round umbilicus thirty-three and three fourths inches.

The vagina was short; the uterus was depressed, the vaginal portion being soft and enlarged like that of a pregnant uterus. There was a tender fullness in the pouch of Douglas. In the right and left fornices, on deep pressure, a rounded mass could be felt. Sound entered five inches, and communicated a feeling of increased resistance as it passed over the endometrium.

A large semi-elastic mass projected into the pouch of Douglas flattening the rectal wall and giving rise to great pain when touched.

During the summer the patient occasionally passed blood and pus per rectum, and though the tumor remained without essential change she was tolerably comfortable, except for some abdominal pain when she attempted to move. In September it was deemed advisable to interfere actively in spite of the fact that there had been evidence of communication between the fœtal sac and the bowel. This communication appeared then to have closed.

The operation was performed October 9th, and after the incision was made it was found that the remains of the fœtus were attached to the right and posterior aspects of the abdominal wall. What appeared to be an abdominal adhesion of the cyst was torn asunder, and the bones of the skull, laid bare by this means, were removed. When this apparent cyst was drawn forward, it was found to consist of about five or six inches of the small intestine, the walls of which, where they lay in relation to the abdominal walls, were thick, softened, and almost gangrenous. In the cavity in which the bones of the fœtus lay there was a considerable amount of fæcal matter. A loop of intestine which was adherent to the part above mentioned was carefully separated from the rest, and was found to contain a fæcal fistula. The whole of the rest of the contents of the cavity in which the fœtus lay were now removed carefully, and the cavity sponged out. The portion of the intestine already mentioned, whose wall formed part of the cyst, was now cut out, and the healthy ends of the bowel brought together as completely as possible by a continuous catgut suture, care being taken to approximate the raw edges completely without including any of the mucous membrane. The stitches were passed very close to one another, and this part of the operation took up a considerable time. The gap in the mesentery was also brought together by continuous sutures.

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[1] Edinburgh Medical Journal, February, 1884.

During this part of the operation there was some hæmorrhage, which was, however, completely arrested by the pressure of the sutures. The edges of the fæcal fistula above referred to, having been thoroughly refreshed, were carefully brought together by catgut suture.

The abdomen was now sponged dry and the wound closed, a large India-rubber drainage tube being introduced at the lower angle of the wound, so as to extend to the bottom of the cyst, and secured in position by passing one of the deep sutures through its texture.

The subsequent progress of the case was favorable in the main, in spite of a fæcal discharge for a few days from the situation of the drainage tube. She left the hospital in good health January 9, 1884.

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SCARLATINA CO-EXISTENT WITH TYPHOID FEVER.

THE following case of scarlatina combined with typhoid fever is reported by Dr. Pinnock, of Victoria, in the *Australasian Medical Gazette* for October, 1883: "During the typhoid fever epidemic which occurred in this city last autumn two out of four children in one family were attacked insuccession, an interval of a fortnight elapsing between the onset of the fever in the two cases. The one first attacked, when convalescent, was sent away to the sea-side. When the other (aged six) was still in bed on the 29th May, that being the seventeenth day of the fever, the temperature being 100.1° F., my attention was drawn to his brother (aged four), who, on account of the limited accommodation of the dwelling, slept in the same room. He was suffering from sore throat, high temperature, well-marked scarlatina rash, etc., and subsequently endured a severe attack of the complaint. I did not separate the two, partly because from my experience of the rapid infection of scarlatina I considered it too late to do so, and partly because the only other available room was occupied by the eldest child, a girl aged nine. She, however, also manifested well marked scarlatina anginosa on the following day (30th May), and on the same day the typhoid-fever patient had sore throat and glandular enlargement, and the next day (31st) he had the scarlatina rash, well out, and typical tongue. His temperature rose a degree when the sore throat attacked him. Next day it was 100.7° F. On the third day (2d June) the rash began to fade, the temperature being 100.1° F. On the third of June the temperature was normal (this according to my calculation, would be the twenty-second day from the onset of the typhoid fever), and continued normal afterwards. The rash disappeared entirely on the 6th of June, and he went through the usual desquamative process. Although convalescence was protracted, he eventually made a good recovery."

"I think there is little doubt that this case was one of double poisoning. In a recent discussion at the Clinical Society of London, Dr. Broadbent held that scarlet fever and typhoid were frequently concurrent. Other speakers, including Dr. Whipham, Sir William Jenner, Dr. Mahomed, Dr. Carafy, and Dr. Andrew Clark, narrated various red rashes occurring in enteric fever which had been mistaken for scarlatina. But from the symptoms and general surroundings of the case above reported I am compelled to regard it as one of co-existent typhoid fever and scarlatina. Scarlatina has already been shown to have occurred concurrently with typhus, proving the possibility of dual poisoning in that disease; why not, therefore, with typhoid also?"

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FOOT-BALL ACCIDENTS.

CASUALTIES have again been frequent among foot-ball players during the past week or so. In one case it is to be feared that a fatal termination will result, it being stated that the spine was fractured. Those who approve of the game as played in the present rough-and-tumble manner must rejoice in the termination of a recent match at Oldham. From the commencement of the game much ill-feeling was apparent. In consequence of a decision of the referee one of the sides left the field, amidst the greatest uproar, and free fights were indulged in "all over the ground." The retiring side were not permitted to make their way to the dressing-room, stones and mud being freely thrown at them, while they "were in other ways assaulted." This is not the first account that has reached us of a foot-ball match degenerating into a riotous and disorderly bear-fight, the tempers of the players having evidently been aroused by the uncontrollable brutalities and roughness of the pastime. Advocates of the present system of playing the game speak highly of the manly qualities it calls forth. We reiterate that we fail to see any manly quality evoked by it. It is manifestly a game in which the stronger and heavier side has an advantage over weaker antagonists. It is, moreover, one in which injuries are frequently received which render the player incapacitated for life, and, as a consequence, too often a burden and a dependent upon his relatives for support. The selfish indulgence in an amusement which may bring such misery into a household is not, to our minds, the highest ideal of manly prowess. Certainly no man should unnecessarily expose himself to dangerous accidents unless he has adequate means of support in the event of his becoming crippled for life. Lastly, a game can hardly be considered manly which leads to constant disputes and appeals to the referee, whose decisions are not unfrequently challenged, and, as at Oldham, ends in a free fight and the disgraceful treatment at the hands of the spectators of the side visiting the town. There are many ways in which foot-ball might be much improved. It could be made more simple, and thus many disputes which now give rise to much bitterness would be avoided. By stopping the handling of the ball and running with it (in the "Rugby" game) the dangerous form of accidents would be rendered less frequent; and if it could be so devised that the kicks tell more on the ball and less on the shins of the players the game would become more skillful and less brutal and dangerous. — *Lancet*, March 22, 1884.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 17, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	616	208	16.96	16.16	2.56	4.48	3.04
Philadelphia	927,995	361	122	14.84	11.48	2.77	2.77	5.88
Brooklyn	644,526	213	17	17.86	14.10	2.82	6.58	3.76
Chicago	632,100	229	132	29.25	6.75	6.30	9.00	2.70
Boston	423,800	150	46	13.99	17.99	5.28	2.50	2.50
Baltimore	408,520	138	62	27.74	13.87	3.65	1.46	1.46
St. Louis	400,000	105	35	15.20	18.05	4.75	1.90	1.90
Cincinnati	272,400	75	22	9.31	22.61	1.33	—	—
New Orleans	234,000	152	52	25.62	15.77	4.59	.66	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	75	33	18.55	17.29	—	6.65	—
Milwaukee	142,400	52	25	17.28	6.50	1.92	5.76	1.92
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	15	1	26.66	26.66	—	—	20.00
Nashville	54,400	15	1	13.33	33.33	—	—	6.66
Charleston	52,286	32	9	—	6.24	—	—	—
Lowell	71,447	22	5	4.55	18.20	—	—	—
Worcester	69,442	19	5	10.52	15.78	—	—	—
Fall River	62,674	23	10	17.40	17.40	—	8.70	4.35
Cambridge	60,995	21	5	4.76	14.28	—	4.76	—
Lawrence	45,516	15	6	—	20.00	—	—	—
Lynn	44,895	21	4	4.76	23.80	—	4.76	—
Springfield	38,090	8	2	25.00	25.00	—	12.50	12.50
Somerville	31,350	6	0	16.66	33.33	—	—	—
Holyoke	30,515	8	1	12.50	37.50	—	12.50	—
New Bedford	30,144	19	3	10.52	15.78	—	5.26	—
Salem	29,503	7	0	—	28.56	—	—	—
Chelsea	24,347	10	1	20.00	10.00	—	—	10.00
Taunton	22,693	5	1	—	40.00	—	—	—
Gloucester	21,400	10	3	10.00	10.00	—	—	—
Haverhill	20,905	3	1	—	—	—	—	—
Newton	19,421	4	0	—	25.00	—	—	—
Brockton	18,323	4	1	—	25.00	—	—	—
Malden	15,273	3	1	—	33.33	—	—	—
Newburyport	13,947	5	2	—	—	—	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Eighty-six Massachusetts towns	363,419	89	16	11.24	17.98	—	3.37	3.37

Deaths reported 2530 (no reports from Buffalo, District of Columbia, and Providence): under five years of age, 892; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 440, consumption 381, lung diseases 295, diphtheria and croup 106, scarlet fever 73, diarrhœal diseases 60, measles 57, typhoid fever 36, malarial fevers 29, whooping-cough 25, small-pox 16, cerebro-spinal meningitis 15, erysipelas 14, puerperal fever eight, typhus fever one. From *measles*, New York, Chicago, and New Orleans 13 each, Baltimore nine, Pittsburg seven, Brooklyn and Somerville one each. From *typhoid fever*, Philadelphia 15, Chicago four, Baltimore three, New York, Cincinnati, New Orleans, and Milwaukee two each, Boston, New Haven, Nashville, Lowell, Gloucester, and Waltham one each. From *malarial fevers*, New York nine, Chicago, Baltimore, St. Louis, and New Orleans four each, Brooklyn three, Cincinnati and Charleston one each. From *whooping-cough*, New York 10, Baltimore four, Brooklyn three, Philadelphia, Boston, and Pittsburg two each, St. Louis and Worcester one each. From *small-pox*, New Orleans 11, Philadelphia four, Cincinnati one. From *cerebro-spinal meningitis*, Chicago and Chicopee three each, St. Louis and Cincinnati two each, Baltimore, Milwaukee, Worcester, and Fall River one each. From *erysipelas*, New York six, Baltimore three, Brooklyn two, Philadelphia, Chicago, and Boston one each. From *puerperal fever*, New York, Brooklyn, Boston, Baltimore, New Orleans, Milwaukee, New Bedford, and Chelsea one each. From *typhus fever*, New York one.

Three cases of small-pox were reported in Cincinnati, St. Louis two; scarlet fever 10, diphtheria two in Milwaukee; scarlet fever 44, diphtheria 25, typhoid fever six, and measles three in Boston.

In 103 cities and towns of Massachusetts, with an estimated population of 1,409,314 (estimated population of the State 1,955,104), the total death-rate for the week was 16.35 against 15.88 and 13.67 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending May 3d, the death-rate was 22.7. Deaths reported 3804: acute diseases of the respiratory organs (London) 360, whooping-cough 173, measles 172, scarlet fever 94, fever 36, diarrhœa 33, diphtheria 17, small-pox (London 10, Liverpool four, Hull and Sunderland two each, Birmingham, Sheffield, and Newcastle one each) 21. The death-rates ranged from 15 in Hull to 29.3 in Wolverhampton; Leicester 16.5; Newcastle-on-Tyne 19.3; Bradford 19.9; London 22; Birmingham 22.2; Sheffield 23.1; Sunderland 24.6; Manchester 24.7; Liverpool 25.2; Blackburn 25.5; Nottingham 25.7; Leeds 28.5. In Edinburgh 20.7; Glasgow 27.4; Dublin 31.5.

For the week ending April 26th, in 170 German cities and towns, with an estimated population of 8,907,985, the death-rate was 25.9. Deaths reported 4438; under five years of age, 1972; consumption 687, lung diseases 568, diphtheria and croup 211, diarrhœal diseases 162, scarlet fever 63, measles and rötheln 52, whooping-cough 47, typhoid fever 42, puerperal fever 24, small-pox (Leipzig and Metz one each) two. The death-rates ranged from 16.3 in Potsdam to 39.3 in Essen; Königsberg 34.4; Breslau 32.8; Munich 36.8; Dresden 23.1; Berlin 25.8; Leipzig 25.6; Hamburg 25.5; Cologne 27.3; Frankfort a. M. 16.8; Strasburg 33.8.

For the week ending May 3d, in the Swiss towns, there were 40 deaths from consumption, lung diseases 40, typhoid fever 31, diphtheria and croup 11, diarrhœal diseases nine, scarlet fever five, erysipelas four, whooping-cough three, puerperal fever one. The death-rates were, at Geneva 22.4; Zurich 31.5; Basle 23.2; Berne 28.9.

The meteorological record for the week ending May 17th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1884.	Daily Mean.	Daily Mean	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 11	29.776	53	64	47	62	42	77	60	W	W	NW	17	16	12	C	O	C	—	—
Mon., 12	30.007	47	62	44	60	43	49	51	NW	NW	NW	17	23	5	C	F	O	—	—
Tues., 13	29.767	47	59	42	71	84	75	77	NW	SE	SE	12	15	15	C	C	R	—	—
Wed., 14	29.824	58	55	42	100	82	98	93	E	NW	S	20	15	3	R	F	C	—	—
Thurs., 15	29.670	56	70	42	58	45	89	64	W	W	SW	12	7	8	C	O	O	—	—
Fri., 16	29.565	54	68	45	60	54	73	62	S	W	NW	9	14	7	O	F	C	—	—
Sat., 17	29.650	51	62	41	66	75	75	72	W	W	W	12	11	12	C	O	C	—	—
Mean, the Week.	29.751	52	63	43				67										15.30	0.76

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 17, 1884, TO MAY 23, 1884.

Wilson, George F., first lieutenant and assistant surgeon. Ordered to proceed to Fort Canby, Washington Territory, for temporary duty at that post, relieving Assistant Surgeon W. O. Owen, Jr., U. S. A., who will report in person at these headquarters for further orders. Paragraph 5, S. O. 62, Headquarters Department of Columbia, May 12, 1884.

Sternberg, George M., major and surgeon. Relieved from duty in Department of the East, and ordered to report to the Surgeon-General of the Army for temporary duty. Paragraph 2, S. O. 115, A. G. O., May 17, 1884.

Magruder, David L., lieutenant colonel and surgeon. Ordered to be relieved from duty as medical director, Department of the Missouri, and to proceed to Philadelphia, Penn., and assume duties of attending surgeon and examiner of recruits in that city.

Fryer, Blencowe E., major and surgeon. From Department of Missouri to Department of Dakota.

Ewen, Clarence, captain and assistant surgeon. From Department of Missouri to Department of Platte.

Strong, Norton, first lieutenant and assistant surgeon. From Department of Platte to Department of Missouri. Paragraph 7, S. O. 115, A. G. O., May 17, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 24, 1884.

Martin, W., assistant surgeon, ordered to U. S. S. Constellation.

Nelson, H. C., medical inspector, granted leave of absence for one year.

Baldwin, L. B., passed assistant surgeon, detached from U. S. S. Pensacola, and waiting orders.

Wells, H. M., surgeon, ordered to Naval Hospital, Brooklyn.

J. M. Murray, passed assistant surgeon, detached from U. S. S. Minnesota, and ordered to U. S. S. Passaic.

Waggener, J. R., passed assistant surgeon, ordered to U. S. S. Hartford.

OBITUARY.

Prof. J. B. Dumas, member of the Académie de Médicine of France, has recently died at an advanced age. He was the author of numerous scientific works, and was an eminent authority in matters of chemistry. In the character of his life work, the seat of his professorship, and the time of his decease he was closely associated with another distinguished chemist, **Charles Adolphe Wurtz**, who died in Paris May 12th. Wurtz was born in Strassburg, November 26, 1817, became chief of the chemical department in the medical faculty at Strassburg in 1839, and took his degree there in 1843. Subsequently he was connected with institutions in Paris and Versailles. After the death of Orfila in 1853, and the retirement of Dumas in 1854, their chairs were united in that of medical chemistry, and given to Wurtz. In 1856 he became a member of the Medical Academy, in 1866 Dean of the Faculty of Medicine, and in 1867 of the Academy of Sciences, at whose suggestion the biennial prize of 20,000 francs had been awarded to him in 1865. On December 3, 1875, he submitted to the French Academy the first specimen of gallium, a new metal discovered by Lecoq De Boisbaudran. He was the author of many valuable volumes on chemistry.

Books and Pamphlets Received. — A Text-Book of Pathological Anatomy and Pathogenesis. By Ernst Ziegler. Translated and Edited for English Students by Donald MacAlister, M. A., M. B. Part II. Special Pathological Anatomy. Sections I.–VIII. London: Macmillan & Co. 1884.

Some Recent Theories regarding the Pathogeny of Sympathetic Ophthalmia, viewed from a Macroscopic Stand-point. By Samuel Theobald, M. D. (Reprint from Arch. f. Ophthalmology.) 1884.

New York and Brooklyn Formulary of Unofficial Preparations. Published by a Joint Committee of Delegates from the College of Pharmacy of the City of New York, etc. College of Pharmacy Building, New York.

Clinical Notes on Cancer, its Ætiology and Treatment. With special reference to the Heredity Fallacy, etc. By Herbert L. Snow, M. D. (Lond.), etc. London: J. & A. Churchill. 1883.

On Malignant Disease, Sarcoma, and Carcinoma of the Larynx. By Henry T. Butlin, F. R. C. S. London: J. & A. Churchill. 1883.

Seventeenth Report of the Medical Staff of St. John's Hospital, Lowell, Mass. 1884.

The Philosophy of Manipulation in the Reduction of Hip and Shoulder Dislocations. Read before the American Surgical Association, 1884. By Moses Gunn, M. D., A. M., LL. D. (Reprint.) Chicago. 1884.

Vaccination: its Necessity, Control, Efficiency, and Safety. Prepared by Eugene Foster, M. D., Augusta, Ga., Chairman of the Committee of the American Public Health Association on Compulsory Vaccination. (Reprint.) Concord, N. H. 1884.

Twenty-Sixth Annual Report of the Washingtonian Home, located at 41 Waltham Street, Boston. 1884.

The New Science of Medicine. By Norman Bridge, M. D. Doctorate Address at Forty-First Annual Commencement, Rush Medical College, Chicago, February 19, 1884.

What and Why. Some Common Questions Answered. Boston. 1884.

Clinical Observations on the Use of Jequirity in Ophthalmia. By H. Knapp. (Reprint, Archives of Ophthalmology.) 1884.

Prospectus of a New Work on Physiology entitled Natural Philosophy of the Body, or the Mechanics in Respiration, Circulation, Absorption, etc. By William H. Triplett, M. D., New York.

Mechanical Principle in the Circulation in the Embryo: Placental Souffle the Analogue of Respiration. [Examples of foregoing Work.] (Reprint from Gaillard's Medical Journal.)

On Dupuytren's Finger Contraction; its Nervous Origin. By Robert Abbé, M. D. (Reprint from New York Medical Journal.)

Original Articles.

HYSTERIA, AS AFFECTED BY REMOVAL OF THE OVARIES.[1]

BY G. L. WALTON, M. D.

It is not the object of this paper to discuss oöphorectomy, as such, either from the surgical or the moral point of view, but to consider the question of hysteria as benefited or not benefited by the operation. This operation having, in the face of persistent opposition, forced itself into recognition on purely gynæcological grounds, the neurological aspect of the subject seems now to attract considerable attention, and its importance is not inconsiderable.

That all sorts of reflex nervous symptoms accompany diseases of the uterine appendages is a well-recognized fact. Similar symptoms appear, to be sure, in women with normal reproductive organs, and even in men, facts which have led to the depreciation of the uterine origin of hysteria to that degree that we sometimes meet with the statement that hysteria is *always* a constitutional disease, having no relation whatever to the pelvic organs. Now, although this is undoubtedly the usual character of the disease, there are certainly many cases in which hysteria occurs in persons possessing no constitutional tendency to nervous trouble, the symptoms dating accurately from disease of the pelvic organs. In view of these cases we must take a step backwards towards the ancient view that all hysteria arose from uterine disorder, substituting, however, probably here the ovaries for the uterus as the seat of original irritation. It becomes of practical importance to consider this subject carefully, for if hysteria exists in a given case of pelvic disease in which operation is proposed, and if the hysteria is considered to be dependent on the ovarian irritation, there will be an additional indication for removing the offending organ. Indeed, if the hysterical symptoms reach a certain degree in such a case they may alone furnish sufficient cause for the operation. One finds not infrequently among reported cases of Battey's operation the statement that the reflex nervous symptoms were relieved. Detailed accounts of such symptoms are, however, not common, and it seems probable that among these cases typical and measurable symptoms of hysteria, such as hemianæsthesia, would be oftener found if oftener sought. As a rule, however, the nervous symptoms have occupied the background, the important indication for operation being generally the dysmenorrhœa.

The question of removal of the ovaries for hysteria alone has now been broached, and has already been practically tested with results diametrically opposed.

As an example of unsuccessful operation may be cited the case of Landau and Remak,[2] in which both ovaries were removed on account of hystero-epilepsy, combined with hysterical hemianæsthesia. The ovaries were found normal, and the nervous symptoms were not alleviated in the least. These writers express, therefore, the opinion that the operation for hysteria is unjustifiable, and that the tenderness existing over the ovaries in this disease is merely a hyperæsthesia symptomatic of the general nervous irritability rather than pointing to the source of the nervous trouble. On the other hand, a large number of cases have been reported in which hystero-epilepsy and similar symptoms have disappeared after removal of the ovaries. In the collection of 218 cases made by Battey of the operations between 1872 and 1881 epileptic attacks were present in twenty-six cases, and were relieved in over two thirds of the number. A number of cases have been reported since this collection was made in which hystero-epilepsy has been the chief indication for removal of the ovaries, and has disappeared or been greatly mitigated by the operation.

As examples of such cases may be mentioned two of Carstens',[3] whose histories were briefly as follows: —

Case I. The patient, twenty-four years old, single, had been a sufferer about five years from dysmenorrhœa, leucorrhœa, and severe hystero-epilepsy, coming on at the menstrual periods. There was no hereditary nervous tendency. Examination showed retroversion of uterus, slight endometritis, internal stenosis of uterus, and ovarian tenderness The left ovary (adherent) was removed, together with a small cyst from the left Fallopian tube. The operation was followed by disappearance of the menses, and by permanent relief of the hystero-epilepsy and the leucorrhœa, at least neither had recurred a year after operation.

Case II. The patient, twenty-four years old, married, has no nervous family history. Severe ovaralgia came on four years ago, accompanied by pain in the vertex and attacks of hystero-epilepsy, occurring sometimes daily. Examination showed retroflexion of the uterus and exquisitely tender left ovary. This was removed, and found diseased. Perfect cure followed, without remission up to the time of second report, made four months after operation. The conclusions drawn by Carstens are as follows: "In general I might conclude that Battey's operation is not only justifiable, but really we might say it is criminal neglect not to perform it in cases which fail to be benefited by other treatment. It is a last resort after every other proper treatment has failed in cases which are caused by ovarian disease, such as hystero-epilepsy, dysmenorrhœa, and menorrhagia due to fibroid tumors, and which either endanger the life of the patient or make life a burden to her."

These views are certainly justified by experience, and the difference between these results and those of E. G. Landau and Remak seems to lie in the selection of cases. That operated on by the latter writers was one of the large class of hystero-epileptics in which the nervous condition is independent of the uterine appendages. The fact was established by examination of the ovaries after operation that in this case the ovarian tenderness did not result from disease of those organs, but was only indicative of general sensitiveness of the nervous system. As regards this class of cases, which is to say, probably, as regards the large majority of cases of hysteria, the conclusions of Landau and Remak are undoubtedly correct. Such cases, however, as those operated on by Carstens, come under quite another category, in that the hysterical symptoms were manifestly secondary to and dependent on ovarian irritation. It is only with regard to the latter class of cases that the question of operation should ever have been considered for a moment,[4] and the first question to be asked is, Into which class does the case in hand fall?

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[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, April 9, 1884.

[2] Zeitschrift f. klin. Med., Berlin, 1883, vi., 437–452.

[3] American Journal of Obstetrics, March, 1883.

[4] Cases of *insanity* accompanying menstruation have indeed been

It may be well at this point to consider briefly the probable physiological relation between hysteria and the ovaries in the two varieties of hysteria, idiopathic and symptomatic.

Hysterical symptoms, mental, paralytic, and convulsive, arise probably from perverted function of the cortical cells of the brain, the final centres of sensation and motion, and the seat of the mental processes. This may be considered the accepted view of neurologists at present. Just what pathological state obtains in those cerebral cells is still a matter of conjecture. Post-mortem examination reveals nothing. Whether the disturbances arise from vaso-motor irregularities, from minute changes in structure, or from mere alteration in reflex irritability without anatomical basis we need not question at present. All that interests us in this discussion is the fact that the connection is a close one between these perverted cerebral states and disordered visceral organs, and that, whatever the modus operandi, cerebral and abdominal irritability generally, if not always, coexist in cases not only of hysteria, but of the allied nervous conditions, as hypochondria and neurasthenia. Now the link through which the connection is established between brain and viscera can be none other than the sympathetic nervous system. From this system the ovaries are richly supplied from the renal plexus, whose connection with the brain is anatomically a very direct one, although this is by no means an important factor, inasmuch as the physiological relation between all parts of the sympathetic nervous system is so close, and the transit so rapid, that the most distant portions of the body are always in intimate and immediate connection.

In cases of hysteria the cerebral disturbance is evidenced sometimes by *loss* of activity, motor and sensitive, as in paralysis, and sometimes by *increased* activity, as in convulsions and hyperæsthesia. Again, both classes of symptoms often coexist in the same patient, some cerebral functions being abnormally active, while others are depressed. Among the symptoms illustrating the former no one is more constant than hyperæsthesia. Spots of hyperæsthesia are sometimes found on the scalp and sometimes on the spine, but rarely fail in the region of the ovaries. The opinion is, to be sure, held by many distinguished writers, as, for example, by Westphal, that this tenderness is in connection with the abdominal wall, not the ovaries. But this view seems clearly disproved by the fact that the spots of tenderness rise during pregnancy with the uterus and fall again after childbirth.[1] The ovarian tenderness arises probably from the peculiar irritability of the rich sympathetic nervous supply of the ovaries, an irritability greatly increased at certain periods by the congestion to which the female reproductive organs are subject. In the ordinary case of hereditary hysteria, this tenderness being merely a local symptom of cerebral excitability, the removal of the ovaries will have no more effect on the disease than the removal of a sensitive spot of skin over the spine.

In the acquired form of hysteria, as in that secondary to peritonitis, cellulitis, or cystic degeneration of the ovaries, the symptoms may be much the same as in hereditary hysteria, but the whole train is probably relieved by the removal of the normal ovaries and tubes, merely by establishing the menopause, and perhaps in a degree caused by them [illegible]. I should hesitate, however, at present, except in a most aggravated case, to recommend the operation for hysteria unless organic disease were suspected.

started by mechanical irritation, as by the pressure of an exudation upon this same ovarian nervous supply, the line of transmission of irritability being from the ovaries to the brain and thence to the various parts of the body. In such cases the hysterical symptoms may not only furnish an additional indication for removal of the source of irritation, but they alone may make life such a burden to the patient as to render the operation not only justifiable but imperative. Certainly when the cerebral irritability culminates in persistent hystero-epilepsy with its usual accompaniments, mental and physical, any measure which promises a chance of relief is worthy of careful consideration.

Until a comparatively recent date the symptoms of hysteria have received so little systematic study that it is only in the latest reports that we find accurate accounts of the nervous manifestations in individual cases. Recent investigations have, however, enabled us not only to classify more or less satisfactorily the seemingly incoherent symptoms of this protean disease, but have brought to light a new symptom whose importance cannot be overestimated, in that it gives us when present a comparatively accurate measure of the severity and progress of the disease. I refer to unilateral loss of sensation.

Hemianæsthesia should, then, always be sought in cases of functional nervous disease, whether idiopathic or secondary to disease of the visceral or other organs, and the clinician who follows this plan will be surprised by the frequency of its occurrence in a marked degree unsuspected even by the patient.

The following cases, which have come under my observation, and in one of which the ovaries have been removed with a (so far) successful result, will serve to illustrate the presence, among other hysterical symptoms, of a typical hemianæsthesia, secondary, probably, to disease in the pelvic region.

Case I. The first patient, Mrs. H., was sent to Dr. H. W. Bradford on account of indistinct vision. Dr. Bradford attributed the ocular disturbance to the nervous trouble, and requested me to examine the case.

The patient, thirty-two years old, married, without issue, belongs to a family with no mental or nervous history excepting that the father died of apoplexy. The mother is living and well. During the past ten years the abdomen has been excessively tender, especially in the right side, pressure there causing pain for days afterward. Within two years she is said by her family physician to have had an abscess in right iliac region with an offensive discharge per vaginam. For about ten years the patient has suffered from severe headaches, accompanied sometimes by vomiting, and sometimes by ringing in the ears and vertigo, with tendency to step up and to fall forward. The headaches begin about a week before the menstrual period and disappear a week after. During this time her sight, at other times fair, is very indistinct. During this period, also, the patient is forgetful, incapable of mental exertion, and makes such mistakes as bringing a plate when she goes for a fork, often enough to cause her anxiety. Between the periods her mind is perfectly clear and vigorous. She has suffered from cramps in the right arm and leg, and from temporary loss of power, having, for example, dropped a plate from weakness of the right hand. She has herself noticed that the sense of smell is much better on the left than on the right, and she always uses her smelling bottle on that side.

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[1] Féré.

The appetite is fair, the bowels constipated. The menstrual flow is moderate in quantity and very painful. The headaches are seated principally at the vertex and temples, and are accompanied by coldness of the vertex, dilated pupils, and by paleness of the face.

Physical Examination. The heart and lungs are normal. The pupils are large, alike, and react sluggishly to light. Patellar reflex exaggerated on both sides. Extreme tenderness of the scalp is found, especially at the vertex, and there are tender spots on the temples. There is no tenderness elsewhere excepting over abdomen. The abdomen is full and tympanitic everywhere. The left ovarian region is somewhat sensitive to pressure, and on the right side the tenderness is so excessive as to preclude careful palpation, the lightest percussion causing pain over a large area. No vaginal examination was made. The report of a previous examination contains the information that anteversion of the uterus existed, that the cervix was normal, and that there was slight vaginismus.

Motion. There is no special loss of motion in any muscle or group of muscles, but the strength is greater as a whole on the entire left side.

General Sensation. There is loss of all forms of sensation on the entire right side to the median line; only moderately heavy pressure being perceived on this side, while on the left the lightest touch is everywhere felt.

Special Senses. The sense of *smell* is greatly impaired on the right, also that of taste. The smell of menthol and the taste of sugar both distinct on the left side, being barely perceived on the right. The *hearing* through the bone is wanting on the right, and that through the air is greatly impaired, the watch which is heard at fifty centimetres on the left being heard on the right at only fifteen. The hearing for high tones was not tested. The membranes are normal; the Eustachian tubes quite free.

The report of the *ocular* examination, kindly given me by Dr. Bradford, is as follows: Vision with right eye $\frac{7}{10}$ (Monoyer) emmetropic. With the left eye there is perception of light only, with lateral fixation. No visual field for form or color to be obtained. The field for form in the right eye is concentrically retracted excepting downwards, where the apex of a triangle reaches the normal limit. The fields for color in this eye are all concentrically limited, with reduction of the field for blue (outside) to nearly the degree of red and green, the fields of the latter colors being about one third of the normal, that of blue one sixth. The fundus on the right is normal. On the left, upon continuous exposure, the arteries seem to contract to one third their diameter, and the patient becomes unable to continue. (This result was several times repeated.) The pupils retract normally to accommodation, sluggishly to light, and are one third or more larger than normal.

The diagnosis was that of hysteria, probably secondary to abdominal disease. The coldness of the head, dilatation of the pupils, and ischæmia of the retina (left) pointed to irritation rather than paralysis of the sympathetic, and nitro-glycerine in drop doses of the one per cent. solution was advised, in the hope of at least relieving the headaches. Operation on the ovaries was in this case not considered, but if the symptoms should become so severe (to use Carstens' expression) as either to endanger the life of the patient or to render it a burden, and if careful local examination should reveal a pathological lesion involving the ovary, and if, again, all other treatment, local and general, should prove useless, the operation should certainly be taken seriously into consideration. The headaches and general condition were reported some time after as benefited, apparently by the nitro-glycerine.

It seems a pertinent inquiry, foreign to the question under discussion, but bearing on the pathology of hysteria, whether anæmia of the surface of the left hemisphere, resulting from spasm of the blood-vessels, may not have been the cause of the anæsthesia and weakness of the opposite side. It is certainly an interesting, and, as far as I know, unique phenomenon that the visual defect in the right eye was typical of central disturbance (amblyopia, with concentric retraction of the field), while the blindness of the left eye was that of retinal ischæmia.

CASE II. The second patient, Miss A., was one operated upon by Dr. Barss, of Malden. The nervous symptoms being pronounced, Dr. Barss kindly gave me the opportunity to examine the patient before and after operation. The case will be reported by him in detail later, but a brief sketch of the important facts will be of interest in this connection.

January 2, 1884 (before operation). The patient, aged twenty-nine years, single, belongs to a family free from nervous and mental trouble. She has suffered from excessively painful menstruation, and more or less constant pain in the back since puberty. Both these symptoms have increased in severity, and of late years various nervous symptoms have been superimposed. The patient is now unable to leave the bed on account of pain and weakness. She has been for some years subject to frequently-recurring convulsive attacks, in which she is sometimes rigid, and sometimes shakes violently. No distinct opisthotonos has been observed. Examination reveals marked diminution of all sensations on the entire right side of the body to the median line. Taste (sugar, quinia) and smell (lemon, vanilla) are entirely wanting on the right. The hearing by the air is less acute on the right, and that by the bone is wanting. The sight is above normal on both sides without glasses, and there is no retraction of the field of vision, nor loss of color perception. The tendon reflex is greatly exaggerated on both sides, the tap causing a violent twitch of the whole body, and great distress. There is some loss of strength in the right arm and leg. There exists a wax-like rigidity of both feet, most marked in the right, the foot resisting forcible movements, but yielding gradually to pressure. Once placed in an awkward position the foot remains so for some minutes without causing the least distress, or even attracting the patient's notice. Attempts to flex the right leg upon the thigh are met by tonic contraction of the quadriceps femoris. The ovarian region is excessively tender on both sides, most markedly so on the left. Palpation shows the left ovary twice the size of the right (Dr. Barss). The patient is anxious for immediate operation, although its nature and dangers are fully understood, the patient being unwilling to undergo the pain of another menstrual period. Both ovaries were removed, without the tubes, January 18, 1884. They were found cystic degenerated. Recovery was rapid, and the patient expressed herself within a week as feeling better than for many years.

My second examination was made March 21st, two months after operation. The hemianaesthesia was much lessened, the lightest touch being felt over the entire right side, though not quite so plainly as on the left. The substances which were not perceived at all by smell and taste on the right side before operation were now recognized on that side, though not so easily as on the left. The watch on the temple, previously heard only on the left, was now heard on both sides, best on the left. There was no trace of the wax-like rigidity in the left foot, and that in the right was much diminished, the right foot when bent into an awkward position now falling back directly to a natural one, though not so completely as the left. The reflex spasm of the quadriceps femoris on the right still persisted. The tendon reflex was normal on the left, but still exaggerated on the right, causing a twitch of the whole body, but less marked than before, while the distress caused by the tap was comparatively slight.

The most marked improvement was with regard to the convulsions, previously so severe and frequent, only two light attacks having appeared since the operation. There had been considerable pain in the back and abdomen at the menstrual period, and at this time the patient, at others up and about, was confined to her bed for some days. We cannot, of course, assume that the improvement will be permanent, but the case well illustrates the rôle which hysteria may play as an indication for operation, and the result up to this time has certainly been most satisfactory.

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A CASE OF ACTINOMYCOSIS IN A HEIFER.[1]

BY W. F. WHITNEY, M. D.

SINCE attention has been called to this form of parasitic disease a number of cases have been observed in Europe within the last two years. Few, however, have been seen in this country, and, as far as is known, none in this immediate vicinity.

The specimen came from the head of a heifer which had been sent to the Harvard Veterinary School, and was kindly placed at my disposal for examination by Dr. C. P. Lyman, who suspected the nature of the affection.

The disease presented itself as a large fungous-shaped mass, projecting from the lower edge of the right horizontal ramus of the lower jaw near the middle. The surface was granulating and covered with a thick crust of purulent material. The outline was slightly lobulated. Upon section the mass appeared to be composed of lobe-shaped divisions, distinguished by their yellowish color and softer consistency from the intervening tissue. Upon deeper dissection the bone was found invaded throughout its thickness, and a large cavity crossed by bony trabeculæ filled with a pultaceous mass of a dirty yellow color was disclosed. The yellow color, both in the solid portions of the growth and in the semi-fluid substance from the cavity, was found to be confined to numerous irregular shaped particles about the size of a pin's head. These could be easily isolated on the point of a knife.

Microscopic examination of these particles when fresh showed that they were composed of large numbers of small bodies of an elongated pear shape, sometimes branching, with slightly clubbed extremities. These were arranged side by side radiating from a central point or line, and presented a very characteristic and peculiar appearance. Lime salts were often associated with them, which had first to be dissolved in dilute mineral acid before the nature of the growth could be determined.

Portions of the tumor were hardened in a mixture of two parts Muller's fluid and one part alcohol, and thin sections made from this showed that each of these clumps of radiating bodies was surrounded by a narrow zone of small cells, the size of leucocytes, in a greater or less degree of fatty degeneration. (This must contribute largely to the yellow color of the particles as seen with the unaided eye.) This zone gradually passed into a tissue composed of large contiguous round cells, and which would be designated as sarcomatous.

These appearances correspond to those first described by Israel in cattle, and later by Ponfick in man, and distinguish the disease as produced by the presence of actinomyces or radiating fungi.

The clinical history of the case, as furnished by the owner, is as follows: —

"The heifer was a pure Holstein, born in Massachusetts November 25, 1881. In the spring of 1883 was hooked in the jaw, which swelled badly at first but receded later. In October, 1883, the swelling broke and discharged up to the time of death; at the same time the tumor began to increase rapidly in size. She aborted January 6, 1884, at about the eighth month, and was killed April 8, 1884. The owner had never seen a similar case, nor was there any other among his herd."

The occurrence of this case renders it probable that others, as yet undetected, may be in the neighborhood and may serve as a focus of contagion to other animals and man.

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[1] Specimen shown at the meeting of the Clinical Section of the Suffolk District Medical Society, April 9, 1884.

Reports of Societies.

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THE ANNUAL MEETING OF THE PENNSYLVANIA STATE MEDICAL SOCIETY, MAY 14, 15, AND 16, 1884.

THE thirty-fifth annual session of the State Medical Society of Pennsylvania was held at Philadelphia from May 14th to 16th inclusive. It was the largest meeting ever held by this Association; nearly four hundred names were registered. DR. HENRY H. SMITH, of Philadelphia, President of the Society, performed the duties of presiding officer with dignity and discretion.

FIRST DAY'S PROCEEDINGS.

DR. JOHN B. ROBERTS, chairman of the Committee of Arrangements, delivered a brief Address of Welcome.

TRIBUTE TO PROFESSOR GROSS BY GOVERNOR PATTISON.

Dr. Roberts was followed by the Governor of Pennsylvania, HON. ROBERT E. PATTISON, in a short address, in which a graceful tribute was paid to the memory of Professor Gross, "that great man whom all regarded with so much pride and veneration; to whose masterly mind two continents paid honor, and who held the triple tributes of Oxford, Cambridge, and Edinburgh; by whose death the medical profession has sustained a great loss."

PUBLICATION OF PAPERS.

The Committee on Publication submitted a resolution declaring that in future no paper read before this Society shall be printed in the Transactions if it has previously been published in full. An amendment was offered also forbidding the publication of abstracts of papers. In the discussion of this resolution it was declared that some of the members had given their papers or long abstracts of them to reporters of the daily press in order to advertise themselves. The matter was referred finally to a committee of five members to report at the session on Friday.

A WOMAN'S VOICE.

The delegates to the various State Medical Societies made reports, among them being one from the members who visited the Massachusetts State Medical Society, presented by Dr. Alice Bennett, of Norristown. This was said to be the first occasion upon which a woman's voice was heard in the proceedings of this Association. Subsequently the same voice was heard reading the Address upon Mental Disorders in fulfillment of an appointment made at the last meeting. The address was a good one, and was received with applause.

VIVISECTION.

A communication received at the last meeting from the Antivivisection Association, asking that the requirements of experimental medicine and physiology be defined by law in order to avoid unnecessary cruelty was reported upon by a committee to which it had been referred, of which **Dr. S. Weir Mitchell** was chairman. In the report all attempts to control vivisection by law were deprecated inasmuch as vivisection had been almost completely stopped in England by the law requiring licenses to be taken prior to performing experiments upon animals. Dr. Mitchell stated that he had applied for snake venom to the government officers in India in order to pursue some investigations upon its nature and effects, and that assistance had been granted to him to conduct experiments in America which could not be conducted in England on account of the law. The passage of the following was recommended: —

Resolved, That in view of the attempts which have been or are to be made to obstruct by restrictive legislation the progress of experimental medicine, this Society desires to express its earnest conviction that experimentation on animals is a most useful source of knowledge in medical sciences; that it is the means by which many important discoveries, both practical and scientific, have been accomplished; that its direction and supervision can be properly intrusted only to members of the medical profession, and that its restriction or prohibition by law would inevitably retard the acquisition of knowledge in respect to healthy and morbid actions, the cause and prevention of disease, and the improvement of the medical art.

On motion the report was accepted, the resolution adopted, and the committee continued.

A STATE BOARD OF HEALTH.

A resolution offered by **Dr. E. A. Wood**, of Pittsburg, was adopted, calling for the appointment of a committee of seven to prepare and report at the session a plan for organizing a society for securing a State Board of Health.

THE PRACTICE OF PHARMACY.

On motion of **Dr. J. V. Shoemaker** the Society indorsed the passage of an act now before the Legislature regulating the practice of pharmacy, and adopting measures to prevent adulteration in drugs and medical preparations as proposed by the Pennsylvania Pharmaceutical Association.

HYGIENE AND STATE MEDICINE.

The address on Hygiene and State Medicine was delivered by **Dr. Benjamin Lee**, in which the lecturer dwelt upon the necessity of education of the community in sanitary matters, and the importance of self-help in organizing sanitary organizations in preference to depending upon State boards. Voluntary sanitary associations, such as those first started in Edinburgh, and in Newport, of which there are now one hundred and seventy in active operation throughout this country, were spoken of approvingly for small places, while for large cities stock companies are more suitable. These companies engage to make inspections, both special and periodical, of dwellings and buildings confided to their care, as far as their sanitary condition is concerned; to indicate defects if any exist, and to remedy those defects by introducing sanitary appliances of the best material, most approved pattern, and most scientific construction, under the supervision of thoroughly qualified experts; to furnish plans and specifications for the sanitary system of new buildings and of grounds, and to take complete charge from the outset of the introduction of such systems.

PROPER MEDICAL EDUCATION

was discussed in a paper by **Henry Leffman, M. D.** He claimed that the dominant methods of instruction in medical schools are not the results of intelligent effort to meet the needs of the community, but are largely an irregular development. The reforms which medical colleges have adopted have been mostly unwilling concessions to public sentiment. The sevenfold division of branches has nothing to recommend it but antiquity; it is not a convenient nor a scientific division of the subject. Under this arrangement some of the departments of the college course are overcrowded, others have not sufficient matter to occupy the time assigned. Departments like hygiene, mental and nervous diseases, and medical jurisprudence have developed so of late years that they might properly be taught by separate chairs and not made merely subsidiary to other chairs, or limited to spring or fall lectureships. The extension and success of post-graduate schools indicate the direction in which the improvement of the curriculum should be made.

Higher specialization is the necessity of the time. The success which has been attained by dentistry shows that other departments, such as otology, laryngology, etc., might with advantage be pursued independently. There would be no reasonable objection to establishing the degrees of doctor of otology, ophthalmology, and so on, commensurate with the degree of doctor of dental surgery.

A preliminary training for the student before entering on the study of medicine is so obviously necessary that it need not be argued.

The final work of medical reform will be accomplished when the college is made merely the instructor, license to practice being given by an official board of examiners after a written public examination.

SCHOOL HYGIENE.

Dr. T. H. Fenton directed attention to Hygiene in Public Schools, or rather the neglect of it, and pointed out some of the principal defects of construction and administration in our public school buildings.

HEART DISEASE AND INSANITY.

The Address in Mental Disorders was read by Dr. Alice Bennett, of Montgomery County. Her subject was the Relation of Heart Disease to Insanity, in which she dwelt upon the common occurrence of heart disease in certain forms of chronic mania with delusions and hallucinations, especially of hearing. After giving the histories of sixteen cases, she analyzed the clinical notes of five hundred cases with special regard to the occurrence of cardiac affections.

Dr. R. H. Chase read a paper on the

PROTECTIVE RIGHTS OF THE INSANE IN PENNSYLVANIA.

The Pennsylvania Hospital for the Insane was established in 1751; it was the first of the kind in America. The Friend's Asylum for the Insane at Frankford was started in 1817, and, like the former, is still in active operation. State hospitals for the insane poor were established at Harrisburg in 1845, at Dixmont, 1853, Danville, 1871, Norristown, 1880, Warren, 1880. The establishment of the Commissioners in Lunacy last year in this State was an additional protection to the insane; and he believed that Pennsylvania was now fully abreast with the world in this respect. The removal of all insane persons from almshouses and prisons is now decreed by law; before long it is hoped that separate provision shall be made for the chronic and criminal insane.

METHODS OF INSTRUCTION AT MEDICAL SCHOOLS.

A resolution was offered by Dr. John B. Roberts expressing dissatisfaction with the methods of instruction pursued at the medical colleges in this State, and forming a committee of seven to consider the propriety of establishing a new school directly under the auspices of the State Society, in which the requirements of the Society with regard to preliminary education, length of course (three years graded course), and final examination by an independent board of examiners, would be complied with, *provided* that if the colleges in Philadelphia adopt these changes no further steps shall be taken in the matter. The subject was laid upon the table.

Second Day's Proceedings.

The Treasurer reported a balance of $2451.85 on hand. The report was accepted, after auditing.

THE ADDRESS IN MEDICINE

was delivered by Dr. W. H. Daly, of Pittsburg. The speaker referred to the beneficial effect of the germ theory of disease in leading operators to practice scrupulous cleanliness in surgery, but stated that the original observations upon which these theories are based could not be conducted in this country for want of government aid, but clinical study, by which these views are to be tested, is carried on by every physician. The discovery of Jenner was quoted as an illustration of what a country physician could do. The labors of Pasteur and their great value were mentioned, but he did not consider them worthy to be compared with Jenner's services to humanity. With regard to specialties in medicine he deplored the shallowness of some specialists, and repeated Dr. Hodgins' statement that "a specialist, in the best sense, should be a physician and something more; but in the worst sense a specialist is something worse than a physician and something less." Many additions to the science of medicine by the labors of specialists were briefly mentioned, and he concluded by stating that this, after all, is only the natural process of growth. Science has always been advanced by labors in special lines of research.

Dr. C. W. Dulles read a paper on

DISORDERS MISTAKEN FOR HYDROPHOBIA,

in which he dwelt upon the rarity of true rabies and the probability of other disorders being mistaken for it. Among those which had been mistaken for hydrophobia he enumerated diseases of the alimentary canal, of the respiratory apparatus, of the circulatory apparatus, various systemic disorders, and nervous diseases. The similarity in the symptoms with those of acute mania, tetanus, and epilepsy was especially pointed out; many cases of reported hydrophobia are simply hysterical.

EXTERNAL TREATMENT IN SKIN DISEASES.

Dr. Arthur Van Harlingen read a paper on The Principles of External Treatment in Diseases of the Skin, in which he essayed to classify various topical remedies according to their effects upon the diseased skin, as protectives, sedatives, astringents, anæsthetics, stimulants, caustics, and mechanical agents. The object of this classification was to suggest lines of treatment which might aid the general practitioner, who might be discouraged with the nomenclature, but still would wish to treat the patients suffering with skin eruptions.

A NEW SPHYGMOGRAPH.

Dr J. H. Musser exhibited a modification of Pond's sphygmograph, suggested by Dr. Matur, of Worcester, Ohio, in which the base of the instrument is narrowed so as only to cover the radial artery, instead of being broad and elliptical. The advantages of this modification in affording a more correct indication of the pulse were insisted upon, and admirable tracings were exhibited made by the new instrument.

JEQUIRITY IN SKIN DISEASES.

Dr. John V. Shoemaker read a communication upon Jequirity and its Use in Diseases of the Skin, in which, after referring to its method of use and action in eye-practice, he spoke of its employment in skin diseases, and exhibited patients who had been affected by lupus, but who had been cured by the infusion of jequirity. It had also been useful in sloughing ulcers and epithelioma, but a much stronger infusion is required than is usually used for ophthalmological practice.

Papers were also read by Drs. J. B. Potsdamer, on Bronchitis and Pneumonia of Rheumatic Origin; Traill Green, A Plea for Chemistry; and Benjamin Lee, on Massage the Latest Handmaid of Medicine.

ELECTION OF OFFICERS.

In the afternoon the Nominating Committee reported the following, who were thereupon elected officers for 1884–85: —

President, E. P. Allen, of Bradford.

Vice-Presidents, Jacob Price, of West Chester; D. M. Bland, of Columbia; S. Brandeis, of Erie; and S. R. Rutledge, of Indiana.

Permanent Secretary, William B. Atkinson, of Philadelphia.

Recording Secretary, A. J. Connell, of Lackawana.

Corresponding Secretary, John G. Lee, of Philadelphia.

Treasurer, Benjamin Lee, of Philadelphia.

Committee on Publication, John B. Roberts, Henry Leffman, and E. Jackson.

Judicial Council, Traill Green, of Northampton; J. A. Ehler, of Lancaster; H. B. Bishop, of Titusville.

The next meeting will be held on the second Wednesday of May, 1885, at Scranton, Lackawana County.

Chairman of Committee on Arrangements, J. F. Everhart.

On motion Dr. Roberts was allowed to withdraw from the Committee on Publication, and the name of Dr. R. J. Dunglison was substituted.

THE ADDRESS ON OBSTETRICS

was delivered by **Dr. Jacob Price**, of West Chester. After a brief review of recent evidences of material progress in obstetrics, he took up several topics of present interest. Pernicious vomiting was ascribed to a local congestion or inflammation of the cervix uteri; in its treatment he recommended salines and topical applications, especially of iodine and carbolic acid. In abortion and flooding the use of the tampon was advocated, with rest and opium. Flexions were considered among the principal causes of miscarriage. In delay during the first stage of labor he preferred morphia and chloral to forced dilatation of the os. Placenta prævia, puerperal convulsions, and puerperal fever were also discussed. With reference to convulsions he said that, overstimulation being the cause in most cases, chloral, bromide, and chloroform may be used, and in severe cases venesection answers the best of all. In puerperal fever antiseptic vaginal irrigation was considered an important feature in the treatment.

DIPHTHERIA.

L. B. Kline, of Columbia, read a paper on Diphtheria, based upon his experience in an epidemic. He defined it to be an acute, specific, contagious, and infectious disease of a miasmatic character, probably primarily a local affection. Lactic acid was recommended as a local application to dissolve the membrane, with inhalations of steam and carbolic acid. Internally the iron and quinine treatment was considered indispensable; potassium chlorate and permanganate, sodium sulphocarbolate, bromine, sodium salicylate, eucalyptus, and other agents have also been employed with advantage.

By invitation of the Society, Dr. H. C. **Wood** gave the result of his experiments made in conjunction with Dr. Formad to determine the pathological character of diphtheria. He declared that there is a mild and a virulent form of diphtheria, and that the micrococci found in the typical cases of diphtheria do not differ from those found in a healthy mouth; the micrococci must derive their toxic effect from accidental and external circumstances. The disease, as the rule, begins by local infection of the mucous membrane, which becomes crowded with micrococci; these rapidly multiply between the cells of the mucous membrane, necrosis follows, and ulceration is produced. Subsequently, the lymphatics are invaded, and next the blood, even the white blood cells. It was found that diphtheria is not a specific affection, because inoculation with various septic agents led to the production of the false membrane, and the same micrococcus was found in cases of scarlatina, when the invasion of the white corpuscles by the parasite was found to be a valuable prognostic sign. What is commonly called "diphtheria" is, therefore, only a putrid sore throat.

The Work of Woman Physicians in Asia was the subject of a communication **Dr. Mary H. Stinson**, which contained a strong plea for the education of women in medical science for foreign missionary work.

DR. MCFERRAN'S OBSTETRIC FORCEPS.

Dr. J. A. McFerran exhibited his obstetric forceps, which are jointed at the junction of the blades and shanks, in order to permit flexion or extension of the head, and avoid some of the dangers of the ordinary forceps. He also made some remarks upon the mechanism of parturition, in order to explain the peculiar advantages of this form of forceps. These instruments were designed in 1877, and presented before the Philadelphia County Medical Society the same year.

Dr. Benjamin Lee made some remarks upon

THE TREATMENT OF HIP-JOINT DISEASE,

and showed two forms of splints that he was in the habit of using. He also exhibited a case which had come under his care when in the third stage, sinuses having formed around the joint; the case was now presented with the two limbs corresponding in length, and with perfect mobility of the hip-joint. At his suggestion a committee of three was appointed to examine the patient and report.

MEDICAL DIPLOMAS.

On motion of **Dr. Jackson** a resolution was adopted as follows: —

Resolved, That a committee of seven be appointed by the chair to inquire as to the best method of making the diploma, which permits a man to enter upon the practice of medicine in the State of Pennsylvania, a real guarantee of his proper qualification for the work, the committee to report at the next annual session of this Society.

By another resolution this report was made the order of business for the morning of the second day of the next session.

PRESIDENT'S ADDRESS.

In the evening the Annual Address[1] of the President, **Dr. Henry H. Smith**, was delivered at Association Hall, his theme being the Usefulness of Scientific Medical Organizations to our Profession and the Public. In connection with State Medicine the capital punishment of criminals by the usual method was condemned as not being in accord with the scientific progress of the age, and the suggestion was made that the Legislature be memorialized to adopt electricity as the agent to destroy life.

(*To be concluded.*)

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[1] See pages 481 and 507 of the Journal.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

The first annual meeting of the American Climatological Association was held in Washington, D. C., May 3d and 5th.

In the absence of Professor Loomis, the President, **Dr. F. I. Knight**, of Boston, first Vice-President, occupied the chair.

ADOPTION OF CONSTITUTION, AND READING OF PAPERS.

The first day was occupied in adopting a suitable Constitution and By-laws.

The second day was devoted to the reading of papers, as follows: —

Address by the presiding officer, **Dr. Knight.**

The Ætiology of Pulmonary Phthisis, by **Dr. B. F. Westbrook**, of Brooklyn. The Effects of Sea Air upon Diseases of the Respiratory Organs, by **Dr. Boardman Reed**, of Atlantic City. The Relation of Laryngeal Disease to Pulmonary Diseases, by **Dr. F. H. Bosworth**, of New York. On Dryness, by **Dr. Charles Dennison**, of Denver, Col., in which he dwelt on the following points: Variability *versus* Equability; a rule for classifying climates as to dryness and desirability, based upon low, absolute, and relative humidities and preponderance of sunshine; the influence of elevation, sunshine, cold, etc., in producing desirable dryness; the physical effect of dryness on man. City Life and City Air Injurious to Consumptives, by **Dr. Donaldson**, of Baltimore. The Use of Compressed and Rarefied Air as a Substitute for Change of Climate in the Treatment of Pulmonary Diseases, by **Dr. J. Solis Cohen**, of Philadelphia.

ELECTION OF OFFICERS.

The following officers were elected for the ensuing year: —

President, Prof. A. L. Loomis, New York; First Vice-President, Dr. F. I. Knight, Boston; Second Vice-President, Dr. W. H. Geddings, Aiken, S C.; Secretary and Treasurer, Dr. J. B. Walker, Philadelphia; Council, Dr. J. H. Tyndale, New York; Dr. E. T. Bruen, Philadelphia; Dr. E. D. Hudson, New York; Dr. Frank Donaldson, Baltimore; Dr. Beverly Robinson, New York.

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NEW YORK ACADEMY OF MEDICINE.

At a stated meeting of the Academy held May 15, 1884, **Dr. D. Bryson Delavan** read a paper entitled

PRACTICAL SUGGESTIONS UPON THE ALIMENTATION OF PATIENTS SUFFERING FROM DYSPHAGIA.

In opening he alluded to the extreme suffering experienced in dysphagia, which came like an overwhelming blow upon patients already prostrated with disease of a serious, if not absolutely fatal, character. The conditions giving rise to dysphagia were of an organic or functional nature or, again, might be caused by surgical operations, and the trouble might be either acute or chronic. Among the organic affections were mentioned tuberculosis, cancer, syphilis, diphtheria, tonsilitis, and retro-pharyngeal abscess, and among the functional, spasm of the constrictors of the pharynx. In dysphagia there might be mechanical interference with deglutition besides pain, direct or reflex, and the result was always, of course, impairment of nutrition. When it occurred the first indication was to give the parts concerned in swallowing rest as far as possible, and sometimes the feeding of the patient with raw eggs or the use of local anodynes was all that was required. In some acute affections of the throat the act of deglutition caused intolerable suffering in spite of such measures as these, and it was, therefore, essential to abolish the act of deglutition. In cases where there was gastric impairment from any cause rectal alimentation was invaluable, but if, on the other hand, the stomach was in good condition it was highly desirable that food should be introduced directly into it if possible. If the cause of the dysphagia was not removable the method to which he now desired to call attention, Dr. Delavan said, would be found very efficient for this purpose. The basis of it was founded on the stomach tube, and he then proceeded to give a summary of the history of that device, and the applications which had of late years been made of it. Unlike the old tube hitherto employed the one which he recommended was of much smaller size. The principles of the method to which he wished to direct attention were (1) to use a tube of the smallest possible calibre that would serve the purpose, and (2) not to pass it all the way to the stomach, but only past the point of constriction of the œsophagus, if any such were present. In many cases it was simply necessary to carry it past the pharyngeal constrictors. By the use of this method pain was done away with, rest was insured, injury to the parts was avoided, and nutrition was maintained.

The apparatus was of a very similar nature, and consisted, first, of a receiver, for which an ordinary soda bottle answered better than anything else on account of the conical shape of its bottom, which rendered it easy to withdraw all the fluid at the same time that it diminished the risk of pumping air into the stomach. From the cork, through which a rubber tube passed to the bottom of the receiver, there issued two tubes, one connected with an ordinary Davidson air-compressor, and the other attached to a catheter (inside of which there was usually a small glass tube), which was to be carried into the œsophagus. The essential feature was the catheter, which might range in size from No. 9 to No. 18, English scale, the one exhibited being a No. 9. It was thus very much smaller than the smallest of the three sizes of stomach tube ordinarily in use. It was advisable that an orifice should be made in the point of the catheter so as to allow of the free passage of fluid. The prepared food was to be allowed to run very slowly into the œsophagus, and Dr. Delavan said that he found it convenient to use an ordinary "cut-off" until all the arrangements for the feeding were completed. At first but half an ounce of fluid should be given continuously.

Fourcher had used an even simpler apparatus, a glass funnel connected with the tube, and Dr. Frank Donaldson, of Baltimore, had employed a fountain syringe. Even an ordinary Davidson syringe had been used for the same purpose. Dr. Delavan said he would not stop to speak of the various preparations of food which might be employed in this way, of which the number was unlimited, and for a notice of which he would refer his readers to the articles of Dujardin-Beaumetz and the recent papers of Dr. H. C. Millard in the *New York Medical Journal.*

In describing the method of introducing the catheter into the œsophagus, he said that the larynx could be avoided by using the finger as a guide. For the purpose of lubricating the instrument (which was never to be neglected) white of egg, mucilage, or milk were excellent, but glycerine and oil were to be avoided on account of their disagreeableness to the patient. A patient of intelligence could soon learn to introduce the tube with more comfort to himself than could be done by the physician. Its passage, however, was not always an easy or painless operation. When the introduction gave rise to dyspnœa Dujardin-Beaumetz directed that the patient should take full breaths, and when it excited nausea that bromide of potassium should be given for a day or two beforehand.

The latter part of the paper was devoted to a consideration of the special applications of the method. He first spoke of its employment in tuberculosis, and said that in no complaint was it more useful. If there was a tubercular deposit in the region of the epiglottis or about the tonsils deglutition caused more suffering than in any other throat trouble. With the chance thus afforded of maintaining a full diet the condition of affairs became greatly changed, and in some cases the possibility of recovery or at least a considerable prolongation of life was afforded. Dr. Delavan then went on to speak of its application in cancer, syphilis, diphtheria, acute tonsillitis, parotiditis, and retro-pharyngeal abscess. In referring to its use in functional disorders he said that dysphagia from spasm of the pharyngeal constrictors was a comparatively rare occurrence, but when it did occur a few well assimilated meals would probably contribute more than anything else to break up the attack. In faucial paralysis from cerebral hæmorrhage, embolism, or diphtheria it was often of service, on account of the well-known tendency of the food to get into the larynx, and hence, in his treatise on diphtheria, Dr. Jacobi had recommended artificial feeding in certain cases of diphtheritic paralysis. When the tube was to be employed after a surgical operation it was advisable to accustom the patient to its use before the performance of the operation. This method being, therefore, of great service in such a variety of conditions, he urged that it should be given a fair, patient, and intelligent trial in all appropriate cases.

The discussion of the paper was participated in by Drs. John C. Peters, E. C. Harwood, Brandeis, George L. Peabody, and W. C. Jarvis, and brought to a close by Dr. Delavan, after which **Dr. R. W. Taylor** read a paper on

CHANCRE OF THE TONSILS.

Having mentioned that he referred to true chancre as opposed to chancroid, he remarked that this initial lesion of syphilis was not so rare as had been generally supposed. *Origin.* It came either from kissing, from the placing of pencils, bottles, cigars, or other articles in the mouth, or from depraved and unnatural sexual contact, which, he regretted to say, he feared was becoming alarmingly frequent in the community. He then proceeded to mention four cases which he had personally seen. The first was in a boy, nine years of age, under the care of Dr. McBurney at Bellevue Hospital for fracture of the leg, and was contracted from bestial practices. The second occurred in a young woman of loose habits, and was ascertained to have been contracted in the same way. The other two occurred in men, and one of these also was certainly due to the same cause. He then mentioned two others which he had not seen himself, but which had been reported to him by gentlemen of the highest authority. One was told to him in minute detail by the late Prof. Freeman J. Bumstead, and the account of the other was given him by Dr. Edward Wigglesworth, of Boston. It was that of a medical student who contracted chancre of the tonsil by placing his mouth in contact with that of a newly-born asphyxiated infant.

Having referred to seven cases which had been reported by European writers (four of which occurred under the observation of Fournier), he went on to speak in detail of the history and symptoms of chancre of the tonsils. At first there were redness and swelling, but no perceptible glandular complication. As time went on, induration and ulceration of the tonsil were noticed, with a grayish-white coating irregularly spread on it; while the neighboring lymphatic glands began to be enlarged and matted together. He then spoke of the differential diagnosis between mucous patches, syphilitic sclerosis, and epithelial cancer, on the one hand, and chancre of the tonsil on the other; summing up the points of diagnosis of the latter as follows: —

(1.) The details of the manner of infection.

(2.) The slow development of the lesion, running a subacute course.

(3.) Its unilateral position.

(4.) Difficulty of deglutition, and even pain, which is referred to one side.

(5.) The special implication of the pre-auricular gland.

(6.) The comparatively little induration and enlargement of the glands at a distance.

In the discussion which followed the reading of the paper, **Dr. F. N. Otis** stated that while he had never seen a case of chancre of the tonsil, so far as he remembered, he saw no good reason to doubt why the lesion should not occur as well there as in many other parts of the body. All that was requisite for syphilitic infection was a *contagium* and an open surface for it to lodge upon. He thought, however, that all the diagnostic points referred to by Dr. Taylor would not be found in certain instances, and, therefore, that it was not safe to decide in these cases that because they were not all present the patient did not have an initial lesion of syphilis. Such initial lesions were by no means always characterized by ulceration, for instance, and he had frequently seen a simple little hard nodule on the genitals, after being the means of infecting the system with constitutional syphilis, become absorbed without having undergone any process involving destruction of tissue whatever. In order to show what peculiar forms the initial lesion sometimes assumed, he related a case in which it was distinctly demonstrated that a little red point on the conjunctiva was the source of the whole trouble.

Dr. F. R. Sturgis had also seen four cases of chancre of the tonsil. One was that of the boy in Bellevue Hospital, the history of which had been given in the paper, and of the others one occurred in a man and two in women. In three there was a considerable amount of active inflammation, while in the fourth the symptoms were less acute. The correct diagnosis of the condition, he considered, depended in great part on the enlargement and induration of the pre-auricular and post-auricular glands, and especially of the former. There could be little doubt of the nature of the case when this was distinctly marked.

Dr. L. D. Bulkley remarked that he thought this was one of the most useful papers that had been read before the Academy for some time. Twenty years ago, he said, no one would ever have thought of looking for the initial lesion of syphilis in the tonsils, and one of the most important points about Dr. Taylor's paper was, that it directed attention to another place in which such a lesion was liable to occur. Not long since syphilis had been regarded as entirely a venereal disease; but since it had been shown in how many ways the infection could be introduced into the system it was no longer considered as necessarily a reproach to be affected with it. He had himself seen four cases of chancre of the tonsil, and one of these he related in detail. It was that of a single lady, thirty-two years of age, of irreproachable character, who contracted it from kissing a man to whom she was engaged to be married, who was suffering from syphilis at the time. It proved to be one of the most severe and terrible cases of constitutional syphilis that Dr. Bulkley had ever met with; and in consequence of the character of the lady the true nature of the trouble was not recognized by the family physician until it had been pointed out by the speaker. Such a paper as this, he thought, therefore, was of the greatest practical importance, as indicating to the general practitioner a possible source of danger from syphilis in a situation where he would probably not otherwise have thought of looking for it.

Dr. W. C. Jarvis thought that there was more dread than there need be of chancre occurring in this position, because there was a constant stream of mucus and saliva bathing the throat and pouring down into the stomach; thus preventing syphilitic virus, when introduced into the mouth, from obtaining a foothold. Chancre of the tonsil was a very rare condition, and this, he believed, was the reason why it was so.

Dr. Taylor said he was quite well aware that there was, as Dr. Otis had pointed out, much variation in the appearances of the initial lesion of syphilis in many parts of the body. But in the tonsil he contended that the appearances did not vary to nearly as great an extent as in some other locations, and that hence the most of the diagnostic points which he had indicated might reasonably be looked for in chancre in that position. But even if the true nature of the affection were not immediately recognized, the patient would not suffer thereby, for as soon as the constitutional symptoms made their appearance there could no longer be any doubt about it; and when this occurred was the correct time to commence with anti-syphilitic treatment. He agreed with Dr. Sturgis that the cardinal point in the differential diagnosis of chancre of the tonsil was in the condition of the glands characteristic of this affection. As to Dr. Jarvis's statement that there was needless dread of it, he was quite willing to admit that chancre of the tonsil was a comparatively rare condition; but, at the same time, as it was one which was liable to be occasionally met with, it would not do to disregard it altogether. As undoubted cases had actually occurred in the past, it was certain that from time to time they would again make their appearance.

— The German government has appropriated 135,000 marks for compensation to the Cholera Commission. Dr. Koch gets 100,000 marks, and the rest is distributed among his colleagues.

NEW YORK COUNTY MEDICAL ASSOCIATION.

ALBUMINURIA.

At a meeting of the Association held Monday evening, May 19th, **Dr. Gaspar Griswold** read a paper entitled Notes on Albuminuria. Since testing the urine for albumen had become such a common practice among medical men, and especially by those holding the position of examiners in life insurance companies, he said, the presence of albuminuria was no longer regarded as any positive proof of disease of the kidneys, or at all events of disease of a serious character. During the last few years albumen had frequently been noticed in the urine of individuals in apparently perfect health, either as a condition lasting for several years, a transient condition, or an intermittent condition, appearing at certain hours of the day and being absent at other times.

Having expressed the opinion that this condition of albuminuria in those in good health was probably due in reality to some more or less temporary inadequacy of the renal epithelium, which when its integrity was complete permitted only the constituents of normal urine to escape, he alluded to a number of conditions which were liable to be associated with a greater or lesser degree of albuminuria. Among these were hysteria, anæmia (especially at the time of puberty), and the presence in excess in the system of certain substances such as the biliary principles and iodide of potassium. It would seem, therefore, that there was a temporary degeneration of the renal epithelium, which attended the excretion of a large amount of solid constituents by the kidneys.

He then gave an abstract of the literature relating to this subject, and dwelt particularly on the statements of Sir William Gull, Moxon, and George Johnson; concluding with a reference to a paper published by Dr. Munn in the *New York Medical Record* of March 22, 1879, in which he reported twenty-four cases of albuminuria (in two instances accompanied by casts) occurring in persons applying for life insurance in the company for which he was examiner who were apparently in perfect health, but all of whom were rejected on this account. As to the effect of exercise in producing albuminuria, Dr. Griswold stated that he had himself made repeated examinations of the urine of twenty-four individuals after taking violent exercise which was, as a rule, followed by cold shower baths, and in not a single instance was he able to detect the smallest trace of albumen. In this connection he related the case of a gentleman who applied for a policy in the New York Life Insurance Company, but was rejected because his urine, which was examined in the afternoon, just after he had been taking a boxing lesson, was found to contain albumen. The following month he was persuaded to apply for insurance in another company, and on this occasion he was accepted, as no albumen was found in his urine and he was otherwise in excellent condition. Having mentioned that albumen had been found in his urine a month previous, however, several very careful examinations were made, and one of them revealed the fact that the urine was not only highly albuminous but also contained both fatty and granular casts. This examination, like that in the other company, was made in the afternoon, just after the applicant had taken a boxing lesson, and in consequence of the condition of the urine he was again rejected. He then consulted Dr. Janeway in reference to his urine;

but the latter examined twelve specimens of it in succession without finding anything abnormal about it whatever. He then inquired what he had been doing before passing the urine in which the albumen was found by the life insurance examiners, and, learning of the boxing, he secured specimens which were passed for several successive days just after taking this exercise, and found albumen and casts in them all. The importance of one such case as this, he thought, could not be exaggerated.

In speaking of the supposed effect of imperfectly digested albuminous food in producing albumen, he stated that it had been found that if the albumen of eggs were injected into the blood, it would not be assimilated, but might be recovered from the urine, into which it passed. Hence it had been argued by some that if albuminous food were eaten in excess a portion of the albumen would not be digested, and would appear in the urine. With a view of testing the correctness of this view he had experimented very thoroughly on himself, repeatedly taking as many as six eggs at a meal, both raw and cooked in various ways. On no occasion whatever was this ingestion of egg-albumen followed by the appearance of albumen in the urine, and the same was true in the case of a number of friends of his whom he had persuaded to try the same experiment. In one instance, it was true, the examination of the urine showed the distinct presence of albumen; but on investigation it was ascertained that albuminuria existed in this case whether eggs had been eaten or not. Some eighteen individuals engaged in this experiment, and he was therefore inclined to believe that the hypothesis of imperfectly digested albuminous food as a cause of albuminuria was not well founded.

From his investigations of the whole subject of albuminuria, Dr. Griswold arrived at the conclusion that the kidneys were probably liable to be affected with slight and transient disease just as other organs of the body were; and in this connection he related the case of a young physician who for seven years after an attack of scarlatina, which occurred in his youth, was the subject of albuminuria. For the last four or five years, however, his urine had been entirely free from albumen. He also mentioned the case of another physician who five years ago was seized, at the same time with an ordinary cold in the head, with a sharp pain in the lumbar region. He attributed this simply to lumbago, but a medical friend having jokingly suggested that he had better examine his urine to see whether he was not suffering from Bright's disease, he did so, and found to his surprise that it contained not only albumen but hyaline casts also. After five days, however, both the albumen and casts disappeared, and had never since been detected in his urine.

The discussion of the paper was opened by **Dr. Austin Flint, Sr.**, who said that in addition to the subject of albuminuria he should like to have that of the significance of casts also considered; since these, like albumen, were not infrequently present temporarily in the urine of those in apparently perfect health. Such conditions of the urine were apt to lead the attending physician to make a prognosis which was not borne out by the subsequent course of events. He then related the case of a young girl of fourteen in whose case it was accidentally discovered that both albumen and casts were present in the urine. After a time, however, they disappeared altogether, leaving her in excellent health.

Dr. William H. Welch remarked that every one who was accustomed to examining urine at all on a large scale from time to time met cases such as had been described, in which if there was any disease of the kidneys at all it must be of a very trifling character. Medical students were sometimes surprised to find albumen in their own urine, he said, and he then mentioned the case of one to whom this occurred only two days before. The young man was apparently in good health, but had been working unusually hard. To the presence of albumen alone, and sometimes to that of casts in addition, he would attach no significance, and he thought it was often hazardous to make a diagnosis of Bright's disease even when, in addition to these, some impairment of the health was noticeable.

Dr. E. G. Janeway related the case of a broker, in apparently good health, whose urine, passed early in the morning or late at night, when the cares of the day were over, never contained any albumen, but which was actually loaded with it at most other times, a fact which he was disposed to attribute principally to nervous influence. A moderate amount of albumen in the urine when taken by itself was not now regarded as of much consequence, but in this instance the quantity of albumen was so exceedingly large that although the individual was still apparently in excellent health it would be a matter of great interest to watch the future history of the case. The case which had been related in the paper as having been under his care was even more remarkable. After the gentleman had taken his boxing lesson there were always hyaline and sometimes granular casts as well as albumen in the urine, and the case would seem, therefore, to show that it did not take as long for hyaline casts to form as had generally been supposed.

Dr. Flint having called attention to the fact that the occurrence of uræmic poisoning depended not on the presence of albumen in the urine (since this was sometimes altogether absent in uræmia), but on the amount of urea eliminated, as roughly indicated by the quantity of urine passed, and on the specific gravity, **Dr. Griswold** closed the discussion. He hoped, he said, that these cases of transient albuminuria would be carefully watched and followed up so that it might be seen what developments, if any, had occurred in the course of five, ten, fifteen, or twenty years.

The next order of business was the

PRESENTATION OF AN ACEPHALOUS MONSTER

by **Dr. Daniel Brown**. The labor was premature, coming on at the end of seven and a half months, and the delivery of the monstrosity followed that of a well-developed male fœtus, which lived until the following day. Dr. Brown stated that each separate fœtus had its own membranes and an entirely distinct placenta, the placentæ being attached at some distance from each other, and expressed the opinion that the acephalous fœtus was not dependent upon the other fœtus for its nutrition (as was ordinarily accepted in such cases), but that there was a direct continuity of circulation between the former and the mother.

The specimen was discussed by Drs. William H. Welch, J. Lewis Smith, and S. S. Purple, after which **Dr. Austin Flint, Sr.**, made some remarks on

SCARLET FEVER

in connection with the paper read by Dr. Charles A. Leale at the last meeting of the Association on Scarlatina in the Fœtus in Utero and in the Mother at the Ninth Month of Pregnancy. He said that personally he had seen no case of the disease occuring during pregnancy, but he had met with one instance of it occurring immediately after pregnancy. The patient, whom he saw in consultation with the late Dr. J. O. Stone, was twenty-eight years of age, and the child had been born two days when she broke out with the eruption of scarlet fever. The urine was slightly albuminous, and the lochial discharge and secretion of milk had ceased, but within twelve days she was convalescent. Two weeks afterward, however, he was again asked to see the patient, when he found that she was suffering from an attack of rheumatism accompanied by abundant albuminuria. She was then in a somnolent condition, and soon afterwards died. The child caught the disease from the mother, and therefore he thought it reasonable to suppose that the mother contracted it either just before or just after delivery. The infant recovered.

Dr. Flint then touched briefly on a few points which he said had occurred to him in looking over the notes of his cases of scarlatina. The first was the extraordinary vitality of the contagion, and one of the cases which he related to illustrate this was the following: A young lady, the daughter of a deceased physician formerly well known in New York, having entered one of the Protestant Sisterhoods was called upon to nurse a child suffering from scarlet fever. This she did for ten days, and after having aired the dress which she had worn during this time very thoroughly for several weeks she put the skirt of it away in a trunk. Eleven months afterward she wore the skirt for the first time after putting it away, and one week after she began to wear it she was herself attacked with acute diffused nephritis and pulmonary œdema, which proved fatal. The most thorough disinfection was, therefore, essential in every case of scarlet fever. He next spoke of the frequency of the occurrence of acute nephritis from the scarlatinal poison, the kidney complication in this disease being due not to cold, as was often imagined, but to the essential nature of the affection. He then mentioned the liability of cases to occur occasionally without eruption, and related one which he had met with in 1874, in which there was no eruption and no sore throat, but in which acute desquamative nephritis and also desquamation of the cuticle occurred. Having mentioned that there was some danger of death from heart-clot in scarlatina, and spoken of the good effects of cold baths in the disease, he concluded by a reference to the benefit of alcohol in the essential fevers in general, which he thought might, perhaps, be due to the fact that this agent acted in reality as a germicide, and by this action served to assist in sustaining the powers of the patient.

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SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

April 9, 1884. Meeting called to order at eight o'clock, **Dr. R. T. Edes**, chairman, presiding. A summary of the records of the last meeting was presented by the secretary.

Dr. F. I. Knight read a paper on the

LARYNGEAL COMPLICATION OF PULMONARY PHTHISIS,

dwelling especially on those which are considered almost pathognomonic, that is, those of infiltration or ulceration, or both these processes combined. He described at some length the laryngoscopic appearances of these lesions, and said that while they usually followed the pulmonary disease in order of development they probably preceded it in exceptional cases. The diagnosis was usually not difficult, but in doubtful cases anti-syphilitic treatment should be tried.

The prognosis was undoubtedly bad, but in some cases the laryngeal manifestation entirely disappeared. These cases afford a strong argument against the universal theory of tubercular infiltration.

In regard to treatment, Dr. Knight said that a mild climate, or even a warm, moist one, seems to suit these cases better than the cold, dry air of high elevations, which was so beneficial to cases of incipient disease of the lungs alone. Semi-solid food, taken cold, as a rule, suits best.

Judicious local treatment not only makes the patient infinitely more comfortable, but also in certain cases apparently brings about an arrest of the local disease.

The old plan of cauterizing these ulcerations was bad. The whole local treatment of tissues so feebly nourished should be very gentle. In the first place the mucous membrane should be kept as clean as possible by the use of alkaline sprays. Weak astringents may be added or used afterwards. Carbolic acid in weak solution and iodoform do good in some cases. When there is much congestion and swelling, the frequent use of finely powdered ice was advised. Scarification does no good, but rather harm, unless there is a translucent œdema. Cutting into a small-celled infiltration only makes troublesome cicatrices. The careful passage of bougies into the œsophagus sometimes gives relief by producing absorption or diminishing the great irritability of the mucous membrane. Morphia powders, combined with sugar or starch, blown into the throat an hour before the principal meal, often give great ease in deglutition. Mild vapors of volatile substances like the oil of pine may be very grateful.

Tracheotomy may be necessary to avert asphyxia, but experience has not sustained the theory that cure of the laryngeal disease is facilitated by the rest to the organ secured by an earlier performance of this operation. Brushes, sponges, and all rough methods of making applications to the larynx should be, as a rule, avoided in this disease.

Dr. Cushing stated that he had very little to add in the way of therapeutics to the admirable suggestions contained in Dr. Knight's paper. A consideration of the pathological condition of the tissues surrounding tubercular ulcers, crowded with imperfectly developed small cells, was sufficient to make any attempt at healing them hopeless. In hospital out-patient practice and where the smell of iodoform was not objected to he had found the insufflation of that substance, powdered and mixed with one half its bulk of gum arabic, to be of great relief. The friends of the patient could easily learn to blow it on to the larynx without any mirror, for if a curved powder blower were steered beyond the epiglottis it was easy to diffuse the powder with tolerable accuracy over the diseased surfaces, and even in time the patient could learn to receive it in inspiration so that a part would come into the trachea, which was often inflamed and ulcerated.

A mixture of morphine in glycerine made pretty strong, so that ten drops would be a dose, and this applied with a spoon to the back of the tongue and allowed to trickle down over the larynx, frequently gives great relief.

Dr. Cushing had little respect for the operation of tracheotomy as a means merely of prolonging life in these cases, believing that when bad enough to cause death it was a kindness not to interfere in such hopeless cases; something might at times be said for the operation when required for relief of pain.

Dr. Cushing, by request, exhibited some of his microscopical preparations of tubercular larynges, showing how the small cells are first deposited along the tracks and at the forks of the smallest vessels; then the swollen mucous membrane of the infiltrated larynx was shown crowded with small cells, which in the neighborhood of the ulcers were so thick that no other tissue was discernible. At the edges of the ulcers it could be easily seen that the agglomeration of small cells had rendered the part incapable of self-support, and that increasing numbers when newly formed must swim off as pus or keep together as best they could in granulations or badly-nourished vegetations, the origin of some of which was demonstrated. Some sections of the trachea showed a precisely similar process there; the nutritive support of parts of the cartilage of the rings being cut off the part dies and is finally thrown off, leaving a deep "punched" ulcer, more or less covered with weak granulations.

Dr. Cushing during his remarks spoke of the fact that cases of tubercular disease of the larynx frequently occur when the most careful examination can find no disease of the lungs until long afterward, and although theoretically it has been maintained that such trouble in the larynx must be secondary to disease in the lungs or cheesy deposits elsewhere, yet practically the throat symptoms are often sufficiently pathognomonic when no disease of the lungs can be detected, and thus constitutional treatment can be commenced or change of climate advised at an early date of the disease, although with poor chance of success. He suggested that according to modern theories such cases of apparently primary laryngeal tuberculosis might easily be such in reality, being caused by direct infection from particles or bacilli in the air inspired.

Dr. Hooper remarked that he had been much interested in the paper, and agreed with the reader in the importance of always obtaining confirmatory evidence of disease in the lungs, and a careful history of the patient, before making a diagnosis of laryngeal phthisis. We meet with the diseases in the larynx in more than one variety, and the appearances are so different in the different stages of each variety that a positive diagnosis cannot be made without undoubted signs of chest lesion. In fact, in all the ulcerative processes of the larynx, whether due to syphilis, carcinoma, lupus, or diseases of the lungs, a detailed history of the case, and evidence of disease in some other part of the body, is necessary before we can decide upon the exact nature of the destructive process. Even if we followed the plan of Fränkel and others, and, in doubtful cases, wiped off some of the discharges from the interior of the larynx and found therein the bacilli peculiar to tubercular disease, we would then only be justified in eliminating with certainty syphilis and carcinoma; but whether we had to do with lupus, tuberculosis, or even leprosy, would still be an open question, unless, as already stated, we discovered other manifestations of one of these tubercular diseases in a different region of the body.

With regard to the question as to tuberculosis occurring primarily in the larynx, Dr. Hooper thought that any one who accepted Koch's discoveries must believe that such could be the case. If the disease in the larynx arises from the presence of the tubercle-bacillus in the sputum coming from the lung, why should not the same specific parasite when inhaled produce tuberculization of the tissues, provided always, of course, that the laryngeal mucous membrane is in a proper condition to receive it, and there is a hereditary predisposition on the part of the individual.

Dr. T. A. DeBlois said that often a great amount of comfort may be derived from scarifying the ary-epiglottic folds in those cases which are accompanied by much swelling, so that the epiglottis cannot properly close, and the patient is constantly choking from particles of food or drink which enter the air-passages with each act of deglutition. He has never seen any undesirable result follow this procedure. He never has observed ulceration of the cicatrix in these cases. In two cases he has seen laryngeal ulcerations heal under the use of iodoform, but in each case they broke down again after a few weeks. In one case in which the patient had been able to take no solid food for months, by the use of iodoform he was able to resume solid food for another full month. No other known form of treatment has ever accomplished more favorable results.

Dr. DeBlois showed an improved form of powder-blower for laryngological purposes.

Dr. W. J. Otis showed a powder-blower of a pattern originally brought from Vienna, but upon which he had adapted improvements which facilitated its manipulation and added to its usefulness.

In connection with the use of iodoform in tuberculosis of the larynx, **Dr. E. W. Warren** stated that he was working in Schrötter's wards in Vienna at the time when this became the regular treatment. Before this about one fourth of a grain of morphia was blown in. The improvement was very marked, and though not recalling that he saw any ulcers entirely heal, there was great diminution of infiltration, and the pain was less than under the morphia.

Dr. J. W. Farlow remarked that he had seen laryngeal ulcers heal, at least temporarily, in dispensary practice, under the use of iodoform. A gain of six or eight weeks is a great thing to these poor patients. Often the larynx is diseased for a considerable time before any disease of the lungs can be detected.

Dr. Bowditch agreed with the general tenor of the remarks of Dr. Knight upon the very great value of topical applications in diseases of the larynx, whether connected or not with pulmonary complications. But Dr. Bowditch could not wholly condemn the use of the nitrate of silver as injurious in these cases. It is well known that the late Dr. Horace Green, of New York, published nearly forty years ago a volume [1] the object of which was to convince the medical profession that nitrate of silver applied at times in a strength of thirty to forty, or even eighty, grains to the ounce of water, might be applied not only without danger to the larynx, but at times with great relief and final cure in some of the most obstinate and long-continued cases of laryngeal disease. Dr. Green also applied the solid caustic to specially enlarged follicles in the throat. Dr. Bowditch, however, had gradually given up the nitrate of silver for the liquor iodinii compositus, as the latter seems more agreeable to the patient and is equally efficient. Dr. Bowditch, moreover, without employing the laryngoscope, for his powers of sight prevented it, had always used a fine camel's-hair brush. With this he was sure that he could touch the vocal cords, often without the least choking. He knew so because the voice improved *immediately* in certain acute cases, and patients were cured after a certain number of such applications, made usually three times a week, and gargling with alkaline or other fluids three times daily. Dr. Bowditch found all spraying and powder blowing objectionable because of the choking that is often produced by them. Moreover, an expensive apparatus is needed, whereas the brush is a simple apparatus which every general practitioner can and ought to have.

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[1] A Treatise on Diseases of the Air Passages. . . . Chronic Laryngitis, Clergyman's Sore Throat, etc. New York and London: Wiley & Putnam. 1846.

There is, however, some art needed in making the application. One case that happened soon after commencing the course of topical applications had taught Dr. Bowditch that the operator must always be sure that the patient has *drawn a full breath, and is about to expire.* Let the vocal cords be touched *at that moment* and no spasm will occur. Let, on the contrary, the touch be made at the instant of inspiration, and violent results may occur. In the case above alluded to, and in which this blunder was committed, the patient threw himself upon the floor, and for a time *seemed* choking. No evil resulted, but a very great discomfort, which latter should be avoided if possible. In addition to the above rules Dr. Bowditch is accustomed, before treating the larynx, to make an application to each tonsil and to the back of throat, allowing the patient to breathe in the intervals. In this way the patient will be gradually led to believe that the final operation will be equally slight. It usually causes *no trouble*, except heat in the parts, although the patient feels that the operator has "touched the spot." Often a clearer voice and ease in speaking will be apparent in a few minutes.

Dr. Bowditch would dwell upon the various points in this simple operation, because each one is important for the *comfortable* performance of it.

Any discussion of the subject of laryngeal phthisis brings up a great number of important questions: What do we know about tubercle at present? How may we recognize tubercular from other forms of ulceration? Each of these single topics would form an inexhaustible subject of investigation and discussion.

DR. KNIGHT thought that Dr. Bowditch's method of applying medicines was a very good one, and would undoubtedly be a safe one to follow. There can be little doubt that tuberculous ulcers may sometimes heal, and the enormous swelling and other symptoms may quite disappear. Unquestionably this conduces greatly to the patient's comfort for a part and frequently for the whole remaining period of life. In regard to the possible arrest of the laryngeal disease three remarkable cases came to his mind at the minute. In all three the swelling of the cartilages was very great, the ulceration well marked, and the dysphagia distressing. There were positive signs of pulmonary disease in the first two, but not in the third. The swelling and ulceration almost entirely disappeared, and deglutition was relieved in the first two, but the patients died, one with symptoms of meningeal tuberculosis. In the third the signs and symptoms disappeared, with the exception of slight swelling of the epiglottis, and slight loss of substance in one vocal cord, and the patient has remained well, without any tubercular symptoms in larynx or lungs, for a year.

DR. J. V. MOTT, of New York, asked the reader if he had observed the effect of iodide of potassium internally in laryngeal phthisis? to which DR. KNIGHT replied that he had seen no beneficial result from its employment except in mixed cases or those which were undoubtedly syphilitic.

DR. MOTT remarked that this medicine was much used in the Metropolitan Hospital in New York, but the character of the cases is often very difficult to determine, as syphilis is frequently present.

In reply to a question as to the utility of general treatment and the results to the patients, DR. KNIGHT replied that hygienic and other appropriate methods of treatment should be diligently pursued in all these cases. The value of topical applications is much enhanced by a generally invigorating treatment for the whole system.

DR. G. L. WALTON read a paper upon

HYSTERIA AS AFFECTED BY REMOVAL OF THE OVARIES.[1]

DR. JOHN HOMANS spoke as follows: I think this operation cannot yet be definitely judged or accurately valued. I consider it to be still on trial. Many successful cases are reported, and others which are not favorable. Alienists and psychologists are divided upon this subject, some recommending the operation in selected cases, while others are not friendly to it under any circumstances. The removal of the ovaries should be thought of in relation to painful menstruation, and consequently in those conditions which depend upon or are induced by painful menstruation. In skillful hands the operation of ovariotomy and the other more common operations of abdominal surgery are no longer so dreaded as they were a few years ago, and the results of ovariotomy to-day are equally as favorable as those of capital operations of the extremities. Abdominal surgery is different from other surgical procedures, and cannot be taught; it must be learned by observation and experience.

Thus far I have operated upon three cases of the kind to which attention is directed in the paper of Dr. Walton. The first patient was a lady twenty-two years old, very bright and intelligent, highly educated, and thoroughly refined. Menstruation had always been irregular and painful. As the disease proceeded the patient first became hysterical, then gradually grew to be destructive, and finally became insane. It was thought that removal of the ovaries might have a beneficial effect, and the case was first brought to my notice by her friends, who sought my opinion in regard to this means of relief. There was at that time great tenderness in the left iliac region with rigidity on touching the part. She had already spent one whole year in bed at her home, and had passed a year at the Adams Nervine Asylum. She had been the frequent subject of gynæcologists and of specialists of various kinds. Finally she was placed in an insane asylum and was kept quiet by means of morphia. The pain was still present in the left side and much worse at the menstrual epoch. At such times the application of leeches to the *os* generally afforded some relief, but the case was gradually becoming worse and it was feared that her insanity would eventually become chronic.

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[1] See page 529 of this number of the JOURNAL.

In March, 1883, I removed both ovaries, with the Fallopian tubes. The patient did perfectly well and made a good recovery from the operation. Soon she began to experience relief from the old distress, and the iliac pains entirely left her. Then the headache diminished, and she became again a bright, intelligent, and perfectly sane person. She began to write, and furnished considerable manuscript for one of the daily papers. Finally her correspondence was intercepted by the family, and it was found that she had resumed the use of morphia, using the money earned from the newspapers to surreptitiously purchase the drug. On being reasoned with she promised to give up the morphia, which she did by gradually diminishing the dose until for months she has taken none at all. On examination the uterus was found to be in an infantile condition, about half the size of the thumb. From this time no unfavorable symptoms have shown themselves, and the patient and her friends consider the result as very successful.

My second case was a young lady who has had a somewhat celebrated history, from the fact that the disordered mental condition had been of some years' duration, and was of a very striking character. This patient was the subject of a scientific essay by Dr. W. B. Goldsmith, under the title of A Case of Moral Insanity, in the *American Journal of Insanity* for October, 1883, and a few extracts from her history as given by Dr. Goldsmith will clearly set forth her condition. He says: —

"The patient is a girl eighteen years old, rather short and small, but of well-knit muscular figure, and very active and strong. Her head is fairly well formed, though slightly inclined to the bullet pattern; her expression amiable and bright, and her general appearance calm. In her seventh year she had a severe attack of scarlet fever followed by a marked change in her mental condition. She became easily excited; seemed unable to apply her mind, and though apparently not malicious, could not be made to obey. Her father committed suicide at about this time, and this appears to have been the first occasion when she seems to have completely lost self-control. Soon after this she was sent to school, where she caused much trouble in various ways, and the teacher declared she spoiled the discipline of the entire school. After this she became subject to violent paroxysms of temper in which she would scream and throw herself about and break furniture and tear clothing. When between eight and nine years old, she was found naked bathing with some boys, and at this time admitted that she had frequently indulged in sexual dalliance with boys older than herself. She was now placed in various "Homes," from each of which she was dismissed on account of her violent and destructive paroxysms, and because she could not be made to observe any rules or regulations. She finally was placed in the Hospital for the Insane at Taunton, Mass., when nine years old, and there remained four years. No intellectual impairment was there detected in her, but she was thought to be in a condition of moral insanity. Dr. W. H. Gage wrote of her, 'she was an extremely difficult patient to manage.'

"From the Insane Hospital at Taunton she was removed to a similar institution at Worcester where she remained about twenty months, whence she was removed by her friends contrary to the advice of the hospital authorities. She remained quite well for four months, when on some trivial occasion she became much excited and leaped from the roof of a veranda, and was found screaming and maniacal on the walk below. The mania lasted two days, when she was placed in the Lunatic Hospital at Danvers. At this time her attacks of violence were generally induced by some slight disappointment or irritation, and would commence by attempting to destroy windows, pictures, or anything fragile. She was very violent toward her attendants, striking them and tearing their clothing and hair in a most vicious way. She has shown violence to every attendant with whom she has been for any length of time. Since her admission to the asylum at Danvers she has taken a variety of drugs, and exhausted the list of punishments and rewards practicable in a hospital for the insane. She has been kept thoroughly under the influence of bromides for weeks together; and the same is true for a less time of chloral hydrate; she has taken iodide of potassium, and has been overpowered by hyoscyamine; she has battled with various forms of mechanical restraint, and has demolished many; has tried every grade of ward, from the most violent to a parole ward where she came and went at will, and all without any perceptible injury or advantage."

I operated upon this patient last July, and removed both ovaries together with the Fallopian tubes. The wound healed by first intention, and she returned home in four weeks, and has been at home ever since. She has appeared to be perfectly well since the operation. Not a drop of menstruation has appeared since the ovaries were removed. Dr. Rowe has expressed the fear that a relapse of the mental disease might recur in these cases even after one or two years. In this case any hæmorrhage seemed to be a sufficient cause for a paroxysm, and the menstrual exacerbation was thought to be aggravated by the fact that it was of hæmorrhagic character, and the removal of the ovaries seemed to be beneficial in the way of preventing this recurrent loss of blood.

The third case was not a suitable one for this operation. The mental disease was of ovarian origin, coming on suddenly soon after marriage, and might, perhaps, have been benefited by an operation at an earlier date. There was undoubtedly commencing dementia before the ovaries were removed, and the patient's condition has become steadily worse from that time. The wound healed by first intention, and not a drop of menstruation has appeared since that time. The patient has become very violent and destructive, and has made dangerous attacks upon her attendants and upon other patients. She destroys her clothing, and has become filthy, passing her dejections in bed or in her garments. In this case removal of the ovaries has not benefited the patient, but the case has probably progressed exactly as it would have done if nothing had been attempted.

It is of no use to remove the ovaries by the vagina, but if the operation is to be done at all it should be by the abdominal incision, and the tubes should also be removed, when a much more favorable result may be expected.

Of these three cases the first may be classed as one of hystero-mania, the second as one of pure hysteria, and the third at present as advancing dementia.

Dr. Cushing inquired who it is that gives consent to a capital operation when this becomes necessary in an insane patient.

Dr. Homans replied that the consent of the guardians or next friends must in all cases be obtained, and also the consent of the patient. Few patients to whom this operation might be expected to prove of benefit are so insane as not to be able to understand and consent to its performance.

Dr. Rowe stated that he had seen many cases of each of the diseased conditions mentioned by Dr. Homans which have exhausted all the resources of asylums, but he had never thought of ovariotomy as a means of treatment. This should be henceforth taken into more careful consideration. In all capital operations the consent of the natural or constituted guardians of the patient as well as his own should first be obtained.

Dr. Putnam remarked that he had had no experience in this method of treatment of insanity. The operation would seem to commend itself even in cases in which the ovaries are not diseased. In many cases in which nervous symptoms are prominent the cure may be aided by judicious control of these functions. In ovarian troubles it may be useful to remove the periodical stimulation of these organs. In many instances of trephining, the nervous symptoms have been benefited or entirely relieved, when no fracture was found, no depression of bone existed, or any other evident mechanical interference with the functions of the cerebral structures could be anywhere observed. In like manner the supra-orbital nerve is cut in cases of spasm of the eyelid, followed by relief to this condition. It is thought to act by removing one source of irritation to the motor centres.

Dr. Homans added that removal of the ovaries with cystic degeneration of their structure is sometimes followed by insanity. This operation is still young in its relation to mental disease, and is liable to abuse. It should be especially guarded in its application to these unhappy cases, and should be done only as a last resort. In one case in which the ovaries were removed per vaginam the condition of the patient was much worse than before the operation. If the tubes had been taken too, the result might have been different. Such a person ought not to be allowed to breed, and if anything is attempted, both ovaries and both Fallopian tubes should be removed, and thus the utmost possible good be accomplished for the patient.

In one case of double ovariotomy the patient has flowed regularly and irregularly ever since that time. Removal of the ovaries does *not* cure dysmenorrhœa. This important fact should not be forgotten in advising any operation short of complete extirpation of both ovaries and Fallopian tubes.

Dr. J. J. Putnam said he had had no experience in the use of Battey's operation, but was quite prepared to believe that its effects might be beneficial both where the ovaries are diseased and even in some cases where they are not. The favorable action of the treatment in the latter group would probably be due to a restriction of the activity of the nervous system within narrower bounds.

AN ANTISEPTIC ABSORBENT PAD.

Dr. Farlow exhibited an antiseptic pad which had been devised for the benefit of ladies while traveling or while menstruating and after parturition. It is made of coarse cheese cloth, and is filled with borated absorbent cotton, and can be easily prepared by any one. This pad is for sale by druggists at one dollar a dozen.

SENILE GANGRENE.

Dr. Fitz showed a series of specimens from a case of senile gangrene operated on by Dr. Warren, and reported upon by him at a meeting of the Society for Medical Improvement, March 24, 1884.[1] No untoward symptoms occurred till within twenty-four hours of death, and the appearance of the wound was favorable till that time. At the autopsy the edges of the wound were firmly adherent throughout the greater part of its circumference, and there was no discoloration or swelling. Both popliteal and anterior tibial arteries were found calcified just below the popliteal space, and both contained thrombi. Venous thrombosis extended upwards from the amputated stump into the femoral vein, terminating just below Poupart's ligament. The thrombus was pale-red, friable, and softened centrally.

Several branches of the pulmonary artery of both lungs, at least a line in diameter, contained reddish-gray thrombi, and at the base of the right lung there was a peripheral nodule of hæmorrhagic infarction of the size of a walnut. Both lungs were œdematous, and the right pleural cavity contained four ounces of opaque pink fluid, the pleural surfaces being besmeared with a thin yellow membrane. There was no necrosis of the pleura.

The spleen was more than twice the usual size, intimately adherent to the abdominal wall and to the omentum. It was dense and heavy, the surface irregularly depressed and nodulated from the presence within the organ of numerous nodules of anæmic necrosis, varying in size from that of a plum to that of a hazelnut. These patches were often porous on section from the presence of numerous cavities containing a relatively clear fluid. Between the necrotic patches the spleen was indurated and reddish-gray in color, while scarcely a trace of splenic structure was to be found normal in color and consistency. A circumscribed patch of thickened intima of the aorta was present, which included the origin of the cœliac axis and the superior mesenteric artery. The former was entirely occluded by fibrous tissue, and the calibre of the latter was diminished one half for a short distance from the aorta, and then was considerably dilated.

The hepatic branch of the cardiac axis was dilated, the splenic artery was narrowed, its walls thickened, and its cavity completely obliterated throughout its entire course by means of an adherent, dark-red, firm thrombus. The splenic vein was also obliterated by a reddish-gray, centrally-softened thrombus, which was continued into the portal vein. The trunk of the latter was filled with the thrombus which extended into the hepatic branches of this vessel.

Peripheral portions of the liver showed a nutmeg appearance, and a nodule of anæmic necrosis the size of a plum was found.

There was a varicocele of the right side, the spermatic vein entering the right renal vein. A moist, dark-red, distending thrombus was continued from the immediate vicinity of the testicle into the right renal vein, whence it extended towards the inferior vena cava as a thrombus the size of the tip of the little finger.

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[1] See Boston Medical and Surgical Journal, 1884, cx., 349.

The chief interest of these specimens lay in the evidence of long-standing serious disease without striking symptoms at the time of the operation; also in the comparatively slight alterations of the liver, despite the obliteration of the cœliac axis and the obstruction of the portal vein. Embolism of the pulmonary artery was to be regarded as the immediate cause of death, while the thrombosis of the renal vein was presumably of marantic origin, and might have been not above twenty-four hours' duration.

Three varieties of thrombi were present, each independent in origin from the others, and neither having given rise to recognizable symptoms till the day before death, when the occurrence of pulmonary embolism was suggested. The stomach gave evidence of extensive softening of the mucous membrane, with putrefactive emphysema, although neither condition was associated with the usual favoring circumstances.

ACTINOMYCOSIS.

Dr. W. F. Whitney showed a specimen of actinomycosis, the first ever exhibited in New England.[1] It occurs in horses, cattle, sheep, etc., and has been frequently observed in Europe. This specimen was from a heifer, and was sent to Professor Lyman, of the Harvard Veterinary School, and by him referred to Dr. Whitney. The disease was located on the lower jawbone, and was as large as the two fists. The character of the growth is fibrous, and shows large numbers of patches of a yellow color, which contain lime salts, and also masses of the parasitic growth.

Dr. Fitz stated that this disease has been observed in isolated cases in the western part of the United States, but that this is the first case reported in this vicinity. The disease can be communicated to man from the domestic animals. Usually the jaw is the part first attacked, and from this point the disease may extend to the thorax, spine, and elsewhere. The origin of the fungus is not yet definitely known. It has been thought by some to enter the organism by means of defective teeth.

Adjourned at 10.15 o'clock.

Recent Literature.

Principles of Theoretical Chemistry, with Special Reference to the Constitution of Chemical Compounds. By Ira Remsen, Professor of Chemistry in the Johns Hopkins University. Second edition. Thoroughly revised and enlarged. Philadelphia: Henry C. Lea's Son & Co. 1883.

This book is divided into two parts. The first part is devoted to a general discussion of atoms and molecules. Chapter I. treats somewhat in detail of Dalton's investigations, the atomic theory, and the methods which we possess for the determination of atomic weights dependent upon purely chemical processes. Chapter II. treats especially of Avogadro's hypothesis, and its application in the determination, primarily, of the molecular weights of compounds and elements, and, secondarily, of atomic weights. Chapter III., the relationship between specific heat and atomic weight. Chapter IV., the schemes of D. Mendelejeff and Lothar Meyer for showing the connection between the atomic weights and properties of the elements. Chapter V. is on the valence or atomicity of the elements. The second part treats at considerable length of the constitution or structure of chemical compounds.

The book has been thoroughly revised, the most noticeable changes being found in the chapters on valence and constitution. A short chapter on the physical methods for determining the constitution of chemical compounds has been added.

In his preface the author says: "I have endeavored to discuss in an impartial way, as objectively as possible, the principal hypotheses which at present play important parts in the science of chemistry." "My object has been to point out as clearly as I could the exact connection between the facts known to us and the hypotheses."

We find in this book the most impartial and satisfactory discussion of the above subjects which we have seen, and we cordially recommend it to those who wish to familiarize themselves with the fundamental hypotheses connected with the science of chemistry, and with the facts which suggest these hypotheses.

New York and Brooklyn Formulary of Unofficinal Preparations. Published by a Joint Committee of Delegates from the College of Pharmacy of the City of New York, the New York German Apothecaries' Society, and the Kings County Pharmaceutical Society. Publication Office: College of Pharmacy Building, New York. 1884. xii. 46 pages.

This is a collection of eighty-one practical formulas for such preparations of the so-called "Elegant Pharmacy" as appear to have established a claim to some recognition, and have survived out of the endless number offered to the medical profession. They are now respectfully submitted by the committee with the very reasonable request that physicians should abstain hereafter from designating the maker's name of any preparation for which a formula is found in this pamphlet, that thus both physicians and pharmacist may be sure to obtain uniform preparations, no matter where they may be dispensed. The preparations mentioned are fifty-two elixirs, ten emulsions, two extracts, one liquor, five spirits, six syrups, two tinctures, and three wines.

The universal use of such formulas would prove as beneficial to the medical profession in this State as they will in New York. B. F. D.

A Handbook of Therapeutics. By Sidney Ringer, M. D., Professor of the Principles and Practice of Medicine in University College, London. Tenth edition. 688 pages. New York: William Wood & Company.

This last edition of a valuable and widely read work differs very little from the previous one. The changes are few and of minor importance, among them are a short page on Eucalyptus, a rather longer mention of the salts of manganese, and the addition of a few paragraphs about salicine. In its present form this suggestive Handbook will doubtless continue to prove useful to a large number of physicians.

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[1] See page 532 of this number of the Journal.

Medical and Surgical Journal.

THURSDAY, JUNE 5, 1884.

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THE "TAXATION" THEORY OF EXPERT TESTIMONY.

MANY are the remedies which have been suggested for the obvious failures and defects of our system of expert testimony. But it is difficult to see what improvement is to be looked for in the value of such testimony either from a scientific point of view or as an instrument to the furtherance of justice from such a position as that which is taken by Mr. Rossiter Johnson in the current number of the *North American Review*. His theory is that the demand of the State upon the expert witness is to be considered as a species of taxation, and while no system of taxation has ever been devised which is absolutely equitable, yet that the levy by the State upon the capital of the professional man (that is, his time and his scientific acquirements) according to her needs, without compensation, is consistent with justice and equity. According to this view no distinction should be made, at least so far as concerns subpœna or compensation, between expert and ordinary witnesses. Both alike, together with the jurymen, are to give their services for the good of the State without recompense, or, rather, the nominal fee tendered is supposed to represent the bare cost of living for the time occupied, which sum the State is bound to exempt from her claim. The men who are called upon to serve in court, whether as jurors or witnesses, pay a varying tax according as their time and services are worth much or little. Only the day laborer is exempt; his tax is remitted to him in the form of a fee, and this simply because it is all he has to live upon, and the State cannot beggar him. The case is compared to the laying of the income tax in our late war. Incomes up to $600 were exempted from taxation on the ground that so much was necessary to subsist upon, but incomes over that amount paid the whole tax, which, therefore, fell very heavily upon the wealthiest people. So, during the conscription in our late war, men were enrolled for military service, with practically no compensation, because the country needed their aid. The day laborer received enough barely to keep him and his family from want, and no more was given to the ex-clerk, engineer, or lawyer who had been earning his one, three, or five thousand per year. In fact, in this case of urgency the tax was still more oppressive and arbitrary, for the conscripts gave not only their time but in many cases their limbs and lives; and each hundred men that were enlisted might know in advance that a certain number of them, on the doctrine of averages, never would come back.

All this is intelligible, nay, more, it is right, for under all government it must sometimes happen that the welfare of the individual should give way before that of the public, and we accept the parallel for jury service, suffrage, and such other universal duties of citizenship. If a man by chance witnesses a crime it is doubtless his duty to attend in court and give his evidence, though it may involve a loss of a hundred dollars in his business, for which he receives in compensation only the regular fee of fifty cents. To-morrow a part of the debt will be repaid to him in the discharge by his neighbor of a similar duty of good citizenship, and the chances are that not for many years, if ever, will he again be thrown into circumstances where such a duty will be placed upon him. True, if his calling is one which specially exposes him to the liability of becoming cognizant of crime (as does that of a physician) he must be prepared to meet this additional tax which society places upon him.

But here, it seems to us, the analogy ends. Beyond what, as a member of society, he sees and hears, the physician should not be held subject to this taxation of time and talents. A murder is committed. The physician was in no sense a witness to it, in fact, knew nothing about it. By reason of special training, opportunities, or advantages on his part, however, he is able to form an opinion which is of value in solving some problem connected with the crime. His opinion is, therefore, sought for the purpose of "furthering the ends of justice." Having once gone through the special mental drill necessary to forming and formulating such an opinion, he is still better able to do it a second time, and is, therefore, even more important in furthering the ends of justice, until finally his whole time may be taken up with this sort of work.

Let us be impartial in this matter. Whatever claim the State has upon the physician as a good citizen, to "further the ends of justice," by giving his time and labor in the elucidation of cases of which he was not personally cognizant, precisely the same claim exists upon judge and attorney, sheriff and constable. They also are bound to give their best services whenever asked to further the ends of justice. But the State has, and with good reason, made these officials its employees, because they possess qualifications and opportunities above those of the average citizen for the detection of crime, and if these qualifications were to be "taxed" instead of recompensed, a gross injustice would be done to a particular class of men. For exactly the same reasons should the expert witness receive compensation from the State for the equally valuable service which he renders her. Whether this official shall be a member of a permanent board and be paid an annual salary, as in some of the countries of Europe, or whether as merely a man of recognized and approved authority in his specialty, whatever that may be, he is summoned to give his assistance in every separate case where it is needed, are of minor importance compared with the point that he shall be summoned when required by the court and paid by the State, and hence be primarily independent of either side in the dispute. The tender of a fee to the expert witness by either of the contestants could then be held as equivalent to the offer of a bribe. Then might the disgraceful counter-swearing of professional men be at an end, and the white light of science fall upon judicial inquiries, unstained by the media of opposed interests.

The comparison has been happily made of the expert witness to the interpreters sometimes required to translate evidence in court. The interpreter should certainly be not in the employ of either party, but of the court, and sworn to give a true and correct interpretation of the evidence. But this is not the point of the analogy with which we are now especially concerned. The evidence may be in French or German, and interpreters are comparatively easy to find. But again, it may be in Chinese or Persian. The court learns of a man who happens to know the foreign tongue. The man is summoned from his business. Shall he be "taxed" his time and labor, and if he proves a good interpreter be summoned again and again whenever his services are needed, irrespective of his personal interest or concern in the given case? or shall he be made an employee for the time being? The interpreter of science has a harder language to translate than any human speech; and the vocabulary of his hearers into which that unknown tongue must be rendered is often a very limited one. Shall he whose task demands a higher intelligence and more patient toil than that of the common interpreter be treated less equitably? To our minds there is a very important sense in which the claim to such a man's service as a right of taxation does *not* "further the ends of justice."

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A WORD FOR MILITARY DRILL IN SCHOOLS.

"It is highly probable that those parents who, through mistaken notions of education, permit their children to grow up ignorant of self-surrender, discipline, and restraint, are encouraging in them the tendencies to excess which in later life may issue in insanity. It is indeed a patent fact that the power of self-control is less cultivated at present than formerly. Our forefathers held many hard and barbarous beliefs, but there was one belief of theirs which we should have done well to retain, namely, the conviction that serious and prolonged discipline is necessary to the building up of a sound and self-sustaining manhood. In these days the last lesson imparted is that of obedience, yet it is certain that they who cannot obey will never know how to rule, and that without self-control the finest natural abilities may be worse than wasted.

"When the tendency to insanity is the effect of new ideas upon sluggish mentalities, which are confused rather than enlightened by the impact, it is probable that nothing can be done. In such cases Nature's law of the survival of the fittest must operate, and such as are incapable of improvement must perish. But with regard to the stronger natures that tend to excess because of defective training, it is not useless to speak words of warning. Nature will be avenged for violations of her laws, and those who exhaust their limited stock of vitality in youth and middle life will be denied the restful old age to which they vainly look forward. Parents who think it philosophical to withhold all discipline and training in self-control from their children will do well to reflect that, far from fitting them for an ampler manhood and womanhood by these means, they are preparing them for disaster, misfortune, and failure, and depriving them of the most indispensable defense and protection against the distracting influences of our fast and feverish modern life."

Such are the expressions of one of our leading daily papers. It is evident that the youth of to-day have a very different training from that received by the generation now passing off the stage. Our city streets show a mob of half-grown boys who are growing up without restraint at home, without the restraint of a business apprenticeship, and with an ever lessening reverence toward God and respect toward man. These are the extreme instances of the universal relaxation of discipline which is only too evident in all classes of society. The entire abolition of corporal punishment in public schools is a sign of the change in public sentiment in the matter.

The exhibitions of military drill in the higher public schools which have taken place in Boston during the past week deserve a passing notice in connection with this subject.

In this military drill is found, for a portion of the rising generation, some slight counterpoise to all this license and lack of discipline. The drill occupies but a small amount of time, it is not severe, but it does teach boys to obey, and that on the instant, and later to command. One might well question if it might not be more beneficial if it were more severe. We doubt if any officer is ever "broken" for failure to maintain proper order. To one who has experienced the severities of West Point or Annapolis the discipline must seem very lax, but, on the other hand, to one who looks with apprehension at the consequences to be feared from universal lawlessness it offers at least a little comfort.

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A VERDICT OF MANSLAUGHTER AGAINST AN IRREGULAR PRACTITIONER.

The trial of "Dr." Franklin Pierce, an irregular medical practitioner of Worcester, Mass., occurred before the Superior Court in that city two weeks ago, on an indictment charging him with manslaughter in causing the death of Mrs. Mary A. Bemis, of West Boylston, in January, 1883, by the use of kerosene oil. The case excited considerable interest. The husband of the deceased testified that during his wife's illness Dr. Pierce said at various times that she had ulceration of the womb, gastro-bilious fever, typhoid fever, water about the heart, and erysipelas. He ordered that the patient's temperature be taken every hour with an ordinary house thermometer, and that a record of her pulse be also kept, so that he could report progress of the case to a dean of some college in Boston. When he discovered the symptoms of erysipelas, one week before she died, he ordered the patient packed in kerosene oil from her neck to her toes, so as to draw out the disease. Cloths were saturated in oil, wrung out, and then laid on. She complained of intense burning pain, and the treatment was discontinued after two and a half hours. Dr. Pierce was sent for. He ordered the kerosene treatment renewed, this time by pouring oil on the cloths without removing them. This treatment was continued for thirty hours or more, when he ordered the cloths removed. It took three hours to remove the cloths, and large patches of skin came off with them. The next day Dr. Pierce presented a bill for $180 for consultation fees in Boston and $45 for surgical examinations. His services were dispensed with the following day, and other physicians called in, who said the patient was past recovery.

The testimony of the nurse showed, in addition, that after the first application of the kerosene the skin hung in strings from the patient's body. When the doctor ordered a second application he forbade the nurse to use sweet oil to allay the pain.

Dr. J. Marcus Rice, the medical examiner who conducted the autopsy, said the woman's epidermis was two thirds burned away; that the true skin was destroyed in several places, and that in some spots the muscles were exposed. He found no sign of pericardial effusion. In his judgment death was caused by the destruction of the epidermis by the use of kerosene. This opinion was confirmed by other medical testimony. One physician who had treated Mrs. Bemis testified that pulmonary troubles and chronic diarrhœa would probably have ended her life soon, and kerosene packing only hastened death. In his opinion she might have recovered from the kerosene treatment but for her vitiated condition.

The defense opened, and put on half a dozen witnesses, who, under Dr. Pierce's direction, have used kerosene in a similar manner to that in this case for erysipelas, typhoid fever, congestion, typhoid pneumonia, and other diseases. All agreed that the treatment was highly beneficial to them. The defense also offered testimony to show that the husband had administered two doses of aconite to his wife, early in her sickness, of eight drops each.

The only witness in rebuttal testified that, under the prescription of the defendant, kerosene oil had been used on her son as a remedy for lung fever until it took off the flesh and laid the bone bare.

The jury were out ten minutes, and returned a verdict of guilty.

MEDICAL NOTES.

— The following have been chosen officers of the Middlesex East District Medical Society for the ensuing year: President, Dr. John O. Dow, Reading; Vice-President, Dr. Winthrop F. Stevens, Stoneham; Secretary, Dr. George E. Putney, Reading; Treasurer and Librarian, Dr. John O. Dow, Reading; Councilors, Dr. Arthur H. Cowdrey, Stoneham, Dr. Frederic Winsor, Winchester, Dr. Seth W. Kelley, Woburn; Nominating Councilor, Dr. Winsor; Censors, Dr. Charles C. Odlin, Melrose; Dr. William S. Brown, Stoneham; Dr. Daniel March, Winchester; Dr. Julius S. Clark, Melrose; Dr. Fred. W. Graves, Woburn; Commissioner on Trials, Dr. Francis F. Brown, Reading; Reporter, Dr. George E. Putney, Reading.

— Two new prescriptions for the treatment of warts are announced in the *Wiener Med. Blätter* (November 8th). One is the application of a piece of lemon peel which has been immersed for eight days in acetic acid three or four times renewed. The slice of peel is left on the wart until it dries, which it does in about nine hours, and this is repeated four or five times. The wart is then so much loosened that it can be removed by strangulation. The second mode of treatment is to insert a pin beneath the wart, avoiding the healthy skin, and then to heat the pin's head in a spirit-lamp. This causes the wart to become white and shriveled at once, when it is easily removed without any bleeding.

— M. Pasteur and his *collaborateurs* have announced to the French Academy that they can render all dogs absolutely proof against the effects of rabies by inoculation however the virus may be administered.

— In the *British Medical Journal*, February, 1884, page 281, it is noticed that in the statistics of the Caen Hospital only four cases of stone were admitted during fifty-nine years. In one the nucleus was a foreign body; in two the patients drank wine, *not cider*, which is the ordinary beverage in Normandy. Inquiries showed that stone in the bladder is rare in countries where cider is the chief drink. M. Denis-Dumont is said to have found the diuretic properties of cider most useful in cases of gravel, obesity, and some forms of gastritis.

NEW YORK.

— At the last meeting of the County Medical Society, held May 26th, Dr. Milton Josiah Roberts read a paper on The Treatment of Ankle-Joint Disease and the Mechanism of its Cure, and presented a patient cured without deformity and without anchylosis. A resolution, offered by Dr. J. A. Irwin, was adopted urging upon Congress the necessity of suitable legislation to secure a more efficient medical service upon ocean steamships in order to prevent the needless sacrifice of human life and the introduction of foreign infection, as far as possible, into this country.

— The free public baths were opened on the 1st of June as usual. There will be eleven instead of nine this year, two of the old ones having been sold, and four new ones built at a cost of $50,000. Six of the baths are located on the East River front, one at the Battery, and four on the Hudson River front.

— Nine graduates received diplomas at the commencement of the Woman's Medical College of the New York Infirmary, which was held on Thursday evening, May 29th.

— Work has now been commenced on the Vassar Brothers' Hospital at Poughkeepsie. It will consist of three principal parts, — an administrative building and a pavilion on either side, — all of which will be two stories in height with high slate roofs. They will be joined by a one-story corridor with a spacious veranda. The buildings are to stand on a bluff, facing the west, and their extreme length, from the north side of the north pavilion to the south side of the south pavilion, will be 180 feet, while the extreme depth, from the front of the administrative building to the rear of the pavilions, will be 120 feet.

— The State Board of Health has just received from one of its inspectors a report which reveals a very unsatisfactory sanitary condition among the cattle at Blissville, L. I. In the stables of one firm, which were in a terrible state of filth and offensiveness, between four hundred and five hundred animals were found housed and fed on distillery swill and hay, and one case of pleuro-pneumonia was discovered. In another stable out of forty cows three were just dying of the disease, and there were five acute cases of it beside. All had been milked that morning, and the milk distributed to customers. An almost equally large percentage of cases of pleuro-pneumonia were also found at other dairies, and there is reason to suspect that diseased cows, no longer able to furnish milk, are slaughtered and the meat smuggled into New York and Brooklyn.

Correspondence.

GRADUATING EXERCISES AT BOWDOIN MEDICAL COLLEGE. MEETING OF THE MEDICAL ALUMNI, PORTLAND, JUNE 2, 1884.

Mr. Editor, — The attendance at the Medical Department of Bowdoin College varies from year to year but slightly from one hundred, and in the term which closed on the 28th of May was ninety-nine. A gratifying circumstance in this connection is that one third of these were graduates of colleges, nine New England institutions of learning having representatives in the class. Thirty-three candidates received the doctorate in medicine. In previous years the graduating exercises have been conducted with but little ceremony, though it has been customary to have an address from some man who had attained eminence in medicine, law, or theology, but this year the class arranged a programme of a more pretentious character, and set an example which will doubtless be followed by all their successors. The address was given by the Rev. Dr. S. G. Brown, professor of mental and moral philosophy in the college, formerly the occupant of the same chair at Dartmouth, and president of Hamilton. His subject was some of the relations of the medical profession to the complicated result which we call civilization, and he handled it in a manner which displayed a critical appreciation of the aims, duties, trials, and achievements of the educated physician. The large audience which filled Memorial Hall listened to the oration with great satisfaction and approval. A valedictory address was pronounced by Mr. F. C. Heath, who had been chosen by his classmates to represent them. It was full of bright points, and was admirably delivered. The diplomas were then presented, and the class sang a very appropriate ode, which was written by Mr. C. L. Barnes. The exercises were enlivened by excellent music furnished by an orchestra of fifteen pieces.

Last January there assembled at Waterville between twenty and thirty of the graduates of the Medical School of Maine in response to an invitation of Dr. Frederick C. Thayer, of the class of 1867. Though the institution had been in existence for sixty-three years, and had educated more than thirteen hundred physicians, there had never been an association of its alumni. On this occasion, however, such a society was organized, and Dr. Thayer, the projector of the enterprise, was very properly elected as its president. A constitution was adopted by which it is provided that any person on whom a degree in medicine has been conferred by Bowdoin College may become a member of the Society by signifying his desire to this effect in writing to the secretary, and paying one dollar to the treasury, provided his character and professional standing are satisfactory to the executive committee, which consists of all the officers. The annual meeting is to be held in the week of the graduating exercises at the School. In accordance with this rule the Bowdoin Medical Alumni Association met in Memorial Hall immediately after the newly-made doctors marched out with their sheepskins. Nearly one hundred were present, and this number would have been greatly augmented but for the severe storm which lasted all day. The President briefly addressed the society, congratulating it upon the auspicious beginning of the new organization, and expressing the opinion that the alumni owed a duty to the institution which gave them professional birth, an obligation which they could discharge in various ways. One, upon which he laid great stress, was the establishment of an alumni fund, contributed by the graduates of the School, and devoted to the advancement of medical education through the medium of this institution. The suggestions of the President were referred to a committee consisting of Drs. Horr, of Lewiston, Walker, of Thomaston, and Osgood, of North Yarmouth, which reported a general approval of them, but added that the matters were of so much importance that they could not be sufficiently discussed in a short time, and recommended the appointment of a committee which should be instructed to report on the subject at the next meeting. The report was accepted, and a committee was chosen composed of Drs. Horr, of Lewiston, E. M. Fuller, of Bath, and H. H. Hunt, of Portland. A constitutional amendment was adopted by which past and present members of the Faculty of the School may be elected to honorary membership. Those who have been instructors, who are not graduates of this School, and who are still living, are Dr. William Perry, of Exeter, N. H., lecturer on theory and practice in 1837; Dr. Corydon L. Ford, of Ann Arbor, Mich., professor of anatomy and physiology from 1864 to 1870; Dr. A. B. Palmer, of Ann Arbor, professor of pathology and practice from 1870 to 1879; Dr. Thomas Dwight, of Boston, professor of anatomy from 1872 to 1876; Dr. Robert Amory, of Boston, professor of physiology from 1873 to 1875; Dr. Thomas T. Sabine, of New York, lecturer on anatomy in 1871, and on surgery in

1872; and Dr. E. W. Jenks, of Chicago, professor of obstetrics from 1872 to 1874. These were made honorary members, as also were those present professors who are not graduates of the institution. The old list of officers was reëlected. They are F. C. Thayer, of Waterville, President; S. Laughton, of Bangor, first Vice-President; R. D. Bibber, of Bath, second Vice-President; C. D. Smith, of Portland, Secretary; F. H. Gerrish, of Portland, Treasurer. The executive committee was authorized to expend at their discretion such moneys as are in the treasury. Dr. A. J. Fuller, of Bath, delivered an address, after which the Association adjourned to the large dining room, on the ground-floor of the building, where a bountiful and toothsome banquet was spread. The newly-graduated class attended as guests of the Faculty. The dinner being disposed of, speeches, in response to toasts, were made by the acting President of Bowdoin College, by Dr. I. T. Dana, the senior medical professor, by Dr. Horr, President of the Maine Medical Association, and others.

The aged Professor Packard, who is acting President, gave a most interesting account of the beginnings of the medical department, the early professors in which were his personal friends. Those who knew Nathan Smith, John Doane Wells, and Parker Cleaveland as young men are not often seen nowadays; and it was a genuine treat to listen to this venerable man as he narrated incidents in the lives of the founders of the Medical School, telling the story with a simplicity and unconscious pathos which touched every heart. Dr. Dana spoke of the work the School is accomplishing in elevating the standard of education, and of the need of larger clinical opportunities, intimating that the institution should be moved as soon as possible to Portland — an opinion which is shared by almost everybody who is familiar with the circumstances of the case. Subscriptions have been raised for the erection of an amphitheatre for the Maine General Hospital, and there is no doubt that the Medical School of Maine will change its location from Brunswick to Portland as soon as a suitable building for its accommodation is put up and deeded to the College of which it is the medical department.

The first annual meeting of the Association is unanimously considered a great success, and the next is looked forward to with the pleasantest anticipations.

There are many alumni whose addresses are not known, and all who did not receive a circular invitation to this meeting are earnestly requested to furnish the Secretary with information as to their residences at their earliest convenience.

Prof. Burt G. Wilder, who has occupied the chair of Physiology for nine years past, has resigned, and Dr. Henry H. Hunt, of Portland, has been chosen lecturer for one year in his place.

Miscellany.

PHYSIOLOGICAL ALBUMINURIA.

The growing opinion that albumen is more frequently present in the urine than was formerly believed, receives support from a recent thesis of M. de Chateaubourg,[1] in which observations are reported conducted chiefly upon healthy soldiers and children. The tests were made by several reagents, but especially with that of Tanret (double iodide of mercury and potassium strongly acidulated with acetic acid) employed according to the method of Professor Bouchard. These means are necessary for recognizing the small amounts of albumen often found, as, for instance, from .005 to .01 gramme of albumen to a litre of urine. The general results obtained by M. de Chateaubourg show that albuminuria is frequent in healthy people. For instance, in 701 examinations made upon persons in perfect health, albumen was found in 592 cases, giving a proportion of eighty-four per cent. The cases where there was a considerable quantity, that is, more than .03 per litre, were sixty-four per cent. In 169 cases even, the amount of albumen was more than .25 per litre.

The author concludes that this physiological albuminuria is variable and modified by many casual circumstances. Thus there were individuals who one day had .25 of albumen per litre and the next day had none. It is modified among other things by bodily fatigue, which markedly increases it, as could be seen in a body of soldiers, both in the number affected and the amount per man. Brain work also increases albuminuria, as was observed in a number of young men preparing for an examination. Digestion, if accomplished during repose, has no effect on the albuminuria. But not so menstruation and the generative functions. Cold baths were found to have a marked effect. Fifty-three men having taken a five-minute bath were found to have albuminuria to a man, but in varying degree. A preliminary examination had shown that sixteen of the men had no albumen when they got out of bed. The amount in the others was increased after the bath. Most of these men had albumen the next day but in much diminished amount. It is pointed out that this influence of cold baths has an important effect. For if it be admitted, as Semmola has long taught, that the repeated transudation of albumen through the renal filter may produce alterations in the renal epithelium, it would seem that bathing should be carried on only with great caution by persons having transient albuminuria, especially if it be easily subject to exacerbations.

THE FIRST DISCOVERER OF THE USEFULNESS OF KANGAROO TENDONS FOR LIGATURES.

We trust that the name of a well-known physician of this city will not escape recognition under the disguise in which it appears in the following paragraph, which we clip from the ***Australasian Medical Gazette:***

"In the *New England Medical Monthly* for June, 1883, Dr. Henry O'Marey, of Boston, is credited with the discovery that fibres of kangaroo tendons, antiseptically prepared, make the best ligatures and sutures for surgical purposes. We would call attention to the fact that Mr. T. M. Girdlestone, F. R. C. S., Eng., of Melbourne, is the surgeon who is really entitled to the credit of this discovery, and that, acting on his recommendations, these tendons have been for some seven years frequently used by him and other surgeons in Australia and England. He first exhibited tendons, prepared by himself, at a meeting of the Medical Society of Victoria, held on December 5, 1877, and called the attention of the profession to their usefulness, giving his own experience in their use."

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[1] Journal de Medecine, January, 1884.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 24, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diphtheria and Croup.	Diarrhœal Diseases.	Scarlet Fever.
New York	1,340,114	648	245	17.70	14.25	4.80	3.30	2.40
Philadelphia	927,995	356	108	17.92	12.60	6.44	2.52	2.52
Brooklyn	644,526	237	90	15.12	13.86	2.94	2.94	4.20
Chicago	632,100	241	143	27.06	6.56	7.79	7.79	2.87
Boston	423,800	149	36	12.06	18.76	5.36	—	1.34
Baltimore	408,520	134	52	21.46	15.54	2.96	4.44	5.18
St. Louis	400,000	108	33	13.80	13.80	5.46	1.82	—
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	183	88	36.85	7.15	.55	12.10	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	73	24	16.75	5.85	5.48	—	5.48
Milwaukee	142,400	51	30	23.52	17.64	7.84	9.80	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	16	7	37.50	18.75	—	—	25.00
Nashville	54,400	12	7	25.00	33.33	—	—	—
Charleston	52,286	38	15	13.15	18.41	—	7.89	—
Lowell	71,447	24	7	16.64	24.96	8.32	—	—
Worcester	69,442	21	12	9.52	4.76	4.76	—	4.76
Fall River	62,674	13	4	7.69	15.38	—	—	—
Cambridge	60,995	—	—	—	—	—	—	—
Lawrence	45,516	14	7	28.56	14.28	14.28	—	14.28
Lynn	44,895	11	4	18.18	9.09	—	9.09	—
Springfield	38,090	12	0	—	25.00	—	—	—
Somerville	31,350	12	5	8.33	—	8.33	—	—
Holyoke	30,515	8	3	25.00	12.50	—	—	12.50
New Bedford	30,144	7	3	14.28	—	—	14.28	—
Salem	29,503	10	2	—	30.00	—	—	—
Chelsea	24,347	6	0	16.66	50.00	16.66	—	—
Taunton	22,693	2	0	50.00	—	50.00	—	—
Gloucester	21,400	7	4	—	14.28	—	—	—
Haverhill	20,905	5	0	—	20.00	—	—	—
Newton	19,421	3	0	66.66	—	—	—	—
Brockton	18,323	3	0	33.33	33.33	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	5	1	—	20.00	—	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Eighty-four Massachusetts towns	359,881	77	8	4.76	27.37	1.19	1.19	—

Deaths reported 2496 (no reports from Cincinnati, Buffalo, District of Columbia, and Providence): under five years of age, 942; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 476, consumption 343, lung diseases 287, diphtheria and croup 116, diarrhœal diseases 98, scarlet fever 63, measles 62, typhoid fever 32, malarial fevers 29, whooping-cough 20, cerebro-spinal meningitis 18, small-pox 12, erysipelas 12, puerperal fever 12, typhus fever four. From *measles*, New York 20, New Orleans 18, Chicago 10, Philadelphia five, Baltimore four, Pittsburg and Milwaukee two each, St. Louis one. From *typhoid fever*, Philadelphia 12, Chicago, Boston, and Pittsburg three each, Nashville two, New York, Brooklyn, Baltimore, St. Louis, Lowell, Lynn, Holyoke, and Waltham one each. From *malarial fevers*, New Orleans 14, New York and Brooklyn five each, Baltimore and St. Louis two each, Chicago one. From *whooping-cough*, New York 11, Brooklyn and Chicago three each, Baltimore two, New Orleans one. From *cerebro-spinal meningitis*, New York and Philadelphia four each, Chicago and New Haven two each, St. Louis, Nashville, Fall River, Newton, Brockton, and Chicopee one each. From *small-pox*, New Orleans 11, Philadelphia one. From *erysipelas*, New York three, Chicago and Boston two each, Philadelphia, Brooklyn, Baltimore, St. Louis, and Charleston one each. From *puerperal fever*, Boston three, Brooklyn and Baltimore two each, Chicago, St. Louis, Milwaukee, Charleston, and Lowell one each. From *typhus fever*, New York four.

Three cases of small-pox were reported in St. Louis (these three cases were from East St. Louis, Illinois, and taken to the hospital at St. Louis as pay patients); scarlet fever 61, diphtheria 45, typhoid fever eight, and measles four in Boston; scarlet fever 17, and diphtheria seven in Milwaukee.

In 101 cities and towns of Massachusetts, with an estimated population of 1,336,911 (estimated population of the State 1,955,104), the total death-rate for the week was 26.15 against 16.35 and 15.88 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending May 10th, the death-rate was 21.8. Deaths reported 3666: acute diseases of the respiratory organs (London) 326, whooping-cough 194, measles 176, scarlet fever 66, diarrhœa 47, fever 35, diphtheria 13, small-pox (London 19, Liverpool two, Sunderland one) 22. The death-rates ranged from 14.3 in Brighton to 28.8 in Blackburn; Bristol 18.2; Sheffield 20.5; London 20.6; Birmingham 21.4; Bradford 22.4; Birkenhead 23.5; Leeds 25.0; Nottingham 25.9; Manchester 27.0; Liverpool 27.4. In Edinburgh 23.5; Glasgow 28.7; Dublin 31.8.

For the week ending May 10th, in the Swiss towns, there were 40 deaths from consumption, typhoid fever 38, lung diseases 26, diarrhœal diseases eight, diphtheria and croup five, whooping-cough four, scarlet fever one, erysipelas one. The death-rates were, at Geneva 21.4; Zurich 37.4; Basle 20.9; Berne 25.6.

The meteorological record for the week ending May 24th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 18	29.859	59	70	46	67	36	55	53	W	NW	SW	11	12	8	C	C	C	—	—
Mon., 19	29.963	66	81	50	70	41	76	62	SW	S	SW	4	17	10	C	C	C	—	—
Tues., 20	30.008	60	70	53	85	100	100	95	S	S	SW	9	10	6	O	R	G	—	—
Wed., 21	30.073	60	73	55	93	82	92	89	NW	E	SW	5	10	1	C	F	H	—	—
Thurs., 22	30.195	59	73	52	84	92	94	90	W	E	SE	2	13	6	C	H	F	—	—
Fri., 23	30.092	65	77	53	95	60	76	77	E	SW	SW	2	12	10	R	C	F	—	—
Sat., 24	29.858	72	88	59	91	50	62	68	SW	W	W	8	14	10	O	F	C	—	—
Mean, the Week.	30.007	63	77	53				76										9.20	0.87

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 24, 1884, TO MAY 29, 1884.

Hall, William R., captain and assistant surgeon. Assigned to duty at Fort Stockton, Texas. Paragraph 1, S. O. 63, headquarters Department of Texas, May 19, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING MAY 31, 1884.

Anderson, F., passed assistant surgeon, ordered to Navy Yard, New York.

Beyer, H. G., passed assistant surgeon, detached from Coast Survey steamer Blake, ordered to Smithsonian Institute for special duty.

Rush, W. H., passed assistant surgeon, detached from U. S. S. Despatch, and ordered to Coast Survey steamer Blake.

Heneberger, L. G., passed assistant surgeon, detached from Navy Yard, New York, ordered to U. S. S. Despatch.

Griffiths, S. H., passed assistant surgeon, ordered to U. S. S. Lancaster on expiration of leave of absence.

Jones, M. D., passed assistant surgeon, detached from Naval Hospital, New York, and resignation accepted, June 15, 1885.

Wise, I. C., surgeon, detached from Academy, and ordered to U. S. S. Constellation.

Suffolk District Medical Society. Last Meeting of the Season. — *The Section for Clinical Medicine, Pathology, and Hygiene* will hold a special meeting at 19 Boylston Place, on Saturday, June 7th, at 7.45 o'clock. Dr. P. C. Knapp will read a paper on Observations on the Cutaneous and Tendon Reflexes. Dr. F. Minot will report Three Cases of Distended Gall-Bladder.

Robert T. Edes, M. D., *Chairman.*
Albert N. Blodgett, M. D., *Secretary.*

New Hampshire Medical Society. — The ninety-fourth annual meeting will convene in Union Hall, Concord, Tuesday, June 17, 1884, at eleven o'clock, A. M. The following order of proceedings is submitted by the Executive Committee: *Tuesday*, June 17, 1884. (1.) Annual Address by the President, at twelve o'clock. (2.) Essay, An Inquiry into the Causes of Insanity, with especial reference to Prevention and Treatment, Dr. Charles P. Bancroft, Concord. (3.) Oration, Aids in Obstetrics, Dr. I. G. Anthoine, Antrim. (4.) Dissertation, Mothers' Mark Delusion, Dr. M. C. Lathrop, Dover. (5.) Oration, Surgical Cleanliness, Dr. C. R. Walker, Concord. (6.) Report on Surgery, Dr. E. O. Otis, Exeter. (7.) Report on Diseases of the Eye, Dr. S. M. Dinsmoor, Keene. (8.) Essay, Treatment of Phthisis, Dr. S. C. Morrill, Concord. (9.) Respiratory Irrigation in the Treatment of Empyema, Dr. E. S. Berry, Dover. (10.) Report on Obstetrics, Dr. M. D. Danforth, Manchester. (11.) Report on Gynæcology, Dr. Ezra Mitchell, Jr., Lancaster. (12.) Report on Necrology, Dr. E. E. Graves, Boscawen: (a.) Obituary notice of the late Dr. S. M. Whipple, New London; (b.) Obituary notice of the late Dr. N. Wight, Gilmanton; (c.) Obituary notice of the late Dr. E. O. Fowler, Danvers, Mass.; (d.) Obituary notice of the late Dr. J. W. Merrill, Jr., Concord. (13) Voluntary Papers. The annual dinner will be served Tuesday, at the Eagle Hotel, at 1.30 P. M. *Wednesday*, June 18, 1884. The Society will meet at eight o'clock, A. M., and any papers or discussions laid over from the programme of Tuesday will be in order. The discussions will be reported by a stenographer for the Transactions. (1.) Report of Delegates to Dartmouth Medical College. (2.) Reports of Delegates to other Societies. (3.) Reports of District Societies, by their Secretaries. (4.) Election of Officers at nine o'clock. (5.) Treasurer's and Auditor's Reports. (6.) Miscellaneous Business. (7.) Reports of Cases in General Practice.

Reception by the Faculty of the Harvard Medical School to the Members of the Massachusetts Medical Society. — Those members of the Massachusetts Medical Society who desire to attend the reception of the Faculty of the Medical School on Tuesday, June 10th, at five P. M., will be able to obtain tickets of the Treasurer at the Institute of Technology on that day.

Suffolk District Medical Society, Summer Practice. — All members of the Suffolk District Medical Society may send to Dr. Edwin H. Brigham, Medical Library, 19 Boylston Place, the days and hours on which during the months of June, July, August, and September they will be in the city to receive patients, with their addresses. After this information is collected and available a notice to the public will be given through the *Advertiser* and *Transcript*..

Dr. E. W. Wigglesworth,
Dr. F. I. Knight,
for Executive Committee.

Boston Medical Library Association,
No. 19 Boylston Place.

Appointments. — The Board of Overseers of Harvard College, at a special meeting held May 28th, voted to concur with the President and Fellows in the following appointments: —

Robert Thaxter Edes, Jackson Professor of Clinical Medicine.

Edward Newton Whittier, M. D., Assistant Professor of Clinical Medicine.

Frank Winthrop Draper, M. D., Assistant Professor of Legal Medicine.

Dudley Allen Sargent, M. D., Assistant Professor of Physical Training and Director of the Hemenway Gymnasium (reappointment).

Correction. — In the report of the meeting of the Boston Society for Medical Improvement, on May 12th, read W. F. Temple.

Original Articles.

SEROUS EFFUSIONS IN THE TYMPANUM.[1]

BY J. ORNE GREEN, M. D.

In serous effusions of the tympanum two distinct factors are thought to be the cause of the exudation, inflammation of the tympanic mucous membrane, and closure of the Eustachian tube, the former by producing a thin, serous secretion such as is common from any inflamed mucous surface, the latter by a more complicated process of suction which causes an exosmosis of the serum from the capillary blood-vessels. The conducting mechanism of the tympanum being suspended and necessarily capable of pendulum-vibrations requires that the air on each side of the drum-membrane shall be of equal density, and this equilibrium is retained through the Eustachian tube, which supplies atmospheric air. When the tube becomes closed the air within the cavity undergoes the changes common to air exposed to a vascular membrane, namely, the oxygen is absorbed by the circulating blood, and although a certain quantity of carbonic acid is given off in exchange the whole volume of air is diminished, and the result of this rarefaction is the suction which produces the exosmosis of serum. The further result of this rarefaction is a gradual sinking inwards of the drum-membrane from the over-pressure of the atmosphere, by which the tension of the membrane is abnormally increased, and its capability of vibration greatly impaired. Bezold estimates that the pressure of the atmosphere on the surface of the drum-membrane is six hundred grammes or one and one third pounds avoirdupois, but, of course, only a portion of this is over-pressure, for there is always a certain amount of air left in the tympanum. As a fact, however, it is not unusual to find the drum-membrane pressed inwards so far as actually to lie against the inner tympanic wall.

These two forms of secretion arising from these two distinct causes have been given different names, that due to the inflammation of the mucous membrane being called a serous inflammation, and that due to an exosmosis being called a hydrops ex vacuo. The dividing line between the two is, however, by no means distinct, and in the majority of cases which are seen in practice it seems impossible to determine how far each factor has been concerned in the causation of the effusion. In most cases it seems to me that both are active, sometimes one and sometimes the other predominating.

The ætiology, symptoms, and course of the disease are shown very well in the following cases.[2] When the drum-membrane is translucent the yellowish color of the serum is clearly seen, and if the liquid does not completely fill the cavity the surface of the fluid is clearly seen, like two fine hairs, running from the manubrium, anteriorly and posteriorly, to the periphery, usually in slight curves. If the surface of the liquid changes on bending the head, as it often does when very limpid, or if it varies its position after inflation, the diagnosis is confirmed. Where the drum-membrane is opaque, either from previous disease or from swelling, the history of the case and auscultation during inflation enable one to make a probable diagnosis.

The cure of the disease is effected by reopening of the Eustachian tube and by resorption of the effusion as the inflammation of the mucous membrane subsides, the opening of the tube restoring the equilibrium of the air on the two sides of the drum-membrane, and the resorption of the serum freeing the conducting mechanism, and thus restoring its vibratory power.

The risks are (1) a permanent lengthening of the fibres of the membrana tympani, leaving it in such a flaccid condition that after restoration of the permeability of the tube it is of little use for the transmission of vibrations; (2) permanent retraction of the tensor tympani muscle or adhesions between the drum-membrane and tympanic wall; (3) non-absorption of the secretion and continuance for an indefinite time of the original symptoms. Permanent retraction of the drum-membrane diminishes the size of the tympanum, and even if the existing secretion is absorbed and the parts left with good conducting power a less amount of inflammation is liable, in case of a fresh attack, to produce serious results, than if the cavity was of its full size. Many of the lighter cases undoubtedly recover of themselves and perfectly, the tube opening as the acute naso-pharyngeal inflammation passes off, and the absorption going on rapidly from that moment. But in many the amount of the secretion is so great that even after the opening of the tube and the subsidence of the inflammation nature is unable to effect resorption, at least within the time necessary to save the ear from permanent deformity. Tympanic serous effusions resemble pleuritic effusions in many particulars except that the mechanical causes at work in the tympanum are more distinctly appreciable, and mechanical methods of treatment are more directly applicable.

Politzer's inflation is sufficient in many cases to fulfill both of the indications for treatment, opening the tube temporarily by its current of air, and reducing the swelling by the pressure of the air and by separation of the walls of the tube, and favoring absorption of the secretion by scattering the serum over a larger surface of mucous membrane. Appropriate treatment to the naso-pharynx is sometimes desirable, but often unnecessary. In no class of cases is the effect of inflation so distinctly visible as in those under consideration. Where Politzer's inflation is ineffectual, recourse can be had to the catheter. Under inflation in one of these methods absorption can be effected in from one to three weeks usually, and progress can be seen in the gradual lowering of the line of serum till it finally disappears. When, however, it is evident after several inflations that no progress is being made, paracentesis will give a rapid evacuation with most excellent results, and in exceptional cases its repetition may be necessary.

The cases show very clearly the immediate improvement after inflation when the serum is scattered and the subsequent diminution in hearing as it again collects, the hearing improving more and more, and relapsing less and less till absorption is complete.

The curved lines marking the surface of the serum, and which run from the centre of the drum-membrane to its periphery, forwards and backwards, are probably due to capillary attraction, as the end of the manubrium or centre of the membrane lies nearer the inner wall of the tympanum than the other portions of the membrane do, and capillary attraction of the two surfaces would hold the liquid at this point at a higher level than where the distance between the surfaces was greater. These curved lines are not infrequently wanting in those cases in which the drum-membrane is completely collapsed against the inner wall, as then the surfaces are equidistant throughout their whole extent, but the curves immediately appear after inflation, which restores to a greater or less degree the natural curvature of the membrane. In exceptional cases the line of the serum is a straight one directly across the membrane. In these cases the serum is so very limpid that capillary attraction of the opposing surfaces of membrane does not act upon it. This fluidity of the serum can generally be demonstrated by changing the position of the patient's head, when it will be found that the surface of the serum has also changed its position, and the patient reports that he could feel the movement in the ear. The more fluid the exudation the more rapidly the absorption takes place.

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[1] Read before the Boston Society for Medical Improvement, May 26, 1884.

[2] These cases are omitted for lack of space.

In regard to the operation of paracentesis tympani, the natural dread of the knife on the part of the patient leads me to try for absorption by inflation before resorting to operative interference, but if, after from two to four inflations, the serum still remains at the same level as at first, or if absorption ceases after progressing for a time, I advise the operation. I evacuate the cavity at one sitting by inflation and by the gentle use of Siegle's speculum, not, however, using the latter long enough to seriously increase the congestion. In the majority of cases the pain from the incision is so slight that it can be easily borne even by little children, partly due, I think, to a partial insensibility of the membrane, produced by the pressure of the fluid. Where, however, the drum-membrane is decidedly inflamed or where the serum has collected in the upper posterior quadrant, requiring an incision in that portion of the membrane, the pain is sometimes acute for a few minutes, but rapidly subsides. Immediately after evacuation the edges of the wound fall in contact, and usually unite in from twenty-four to forty-eight hours, but not so firmly that they cannot be separated by a probe on the next day if further accumulation renders another evacuation necessary.

A few inflations after evacuation are generally sufficient to fully restore the permeability of the Eustachian tube, but till this is accomplished the permanency of the cure cannot be depended upon.

In those cases in which there is little or no swelling of the tissues the relief from the operation is often immediate, the fullness and pressure in the ear, the subjective noises, the dizziness and the deafness ceasing within a few minutes; where there is much swelling of the tissues the relief is more gradual, as time is necessary for the subsidence of the swelling.

SOME OBSERVATIONS ON SOUTHERN CALIFORNIA AND COLORADO.

BY F. H. DAVENPORT, M. D.

I HAVE thought that a few words in regard to Southern California and Colorado, and my impressions of their value as health resorts, might be of interest to your readers. What I shall say will be merely the result of a few months' sojourn, and I recognize the imperfect character of such observations. But they have at least the merit of being disinterested, and as health was the object of my visit, climatic conditions were studied as carefully as the circumstances would permit. As the special aim for which the journey was undertaken, namely, to find a climate in which asthma would be relieved, was not attained, I shall at least hardly fall into the error of too enthusiastic admiration of the climate, a fault which we feel to be only too common with persons who have experienced great benefit in any health resort. Certainly if sunshine, warmth, equable temperature, very little wind, and no cold winds, slight rain-fall, and very little dampness are factors of a good climate we have one here. I personally know of no climate that equals it in these respects, unless it be Upper Egypt during a few months in winter, and that has little else but climate to recommend it. One cannot live there the year round, and it is at present merely the goal of a winter's excursion.

Let me speak a little more in detail as to these several points, and my remarks will have reference more particularly to Santa Barbara, as the greater part of the winter was spent there. The sunshine is a marvel and a delight. During the greater part of the year one can be almost as sure that the sun will shine as that it will rise; and week after week of the most charming Indian summer weather is the rule.

As regards the temperature, there is no cold weather. Hoar frost is occasionally seen, but delicate flowers bloom in the open air the year round. Snow is exceptionally seen for a few hours on the tops of the neighboring mountains, but it never snows in the valleys. The temperature in winter ranges on an average from 40° to 50° Fahrenheit in the morning, 55° F. to 70° F. at noon, and 50° F. to 60° F. in the evening. In summer these figures would be a little higher, but very hot days, with a temperature of 85° F. or over, are exceptional. The equability of the temperature is to my mind the most favorable element of this climate. The diurnal variation is very small, a most important factor in estimating the value of a health resort. The changes through the day are slight, and never sudden. There is no marked chill at nightfall, and if invalids should chance to be caught out at sundown it is not so serious a matter as at many invalid resorts of much wider fame. I am speaking particularly of Santa Barbara. In the neighborhood of Los Angeles, and in general back from the sea-coast among the foot-hills and mountains, there is a cold wave at night which must be trying to delicate persons. Santa Barbara is exceptionally well situated. The sea-coast line runs from northwest to southeast, and the prevailing south to southwest winds come in cool from the broad Pacific. The colder winds of the north and east are shut off by the range of mountains some twenty-five hundred feet high, which half encircle the broad belt of gently rising ground on which Santa Barbara is situated.

There is very little wind, as a rule. For instance, during the months of December and January there was every day a gentle breeze, just enough to ruffle the surface of the water, and only once sufficient to make white-caps. What little wind there is is never chilly, and though an occasional windy and dusty day occurs yet it is so much of an exception that it never need be taken into consideration in sending a patient thither.

I found, before going to California, that there was a great deal of misconception about the so-called " rainy season." The expression naturally calls up to mind a series of months when rain falls pretty constantly, interfering with out-of-door exercise, causing mud and dampness, and a generally uncomfortable state of affairs. Such is by no means the case. Rain may occur from November to May, but there is usually very little except in January, February, and March, and even then an occasional rainy day, or a shower in the night, followed by bright sunshine, is the rule. As the whole rain-fall, which averages about fifteen inches, is distributed through five or six months, the amount of unpleasant weather is very small, not enough to interfere with the comfort of the most delicate patient. There is an occasional wet season when the greater part of the rain-fall occurs in one or two months, and rivers overflow their banks, travel is interrupted, and the roads become almost impassable from mud. Such has been the winter just passed, there having been the greatest rain-fall for over twenty years. In February a great deal of rain fell, more than eighteen inches in the course of three weeks; but with the exception of annoyance from delayed mails and interrupted communication it was not serious. Invalids did not seem to suffer from it, and for two reasons: first, it was not a cold rain; and, second, when the sun shone out again the roads dried rapidly in the town and its immediate neighborhood, and wonted carriage or horseback exercise could be resumed.

Two other sources of dampness are dew and fog. There is a very moderate dew-fall, and what there is seems to be precipitated in the early morning, and at sundown and in the evening there is no marked dampness. What falls in the night is so quickly dried by the sun as to cause no inconvenience whatever. Fogs occasionally occur, but are not disagreeable. They are warm and soothing, as there is a decided absence of that raw and chilly element which makes them so undesirable on our coast.

We have here a climate which would seem to possess very few serious disadvantages, and where we should expect patients with affections which need a mild, equable, and moderately dry climate to improve. Of such affections lung troubles form by far the largest contingent, and in the majority of cases they justify the reputation of the climate. More time than has yet been devoted to the subject, larger experience, and more accurate observation are needed before we can define with precision exactly what forms of pulmonary disease are most benefited by this climate. With regard to phthisis, I should select Southern California in preference to other health resorts for cases which were not predisposed to hæmorrhage, where the consolidated portion of lung tissue showed a tendency to break down, and even in cases of cavity formation, especially if there were very free secretion. The strength of the patient is an important factor in deciding. Where the strength has become markedly reduced, and there is so much prostration that exercise is impossible, I should choose California rather than Colorado, for instance. The climate is so mild as to make an out-of-door life possible for the most delicate invalid, and only as the patient gained strength would a greater elevation and a more stimulating air be advisable.

Chronic bronchitis, especially of the dry form, where there is some emphysema, and the heart has difficulty in doing its work, is one of the diseases most likely to be helped. So, too, chronic throat affections, pharyngitis, and laryngitis, and catarrh in its various aspects. Many asthmatics find that they are better in Southern California, but generally experience more relief at points of greater elevation than Santa Barbara.

While California will always be a favorite health resort for consumptives, and increasingly so as it becomes better known, and travel becomes easier, yet I am sure that nervous debility will claim it more and more for itself. I know of no climate better fitted for the broken-down man of business, or the nervous invalid, to whom the slightest household care is a burden. There is something so seductive in the air and sunshine and warmth that one is perfectly contented to do nothing but breathe and enjoy nature. The universal testimony of those who have lived there a series of years is that ambition is forgotten, energy is lost, and one gets into such a placidly tranquil state of mind (demoralized we should call it) that nothing worries or disturbs, and life is not a problem to be solved, but a *dolce far niente* existence to be enjoyed.

Neuralgic affections are especially helped in this climate, while rheumatism would be rather a contra-indication.

The choice of a climate is in most cases a matter of intelligent experimentation, and experience shows that cases which for a time are benefited on the sea-coast yet now and then need a change inland. There is within easy access of Santa Barbara a health resort which combines most of the advantages of that place with greater elevation and consequently more bracing air. This is the Ojai Valley, which has a deservedly growing reputation. It is fifteen hundred to two thousand feet above the sea-level, cut off from winds, and possessing a very pure air.

Santa Barbara and the Ojai Valley together possess nearly all the requisites of a thoroughly good climate.

By all means advise patients to consult some local practitioner. There are many minor points which only such knowledge as comes from residence in a place will suggest, which, though small, are by no means unimportant.

I propose to say but little of Santa Barbara in other respects. A few practical hints, however, as to accommodations, cost of living, and other incidental expenses may not be out of place. One has a choice of three modes of living, — in a hotel, in a boarding-house, or keeping house. Hotel life involves the least care, but is the most expensive. Santa Barbara has two good hotels, one of which, the Arlington, is the best in Southern California. By the month the expense is from two dollars and a half to three dollars a day, and the accommodations and table are thoroughly good. I should consider the freedom from the cares of housekeeping, the pleasant social element which may be cultivated or not as the person chooses, and the independence which one could not have in a small boarding-house, as elements particularly favorable for most invalids.

There are several very good boarding-houses in Santa Barbara, where the expenses are about two thirds what they would be in the hotel. They are very small, however, being merely dwelling-houses, with at most three or four rooms for guests, and unless a party of friends could take the whole house there might be a great deal of annoyance on the part of invalids from noise, and on the part of well people from the constant sight of some poor invalid, or the hearing an incessant cough. The table at several of the boarding-houses is said to be very good.

Housekeeping, with the one exception of servants, is said to be very easy. Cottages to rent for the season are very numerous, and many of them exceedingly attractive. Good furnished cottages can be had for from thirty dollars to sixty dollars a month, unfurnished for from twenty dollars to thirty dollars. An occasional open fire at morning and night is all that is needed in the way of heating. Provisions would average about the same as in the East, meats and vegetables being cheaper, and some groceries dearer. Chinese servants are almost exclusively employed, and their wages range higher than servants' wages here.

Good saddle-horses can be bought for from fifty dollars to one hundred dollars. They can be hired by the month for twenty-five dollars, or a horse and buggy for forty dollars, and for a short stay that is decidedly the best arrangement.

For any one who contemplated staying more than six months I should by all means recommend hiring a house as, on the whole, the most satisfactory way to live. For persons who are well enough to go out without regard to the weather a modification of housekeeping may be tried by renting a house near one of the hotels or boarding-houses, and taking meals at the latter. In that way more quiet is secured than in the hotel, and the bugbear of servants is avoided.

There are good educational advantages in Santa Barbara, very agreeable society, a pleasant club, and churches of all denominations. There are a great many more physicians than can make a living, most of them obliged to live there on account of their health. Zymotic diseases are very rare, and the severe diarrhœal diseases of children are almost unknown. Children do remarkably well, as they rarely take cold, and can be out of doors at play almost every day of the year. Taking it all in all, while there are many disadvantages in an enforced residence in Southern California there are a great many compensations.

I spent a few weeks in Colorado Springs on my return, and was interested to compare the two climates, so radically different, and yet both advancing such strong claims as health resorts for consumptives. In both places I found profound distrust of the other, and in Colorado Springs it was the opinion that it was almost sure death for a consumptive to go from there to California. Several cases in point were cited, and I myself should consider it much the safer course to go from California to Colorado than the reverse. From the stimulating air of Colorado the let-down is too sudden.

Colorado does not impress a stranger as a remarkably good climate. It is very changeable, windy, and at times intensely cold or hot, and has a markedly stimulating effect on the whole nervous system. But facts speak louder than theories, and the facts are that consumptives, many of them with but fractions of lungs in working order, improve and live a comfortable life. The explanation seems to me to be the dryness and pureness of the air. Certainly if with so changeable a climate there were dampness, such good results as we find would be impossible. One result of the changeability of the climate is that part of almost every day is warm and pleasant enough for invalids to be out. The sun's rays are very powerful, and even with the thermometer at zero it is warm in the sun.

One would suppose that the effect of an altitude of over five thousand feet on the circulation, quickening and stimulating it, would be to favor hæmoptysis, but such is not the case. The hæmorrhagic cases do well, as a rule, and a primary hæmorrhage occurring in Colorado is an exception. The cases where there is consolidation without cavity formation do best, and in many instances areas of dullness diminish and clear up with astonishing rapidity. Cases farther advanced, where there is already breaking down of lung tissue, do not do as well, and when a change of climate seems advisable in such cases I should choose California rather than Colorado.

The claims of both these great sections should not be ignored. It is absurd to send all patients to one or the other. There are cases which will do better in Southern California than anywhere else, just as there are cases which need the dryness of air and elevation of Colorado. To determine which place will suit the given case requires most careful study. The temperament and habits of the patient, extent and rate of progress of the disease, ability or not to take exercise, state of the mucous membranes of the air-passages, and a great many other points, should be carefully considered. Only as that is done can the best results be expected from a change of climate.

I heard a great deal said about the climate of New Mexico and Arizona, but only passed through these territories en route for California, so cannot speak from personal experience of their value. I only know that the air seemed to us to have an exceptionally pure and bracing quality, different from any other part of our journey. It seemed to allay all irritation of the mucous membranes, and it was a delight to breathe it. I think these territories have a great future before them as health resorts. There is a table-land which stretches on the eastern side of the Rocky Mountains even down through Mexico, at a varying altitude of from four thousand to seven thousand feet, which has virtually the same climatic conditions, and I feel sure that places will be found which will unite the advantages of Colorado health resorts with a less rigorous winter climate.

RECENT PROGRESS IN OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

THE JEQUIRITY QUESTION.

THE enthusiastic announcement by De Wecker, nearly two years ago, of the merits of infusion of jequirity in the treatment of trachoma has been followed by the publication of numerous articles on the subject. Our readers will remember a paper in this journal by Dr. Standish, one of the earliest on the subject published in this country, giving a detailed account of the results of this treatment in a series of cases. The success attained was a very gratifying one in view of the generally obstinate nature of the affection and its great tendency to relapses. But it appeared there that the claim made by De Wecker of the innocuousness of the remedy as to ulceration of the cornea was not altogether justified. Still stronger instances of serious implication of the cornea from the use of the drug have been presented by others. The general verdict, however, has been that the new remedy is of much value when employed with caution and in properly selected cases. Precisely what is the range of disease in which jequirity may be safely used cannot yet be regarded as settled. It would seem at present that its application should be much more narrowly restricted than De Wecker proposed in his early communications, and that unless there be a pannus of the cornea it is more likely to be injurious than beneficial.

In a recent paper De Wecker[1] gives the conclusions drawn from a very extended experience of the method. He thinks it important that the infusion should be used when fresh, as an unpleasant odor is developed after a few days, and when old it is not so reliable in its action. A three per cent. infusion is generally employed; a five per cent. in cases of dry degenerated conjunctiva only. The infusion is applied but once, being thoroughly rubbed on the conjunctiva of the inverted lids and fornix by means of a sponge dipped in it, but with avoidance of the cornea. In most cases a single such application is sufficient to produce a violent ophthalmia, and if the trachoma is not cured a second and a third application is made at an interval of at least two or three weeks. The dangers of jequirity ophthalmia are two: the employment of strong infusions in too rapid succession, and application to a conjunctiva already discharging. With pannus of the cornea this writer asserts that an intense inflammation excited by a single application brings no danger to the cornea, but an undue increase of a beginning ophthalmia by farther use of the drug or its continuance when there is already a purulent discharge does endanger the cornea, for there is then produced not the specific jequirity ophthalmia, but an increase of the preëxisting purulent conjunctivitis. The remedy should not, therefore, be used when there are suspicions of chronic purulent ophthalmia, but only in cases in which the granulations are dry. If the cornea is intact treatment with jequirity is rather harmful than beneficial, for such cases greatly resemble chronic purulent conjunctivitis with marked papillary hypertrophy. The few cases which have been observed in which the inflammation extended by inoculation to the other eye are to be explained by the production of purulent ophthalmia in a conjunctiva unsuitable for the treatment, true jequirity ophthalmia not being so transmissible.

The efficiency of jequirity in simple and ulcerous pannus De Wecker considers established without doubt. He also claims that, according to his observations, its use is attended with no danger in parenchymatous keratitis and chronic infiltration of the cornea, which clear up with more or less certainty and to a greater extent than has ever been attained with syndectomy. He quotes one of his assistants, who had experimented on three hundred patients, that torpid central corneal ulcers, especially those due to cicatricial keratitis and torpid scrofulous pannus, with or without ulcers, may successfully be subjected to this treatment. In these diseases, however, the swelling of the conjunctiva and the amount of purulent secretion must be considered in determining whether jequirity should be used.

The experience of others with jequirity has not always been so rose-colored. Several oculists gave the results of their employment of jequirity in the journal in which the above paper appeared. From consideration of these and other publications it appears that the susceptibility of individuals to the action of the remedy is by no means uniform. The pain induced by the application is often very great; sometimes severe rigor, fever, and prostration have been caused. There have been glandular enlargements in some cases. Not only ulceration but perforation of the cornea has occurred in several instances, even when there was pannus of the upper half, at least, of the cornea, and a weaker solution than that last advised by De Wecker was used, though the treatment was not always confined to a single application. Knapp[2] reports a case of ordinary trachomatous pannus, no discharge, no corneal ulcers, in which a single brushing of a fresh three per cent. solution, macerated three hours, over the everted upper lid was followed by a most intense reaction; membranes marked, and when, three days later, they were cast off, a most violent pyorrhœa followed, which, in two days, affected the other (not inoculated) eye; extensive central perforating ulcers in both corneæ. Severe dacryocystitis has also been observed.

In acute trachoma with clear cornea jequirity has often aggravated the inflammation, sometimes has cured the granulations with the formation of dense cicatrices. In chronic trachoma with vascular and secreting conjunctiva the condition is usually made worse. In chronic trachoma with more or less cicatrized conjunctiva, without secretion and with pannus, the result from jequirity is often brilliant, at least so far as the pannus is concerned, and more rapid than by any other method of treatment. But even here, although the pannus clear up, granulations of the lids, if present, often persist, and while relapse of pannus seems to be very much less frequent than after other methods it is not unknown. Danger to the cornea, other things being equal, is inversely as the amount of pannus.

The widespread acceptation that the germ theory of disease has acquired at the present day made it natural that its aid should be invoked to explain the inflammation excited by jequirity. De Wecker early suggested that a vegetable ferment was the active agent concerned. Sattler[3] undertook an extended series of experiments on man and rabbits to determine the nature of this agent. He described a period of incubation of some three hours between the application of the infusion to the conjunctiva and the first appearance of subjective and objective symptoms, and considered the whole course of the inflammation to bear a strong resemblance to that of an infectious disease.

Attempts were made to discover some chemical substance in the infusion which would produce the inflammation, without success. There was found invariably, however, in the fluid, sometimes immediately after filtration, usually only some hours later, a definite variety of bacillus, which rapidly increased in numbers and soon began to collect at the surface and to produce spores. The film thus formed sank after some weeks, and the fluid gradually became clear. It was in accord with these changes that the activity of the infusion was found to be greater at first, but after a time to be wholly lost. The same bacillus was found in small quantity in the purulent secretion of the conjunctiva and in the membranous exudation, and the scanty presence of the bacillus here was regarded as explaining the circumstance that the secretion of jequirity ophthalmia, applied even repeatedly to the healthy conjunctiva, excited but a mild degree of conjunctivitis. The bacillus was also found in the infiltrated conjunctival and subconjunctival tissue.

Endeavors were made to obtain an infusion free from bacilli. Boiling for half an hour to an hour invariably made the infusion wholly ineffective. This procedure, however, also precipitated the albumen naturally present in considerable amount, and when the fluid was separated from the precipitate by filtration and exposed to the air only a feeble generation of the bacillus took place. Addition of bichloride of mercury to the jequirity infusion in the proportion of one to 10,000 stopped the development of bacilli; but the infusion still excited a severe ophthalmia. Here the discovery of spores floating in the fluid and capable of development when transferred to a suitable material was regarded as accounting for the ophthalmia.

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[1] Archives of Ophthalmology, xiii., 1.

[2] Loc. cit.

[3] Klinische Monatsblätter fur Augenheilk., June, 1883.

Stronger solutions of sublimate destroyed the germs. Thymol (one to 2000) did not prevent the development of spores or of inflammation.

By careful observation of precautions against the admission of germs Sattler succeeded in preserving for weeks, in a flask stopped with cotton wool, an infusion wholly free from germs. Nevertheless, when this infusion was carefully dropped upon the conjunctiva it excited a marked ophthalmia. This result Sattler readily explained by the supposition that it must have been difficult to prevent germs free in the air from reaching the conjunctiva during and after the application.

Finally, pure cultures of the bacillus were made. The cultivated bacillus placed in the conjunctival sac caused a conjunctivitis. After a single application the conjunctivitis was mild, and in twenty-four hours only slight traces of it remained. A number of applications at intervals of one or two hours excited the characteristic diphtheritic exudation in the fornix conjunctivæ, and the inflammation continued several days. Sattler considered it proven that the ophthalmia was caused by the bacillus in question. This bacillus, however, was not originally in the jequirity pea, but one whose germs were very generally present in the air. Under ordinary circumstances innocuous, when transplanted to a suitable soil (jequirity infusion) it developed a pronounced malignancy. He admitted that a bacillus of similar appearance and like behavior on cultivation was to be found in infusion of ordinary peas, but claimed that the conjunctivitis caused by pea infusion containing the bacillus was very mild.

Two years earlier Sattler [1] had described a micrococcus in the granules of trachoma, which he believed to be the cause of the disease. Now, in view of the curative action of jequirity in trachoma, he considered that, just as the new bacillus in jequirity infusion prevents the development of all other germs that may be present there, so in the trachomatous conjunctiva it modifies the condition of the tissues in such a manner as to deprive the micrococcus which has produced the trachoma of its means of existence.

Sattler's position did not remain long uncontroverted. Hippel [2] came to very different conclusions. He also experimented on man and rabbits. He denies the analogy with infections, asserting that there is no period of incubation, and that if the disease were infectious it should be easily capable of propagation by the secretions. His attempts to prevent the development of the bacillus by solutions of sublimate, even as strong as one to 5000, were unsuccessful. Yet he points out that he was able to produce in the rabbit by solution of sublimate alone (one to 6000) a violent conjunctivitis, with diphtheritic infiltration, necrosis of conjunctiva, and destruction of the eye. Regarding the possibility that sublimate might, by chemical action, not by its antiseptic properties, prevent the effect of jequirity, he used one half to two per cent. carbolic acid, one third to one sixth per cent. salicylic acid, and four per cent. boracic acid solutions. With all he was able to preserve the infusions for months free from bacilli, and although there were particles in the fluids which might have passed for spores, careful attempts at cultivation of these wholly failed. Yet the infusions, even when three or four months old, excited the same violent ophthalmia as did fresh watery preparations swarming with bacilli. Hippel found in infusions both of hay and peas a bacillus strongly resembling that of jequirity, and was able by repeated applications of these to produce in rabbits severe conjunctivitis, with adherent gray exudation in the fold of transmission, and secondary affection of the cornea. Farther, an oily substance with strong odor of jequirity was prepared by Gähtgens by treatment with ether. This, used in the form of a neutral emulsion, caused in two rabbits a thoroughly characteristic ophthalmia, with the single difference that the inflammation developed more slowly. The experiments were too few, however, to determine if this really contained the active principle of the drug.

Still more recently Neisser,[3] in Breslau, Klein,[4] in London, and Salomonsen,[5] in Copenhagen, have published the results of experiments undertaken to determine the influence of Sattler's bacillus in causing the jequirity ophthalmia. Neisser and Salomonsen agree that there is a so-called period of incubation, but without giving it the significance Sattler attached to it. All confirm the observation of Sattler that a sterile infusion possesses full virulency, and concur in the statement that the bacillus is not the active agent.

Neisser and Salomonsen even assert that, instead of the bacillus causing the inflammation, it is this which after a time destroys the potency of the jequirity, while, on the other hand, the activity of the infusion is preserved so long as it is kept free from germs. All were unable to find the bacillus in the secretions, or in cultures made by inoculating suitable soils with the pus and membranes. Boiling, or, according to Neisser, even long standing at a temperature of 38° C. to 39° C., destroyed the efficacy of the drug. Finally, Klein, having sterilized infusions by boiling, inoculated them with bacilli and spores from another preparation, and when after twenty-four hours they were swarming with bacilli found their application to the conjunctiva entirely ineffective.

— The following elephantine dose was recently administered by the attendant veterinary to one of Barnum's secular elephants, "Allah," which was attacked with enteritis while in Cincinnati: Lard, eight pounds; linseed oil, one gallon; tincture of opium, one pint; spirits of nitrous ether, one pint; syrup, one quart. The lard and oil were first mixed, then the other ingredients added. The trunk was raised above the head and the mixture poured down the throat through a large metal tube. His elephancy recovered.

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[1] See this Journal, vol. cvi., p. 517.

[2] Archiv für Ophthalmologie, xxix., 4.

[3] Centralblatt für pract. Augenheilkunde, February, 1884.

[4] Centralblatt für die med. Wissenschaften, No. 8, 1884.

[5] Centralblatt für pract. Augenheilkunde, March, 1884.

Reports of Societies.

THE ANNUAL MEETING OF THE PENNSYLVANIA STATE MEDICAL SOCIETY, MAY 14, 15, AND 16, 1884.[1]

THIRD DAY'S PROCEEDINGS.

Professor Leidy, President of the Anatomical Board of the State (appointed under the law recently adopted to protect dissection by the distribution of cadavers from various public institutions throughout the State to the colleges), addressed the Society, and requested the coöperation of the medical profession of Pennsylvania in seeing the law faithfully and fairly executed.

Dr. N. S. Little read the address in Ophthalmology, in which he discussed the value of pupillary symptoms in general disease, based upon the records of 1000 cases.

Dr. Edward Jackson, of Chester County, in a brief communication called attention to the danger of Poisoning by Mydriatics, and referred to a number of fatal cases.

A FORM OF EPITHELIAL MYCOSIS FROM A CLINICAL STAND-POINT

was considered in a paper by **Dr. Albert G. Heyl**, in which he discussed the relations of micro-organisms to certain diseased states, and directed especial attention to forms of bacterial infection observed in the eye, not always limited to the conjunctival epithelium, but seen in other localities. This affection is almost always fatal.

AN ELECTRIC LARYNGOSCOPE

was shown by **Dr. Carl Seiler**, which consisted in a small arc-lamp fixed in front of the mirror on the forehead of the observer. It was operated by a storage battery.

Dr. J. Solis Cohen exhibited Trouvé's polyscope for examining the larynx, and for rhinoscopy.

In a communication entitled Does Chronic Discharge from the Ear make Life Insurance Hazardous? **Dr. Charles L. Turnbull** answered the query in the affirmative, after considering the reports of a number of cases.

Dr. Peter D. Keyser in a conclusion of the paper read at a former meeting, on Some Ophthalmological Observations during Ten Years' Service in Wills' Eye Hospital, gave a number of clinical histories of cases of affections of the choroid, retina, optic nerve, recti muscles, sclerotis, vitreous, etc., with some anomalies of refraction.

THE ADDRESS IN SURGERY

was delivered by **Dr. John B. Roberts**, of Philadelphia, who exposed some "surgical delusions" with regard to the safety of chloroform anæsthesia; the value of styptics, dangers of trephining the skull, necessary fatality of heart wounds, lateral symmetry of normal limbs in the same individual, and one or two other points of interest.

Dr. E. T. Bruen read a paper upon the

OPERATIVE TREATMENT OF PURULENT PLEURAL EFFUSIONS,

written in conjunction with Dr. J. Wm. White, in which he detailed the indications for the operation; gave a résumé of thirteen cases in which it had been performed, with the report of an original case in which a section of three ribs was removed with good results.

Dr. C. B. Nancrede, in a paper on

THE BICHLORIDE OF MERCURY AS A SURGICAL DRESSING,

spoke enthusiastically in its praise, and reported cases of amputation of breast and other major operations which healed without a drop of pus.

PUBLICATION OF PAPERS AND ABSTRACTS.

Upon reassembling in the afternoon the report of the Committee upon Publication of papers and abstracts was presented as follows: —

"All the papers read or appointed to be read before this Society become thereby the exclusive property of the Society, and the author has no right to publish or cause to be published the paper or any part of the same without the consent of this Society. The Committee on Publication shall not be at liberty to publish any paper that has been published in violation of the above requirements.

"*Resolved*, That the Medical Society of the State of Pennsylvania look with great disfavor upon the making use of this organization as an advertising medium, and hold such practice as contemptible as a flagrant violation of the spirit of the Code of Medical Ethics."

This was adopted with the amendment that the Society reserved the right to furnish abstracts or to permit them to be furnished for publication.

Dr. De Forrest Willard read an excellent paper upon

NON-NECESSITY OF TARSOTOMY IN TALIPES OF CHILDREN,

and presented cases showing the value of manipulation and stretching with proper apparatus. He exhibited a form of apparatus in which a shoe on the affected foot was attached to a belt around the pelvis by a vertical, lateral steel rod, jointed opposite the knee and thigh, in connection with which was a long spiral spring, which by a constant action everted the toes. Cases were shown and photographs passed around to prove that tarsotomy is not needed in children even when the deformity is great.

Dr. A. Sydney Roberts exhibited several cases illustrating the application of a new form of splint to the treatment of Chronic Articular Osteitis of the Knee-Joint, and **Dr. W. S. Janney** exhibited a case of deflection of the trachea, in which the presence of a large tumor of the neck had required the performance of tracheotomy.

REPORTS, RESOLVES, AND ANNOUNCEMENTS.

A favorable report on the plan submitted during the first day to found a society to organize a State Board of Health, and to help educate the community in medical matters and the principles of health was adopted without debate.

Resolutions paying tributes to the memory of the late Professor Gross, and proposing the erection of a monument to him in Fairmount Park, were unanimously approved.

The time for the next meeting, at Scranton, was changed from May 2, 1885, to the last Wednesday in May, on account of the proximity of the former date to the time of the meeting of the American Medical Association in New Orleans.

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[1] Continued from page 535.

The announcements for the regular addresses in next year's session were made as follows: In surgery, Dr. E. A. Wood, of Pittsburg; in obstetrics, Dr. C. A. Rahter, of Harrisburg; in hygiene, Dr. J. G. Richardson, of Philadelphia; in mental diseases, Dr. S. S. Schultz, of Danville; in otology, Dr. C. S. Turnbull, of Philadelphia.

Just previous to the adjournment *sine die* the new President, **DR. E. J. ALLEN**, was introduced by the ex-president, who made some valedictory remarks, and welcomed his successor, to which Dr. Allen responded in a few words, thanking the Society for the honor conferred. The Association then adjourned.

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PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

MAY 26, 1884. The President, **DR. CHARLES D. HOMANS**, in the chair.

SPECIMEN ILLUSTRATING PROGRESSIVE MOVEMENT OF DERMOID LINING OF EXTERNAL AUDITORY CANAL.

DR. F. H. HOOPER showed a specimen which had been removed from the ear, and which came away sticking to a ceruminal plug. The specimen represented the dermoid coat of the membrana tympani and of a portion of the external auditory canal. When first syringed out it was rolled up into a compact mass, but on being placed in water it unravelled to its present length, which is four inches and a half. Its width is half an inch. The specimen illustrated very well the progressive movement from within outward of the dermoid lining of the external auditory canal and of the outer coat of the membrana tympani. This movement has long been recognized, and even the direction with which it takes place has been demonstrated by Dr. C. J. Blake's ingenious observations on the subject. In this instance the epidermis in its outward movement, meeting with the resisting plug of cerumen, gradually folded up on itself (like the sides of an accordion when the instrument is closed); which explains how a mass of this length could be accommodated in the small portion of the meatus between the ceruminal plug and the drum-membrane.

DR. J. ORNE GREEN said the specimen shown was an unusually large and perfect one. In regard to the mode of formation of these collections it would be interesting to know whether the roll lay across or lengthwise of the meatus, and he was not aware that this fact had been as yet noted; if the explanation given was the correct one, we should expect it to lie across. For himself he was unable to accept the undoubted outward growth of the dermoid layer of the drum-membrane as explanatory of all or even of the majority of these epidermal collections in the meatus; for such were often found on a circumscribed portion of the walls of the passage only, even in the extreme outer portions, all other parts of the walls and of the drum-membrane being healthy. He was rather inclined to refer them to what has been called "desquamative inflammation," which leads to large collections of epidermis, sometimes in the tympanum proper, sometimes in the mastoid cells, and not infrequently in other parts of the body, as the vagina. It might be that further investigation would show that collections like the one under discussion, consisting of a distinct roll of epidermis, were influenced to take the form of a roll by the dermoid movement, but even in these cases it seemed to him we must assume a pathological process to account for the enormous epithelial development.

DR. HOOPER, in answer to a question by Dr. Minot, said that the patient complained of deafness. Both ears were full of cerumen, and this compact mass was syringed out. The drum was much injected, yet there had been no history of inflammation. Hearing is now perfect.

LINKS OF ARTICULATED CATHETER REMOVED FROM THE BLADDER.

DR. J. COLLINS WARREN showed several links of an articulated metallic catheter, which had broken off in the bladder when passed by the patient, an accident which has happened several times. They had been retained some six months, and he used the lithotrite, expecting to break up incrustations and separate by evacuation. At the first introduction several pieces of catheter were caught and brought away. Others were washed out, and on using the lithotrite again it became locked, and would not easily open. By means of incising the meatus, a link which formed a barb with the jaws of the instrument was withdrawn. There proved to be little or no incrustation.

DR. R. H. FITZ read a paper on

THE IMPORTANCE OF PERSISTENT OMPHALO-MESENTERIC REMAINS AS A CAUSE OF INTESTINAL OBSTRUCTION.

The report of the discussion on this paper is delayed by request of Dr. Fitz.

DR. J. ORNE GREEN read a paper on

SEROUS EFFUSIONS IN THE TYMPANUM.[1]

Dr. Green said in answer to Dr. C. J. Blake that he thought paratencesis was indicated in a case of effusion without congestion, provided it were not absorbed by inflation.

DR. C. J. BLAKE said that among the causes for hydrops tympani were closure of the Eustachian tube, which commonly includes some congestion; the presence of nasal polypi, when the condition can be removed by the removal of the polypus; and reflexes affecting the vaso-motor nerves of the part. He mentioned a case of exposure to cold during a drive, which was followed in two hours by great pain, with swelling and bulging of the upper part of the tympanum, which was transparent with effusion. although there was no liquid in the middle ear. The condition, if not relieved, would grow worse. Inflation was impossible, and paracentesis caused the collapse of the bulged membrane with a sharp hiss of escaping air. An hour later there was a free serous discharge. He asked the reader if he is ever obliged in these cases to use the Eustachian bougie.

DR. GREEN said that he thinks either Politzer's inflation or the catheter can commonly be used in this condition. He would not, however, hesitate to use the bougie if they failed, and he does use it in other forms.

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[1] See page 553 of this number of the JOURNAL.

Dr. S. W. Langmaid expressed his opinion that most people are unable to have the nostrils long occluded without risk of effusion in the ear, and that the risk is increased if there is at the same time a pharyngeal stenosis, from whatever cause.

Dr. Green said that he had not intended to go into anything but the common forms, and he wished to dwell particularly on the diagnosis and treatment.

Dr. G. K. Sabine asked if there is any value in the common practice of inflating the ear by blowing against the fingers.

Dr. Green thought it would only be possible in simple cases. It is partial, and it may do harm by causing congestion of the whole head, while from the frequency with which the patient is tempted to use it there is danger of stretching the drum.

PERCEPTION OF MUSICAL NOTES IN ANIMALS.

Dr. C. J. Blake showed a whistle invented by Francis Dalton in which the pitch is regulated by a screw. By the use of this it is found that small dogs appreciate a higher pitch than large ones. Experiments are now in process on cats.

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ESSEX NORTH DISTRICT MEDICAL SOCIETY.

H. F. ADAMS, M. D., CORRESPONDING SECRETARY, REPORTER.

The regular annual meeting of the Essex North District Medical Society was held at the Eagle House, Haverhill, March 7, 1884, Dr. J. A. Douglass, of Amesbury, President, in the chair.

The annual address was by Dr. E. P. Hurd, of Newburyport, Vice-President of the Society; subject

CEREBRAL LOCALIZATIONS.

The following is a synopsis: The essayist divided his topic into four heads: First, the general physiology of the cerebrum; second, regional physiology; third, psychical evolution and cortical centres; fourth, the explanation.

Under the first head, he said, there was general agreement that the hemispheres were the seat of the intellectual operations and of volition, as proved by mutilations in animals (removal of parts or the whole of the cerebrum) and the effects of disease in man (atrophy, inflammation, œdema, etc.). Grave lesions of the encephalon, whether morbid or experimental, are always attended with enfeeblement or disappearance of the psychical faculties, and it is a fact, too, that motility also suffers in a marked degree.

When we come to the matter of regional physiology, we find ourselves in the midst of problems that still await complete solution. The first and capital fact in cerebral localizations was the discovery by Broca in 1861 of the speech centre in the posterior part of the third frontal convolution of the left hemisphere.[1] Thousands of observations have confirmed Broca's thesis, and lesions of Broca's convolution extending into the pre-frontal lobes are found to be attended not only with aphasia but with amnesia, — loss of the memory of ideas, as well as of words and verbal expression. Other considerations, such as the effect of destruction of these inexcitable (pre-frontal) lobes, go to show that their main function is psychical. Hughlings Jackson thinks that they are *par excellence* the motor substrata, but if any motor influence emanates from them (and anatomically these lobes certainly seem to be connected through the corona radiata with the motor portion of the cerebro-spinal axis), such motor influence must be of an inhibitory character, that is, restraining rather than exciting. We have certainly instances of motor neurility which is inhibitory in the cardiac branches of the par vagum, the depressor nerve of Cyon, etc. As to the functions of the parietal lobes, Ferrier's carefully conducted experiments seem to prove that they are motor rather than psychical; this is especially true of certain areas of gray matter bounding the fissure of Rolando, electrical stimulation of which produces definite motor results, destruction of these areas being followed by local paralyses, as of limbs. The phenomenon of descending degeneration of the medullary strands between Ferrier's cortical centres and the basal ganglia, in the case of lesions of the so-called motor regions, and the coincidence of this degeneration with similar degradation of the motor columns of the spinal cord, as noted by Charcot and Flechsig, seems to point to direct anatomical connection between the anterior and crossed pyramidal columns of the spinal cord and those cortical regions. Franck and Pitres have obtained similar results by section of the fibres proceeding from the gray matter bounding the fissure of Rolando, secondary degenerations occurring precisely similar to those which are seen in motor nerves after their separation from their trophic centres in the spinal cord, and they reason from this that "the medullary fibres between the cortical centres and the lower motor nuclei bear the same relation to the nerve cells of the cortex as the spinal motor nerves to the multipolar cells of the anterior cornua."

Experimenters working in the same direction with Ferrier (Carville and Duret, Luciani and Tambourini, notably Yeo) have added confirmation to Ferrier's views, and hundreds of clinical and post-mortem observations have demonstrated the concomitance of general or limited paralyses with lesions more or less circumscribed of those portions of the parietal lobes now known as Ferrier's centres.

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[1] The whole subject of aphasia is a complex one, nor have we yet the data for its complete exposition from the stand-point of definite anatomical bases.

Broca's convolution is regarded as the seat of language expression, that is, the centre from which volitional incitations to movements of articulation pass downwards. At the same time there are several well-attested cases on record which go to show that lesions in the neighborhood of (that is, posteriorly and below) Broca's centre are attended with aphasia, often with verbal surdity and blindness. I call particular attention to the Contribution to the Study of Aphasia by Dr. Balzer in the Gazette Medicale de Paris, March 1 and 15, 1884. In one of Dr. Balzer's cases there was marked motor aphasia and agraphia with verbal blindness and deafness and general intellectual obtusion. The autopsy disclosed (on the left side) softening of the first temporo-sphenoidal convolution, the lower portion of the inferior parietal lobule, and the *pli courbe;* that is, the centres of sight and hearing were involved. Here, although Broca's speech centre was not directly affected, it is easy to understand that an extensive lesion in the vicinity might have had a considerable inhibiting influence on that centre, especially when it is taken into consideration that an important branch of the Sylvian artery was found calcified. Moreover, the auditory and visual centres on the left side were destroyed. The language function is so associated with ideation generally, and normal ideation is so dependent on integrity of the perceptive centres, that serious lesion of the latter must impair (if it does not render utterly impossible) all reminiscential reproduction. In other words, verbal expression must be lacking when the memory of words is gone.

Balzer's second case was one of pathological "muteness." The left temporo-sphenoidal lobe was "a mass of pus." There was considerable congestion of the inferior portions of the left frontal lobe, and slight adhesions of the membranes. The observation is imperfectly reported, and on the whole is hardly to be regarded as evidence against Broca's doctrine

His third observation is carefully reported. It is a case of tuberculous meningitis on the left side, and the general symptoms, coupled with the post-mortem revelations, remarkably sustain the doctrines of localization as propounded by Ferrier. There was right hemiplegia and lesion on both sides of the fissure of Rolando, motor aphasia, verbal blindness and deafness, agraphia with meningo-encephalitis of Broca's convolution, the temporo-sphenoidal lobe, and the angular gyrus. Tuberculous meningitis seldom lends itself to the elucidation of cerebral localizations. In this instance the data were sufficient to sanction quite positive conclusions.

Among the important contributions which have appeared in American medical journals, throwing light on certain aspects of the subject, were signaled the papers by Seguin and Dalton in the *Medical Record* (1881). The "new phrenology" has been proved a valuable aid to diagnosis by the former, who has found Ferrier's statement of localizations to be, "not theoretical guides, but valuable life laws." The experiments of Dalton go to corroborate the position of Ferrier, that the angular gyrus is the seat of visual perception, blindness following its excision in dogs.

Allusion was made to numerous cases on record of abscesses of the hemispheres which have been diagnosticated by the local paralytic symptoms. The skull has been trephined, the abscess evacuated, and recovery has followed the operation. It is worthy of note, too, that Dr. Hughlings Jackson, reasoning from clinical and pathological observations of unilateral and localized epileptiform convulsions, formulated in advance of any experiments of Fritsch and Hitzig views of the ætiology of these convulsions, which are found to be in accordance with Ferrier's observations and those of his German predecessors. These obscure forms of epilepsy, referred by Jackson to irritative or discharging lesions of Ferrier's centres, are now known as "Jacksonian epilepsy." With regard to the various sensory centres (auditory, visual, gustatory, tactile, etc.) there is still great uncertainty; experimenters are not agreed as to the precise location of these centres in the cortex, nor as to the function of the occipital lobes.

Under his third head (psychical evolution, etc.) the essayist discussed the ancient phrenological hypothesis, which he considered unfounded and absurd. He advocated the evolutionary doctrine, which teaches — in opposition to the old view that mind is constituted by an assemblage of distinct faculties, having their seats in separate regions of the cerebral cortex — that "intelligence has neither distinct grades nor is constituted of faculties that are truly independent; its highest phenomena being the effects of a complication that has arisen by insensible steps out of the simplest elements." The only division of mind that has stood the test of the ages is the threefold division of intellect, feeling, and volition, and yet these three aspects of mind are, as Bain teaches, so dependent among themselves, although characteristic in their manifestations, that no one could exist alone, and feeling is the basic substance of mind. Intellect, moreover, is separable into only three factors: discrimination, or consciousness of difference; similarity, or consciousness of agreement; and retentiveness, or the power of memory or acquisition. The above being premised, it seems a necessary conclusion that identical parts of the brain are concerned in all the phenomena of mind.

The division of the cerebral hemispheres into lobes is artificial. There is everywhere intermingling of nerve fibres and nerve cells, and the closest blending of intercellular processes. The arrangements for diffusion of "nerve currents" are of the most perfect kind. Multiple as are the neural manifestations, there is practically, through all, the solidarity of a single unit. The essayist, in taking up the subject of cortical centres with reference to a statement of Exner's modification of Ferrier's localizations, alluded to the views of Brown-Sequard and Goltz that the sensory and motor substrata of function are scattered over wide areas. This is possible by virtue of the well-known multiplicity of fibre connections, but improbable, and it presupposes the occupancy to a greater or less extent of a whole cerebral hemisphere by any voluntary operation.

There are strong considerations which favor the theory of localizations in limited areas of the cortex. In this seeming chaos of cells and fibres there must be orderly arrangement. If the cerebral hemispheres be a representation of inner relations answering to the most stable relations of the external cosmos, the order in the inner world must correspond with the order without. The law of physiological distribution of labor must apply to the cerebrum as well as to other parts of the economy. When you move your hand in obedience to a voluntary impulse, such motor excitation comes from a definite region of the cortex. It will always under similar circumstances come from the same cortical region. The fibres of the corona radiata which carry visual impressions to the cortex must pursue a definite route. Other sense impressions must follow, as it were, a beaten track to some region of the gray matter near the surface, when they are for a time concentrated, to be afterward, it may be, widely diffused, and blended with fibres of different sensory nature, and motor fibres. That the visual, auditory, and tactile centres occupy a wide area of the cortex seems probable when we consider the part which they have in building up the fabric of our mental experiences.

These opinions are in harmony with those expressed by H. Charlton Bastian in the "Brain an Organ of Mind," and other authorities. Bastian, who charily and reservedly admits the doctrine of localizations as applied to topographically distinct foci of sensation, while admitting the essential facts of motor localizations, was the first formally to propound the theory of "Perceptive Centres in the Cortex" in the *Journal of Mental Science*, 1869; also to state the view, supported of late by Exner, "that there may be much and compound overlapping of areas, and though the area pertaining to the impressions of any particular sense in the cerebral hemispheres may be a very extended one (not to speak of the still further complication brought about by the communication established between the nerve cells of the sense area with those of others in the same hemisphere, and the opposite hemisphere), still it may well be that certain portions of the surface of the cerebral hemispheres might correspond more especially to the *maximum* amount of nerve cells and fibres pertaining to some one or other of the various senses."

This theory of the overlapping of sense centres in the cortex and the wide diffusion of their cellular and fibrous connections has received striking confirmation from Exner's studies, to which attention was called in an editorial article in the *Medical Record* for April 15, 1882. According to Exner the cortical centres are rather areas of functional concentration than sharply demarcated sensory and motor foci, and the diffusion and interblending of fibres which there occur and the overlapping of one district by another afford a plausible explanation of the different results which have been noted in lesions of these districts, also of the recovery from functional paralysis which in animals so often follows such lesions. In other words they are "vicariating areas."[1]

The cortical field of vision, according to Exner, corresponds more exactly with the region assigned to this sense by Muhr and Monk than to that assigned to it by Ferrier, namely, the angular gyrus. This perceptive centre has a relatively wide area in the upper and middle occipital lobes, extending thence into the cuneus. Here again Bastian's view is justified. According to Exner's observations the tactile fields correspond very closely with the motor fields for the same body regions, and this is in striking confirmation of the studies of Betz and Luys on the functional significance of the cells in the stratified zones. Luys believes that the submeningeal region, principally occupied with small cells, is especially connected with the phenomena of sensation, while the deeper regions, occupied by large cells (triangular cells of Luys, giant cells of Meynert), may be considered as the most important regions that give rise to motor phenomena. In studying this question Luys bases his conclusions principally on data acquired from a study of the spinal cord, which show that the regions of small cells have sensory functions (posterior cornua), while the regions of large cells (anterior cornua) are motor. Betz's special contribution to this micrographical study is that the large, so-called motor cells predominate in the neighborhood of the fissure of Rolando (Ferrier's excitable motor region).

The essayist in concluding remarked as follows: —

"On the whole the doctrine of localizations as propounded by Ferrier, with some probable modifications as above indicated, seems likely to be triumphant along the whole line.

"The question now presents itself, What is the explanation of this doctrine? What theory will best string together all these facts?

"The cerebral hemispheres, gentlemen, are, if we read comparative anatomy aright, a budding forth, an outcropping of the opto-striate bodies, the great sensori-motor ganglia; they are certain stories, as it were, added on to basal ganglia, and were called by Solly the hemispherical ganglia. The enormous augmentation of cells and fibres which compose these cortical centres bespeaks in the organism a higher and more complex system of adjustments of inner to outer actions, an extension of the correspondence in space and time, involving an increased amount of life and a longer continuance of life. Accumulating experiences in the race caused augmented development of the anatomical substratum representing those experiences, with its elaborate system of connections whereby those experiences are compared, and become combined and coördinated.

"I wish to be understood as hypothecating an immanent divine force raising matter through evolution to the sublimest organic plane, and developing out of the lowest nervous activities the highest powers of mind.

"I desire now to insist on the following points in elucidation of this difficult subject: If the cerebral hemispheres be an extension of the basal ganglia then the functions of these hemispheres cannot be essentially different from the functions of the basal ganglia. Assuming this we should expect, *a priori*, to find the same orderly arrangements for motor coördination in the cortex as we find in the lower ganglia, and as there is progressively an increase in the complexity of coördinations as we ascend the cerebro-spinal axis, so we are warranted in regarding the cerebral convolutions as the highest centres of muscular combinations, representing on a larger scale the combinations of the lower centres. Such being the case, as there are tracts in the inferior portions of the cerebro-spinal axis whose lesion causes local paralyses, so we should expect to find definite areas in the cortex whose lesion also would cause paralysis of a more or less local and limited nature. I have already shown that the facts are in harmony with this view. The gray matter in the neighborhood of the fissure of Rolando with its fibrillary prolongations in the corona radiata seems to contain the centres through which the will (I use this old metaphysical term to avoid circumlocution) acts downward on the corpus striatum, calling into play new cell combinations and the appropriate motor mechanism.

"With respect to the sensory and perceptive functions of the basal ganglia, called the sensorium by Dr. Carpenter, I would regard the cortical centres as simply the complement of those basal centres. Much confusion has been introduced into cerebral physiology by endeavoring to make an essential difference between the intelligential functions of the cerebral hemispheres and those of the sensorium, so called. The difference is only one of degree, not of kind. Luys is undoubtedly right in making of the optic thalamus a perceptive centre, in opposition to Dr. Carpenter, who considers it the centre of brute sensation. Every sensorial impression is to some extent *perceived* in the thalamus, although the elements constituting the complete perception of an object are largely supplied by the cortex. I would, then, style, after Luys, the sensory portion of the cortex the centres of augmented and completed perception. Such being the case I see no difficulty in understanding how the seats of common sensation and of special sense in the thalamus should have their representatives in the hemispheres. It may well be, moreover, that these cortical centres by education and development do finally in the highest creatures acquire such predominance that without their coöperation every sense impression shall be confused, unreal, or even *nil*. Hence the blindness that follows destructive lesion of the angular gyrus, and which in the lower animals is said gradually to be recovered from, probably by, the lower sight centre, which Luys locates in the thalamus, gradually taking on increased function. These are abstruse subjects, a provisional solution of which must for the present be sought in deductions from the general doctrine of evolution, which is shedding so much light on all difficult physiological problems."

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[1] This view (of overlapping and diffusion) does not seem to me to be essentially different from that advocated by Dr. Hughlings Jackson in his recent Croonian Lectures. "It may be said that one convolution will represent only the movements of the arm, another only those of speech, another only those of the leg, and so on. The facts show that this is not the plan of structure of the nervous system. Thus, to take an illustration, the external parts, x, y, and z, are each represented by units of the corpus striatum. But the plan of representation is not that some units contain x largely only, as x^3, others y largely only, as y^3, but that each unit contains x, y, and z; some, let us say, as x^3, y^2, z; others as x^2, y^3, z, etc. When we come to the still higher evolution of the cerebrum we can easily understand that if the same plan be carried out a square inch of convolution may be wanting without palsy of the face, arm, and leg, as x, y, and z are represented in other convolutions, and we can also easily understand that discharge of a square inch of convolution must put in excessive movement the whole region, for it contains processes representing x, y, and z with gray matter in exact proportion to the degree of complexity." This doctrine of compensation, Dr. Jackson thinks, applies to representation of movements in the mid cerebral region of dogs. Destruction of a part of the dog's mid cortex entails no permanent paralysis, but discharge of any part of it produces convulsion. — *London Lancet*, April 26, 1884, page 743.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

NOVEMBER 10, 1883.

THE MEDICAL TREATMENT OF UTERINE FIBROIDS.

Paper by **Dr. Blake.**

Dr. Chadwick gave corroborative testimony as to the danger of removal of mural fibroids when of any size, — that of a billiard ball, or larger. He had removed a number, but considered them a very dangerous class of cases. One, which he had occasion to remember, was that of a very stout woman, with a sessile fibroid, not projecting into the uterine cavity, extremely hard, enucleable only as far as the fingers would reach, namely, only two thirds of its whole connection. The fingers and scissors could not be used together for want of room, and finally the operation had to be abandoned. This was at one P. M. At four P. M. a tremendous chill occurred, and an intra-uterine antiseptic douche was administered. The pulse and temperature nevertheless jumped up, more chills occurred, and twenty-four hours after the operation the woman died from septicæmia. The autopsy showed a tumor two thirds the size of the fist, its surface gangrenous. The liver looked like bread, it was so full of gas.

Two or three weeks afterwards Dr. Chadwick operated upon another case, and succeeded by digging and pulling and cutting in cleaning out all the growth in the course of an hour. Septic poisoning took place, and was arrested only by the intra-uterine douche of permanganate of potash. The disease was fought for two or three weeks, and the patient finally pulled through. Dr. Chadwick said he would not again undertake a similar case without the alternative of performing abdominal section in case the tumor could not be extracted. Dr. Chadwick referred to cases in other hands with similar results. He had found it difficult to dilate the cervix sufficiently for the operation, even with the aid of two or three successive batches of tents.

Dr. Sinclair said he had never had a death following the operation of removal of a fibroid tumor; but might have had, and had seen death ensue from the operation in other hands, and considered it especially dangerous if any part of the tumor was left behind. Such a growth was infinitely more difficult to remove than an ovarian tumor.

Dr. Curtis spoke of the advantage in many cases of fibroids of tiding the patient along and waiting for the assistance of nature, even if there was serious hæmorrhage to call for interference. He recalled several cases of women who with such growths had been so treated, and were now able to walk or ride and enjoy comparatively decent health.

Dr. Lyman quite agreed with what had been said. He suggested the propriety in such cases of going back to the original proposition of Atlee, — the first man who ventured, forty years ago, to incise the fibroids, — a long free, but not deep, incision of the capsule, after which there was a much greater chance of expulsion by the use of ergot. The chief danger to be feared in this was sphacelus of the tumor and resulting septicæmia. Dr. Lyman had seen the operation of enucleation fail in the best of hands, and spoke of the difficulty of access to the tumor, the finger filling the uterine neck, after dilatation, more or less completely. Two methods only seemed to offer any really satisfactory results, namely, ligation of the tubo-ovarian artery on either side, as proposed by Mr. Thornton, thus diminishing the circulation in the organ; and, secondly, the removal of the whole uterus, although this operation we know had been attended with immense mortality in Continental hands, but Mr. Keith's results were encouraging. Fibroids easily enucleable were extremely rare. The two chief objections to the operation were its length, and the amount of laceration of tissue exposing the patient to the almost certain supervention of septicæmia.

Dr. Chadwick observed that there was one method of cure which had not been referred to, — pregnancy. In every case of a dozen or fifteen of this sort in his own experience the result of the supervention of pregnancy had been the complete disappearance of the tumor during involution and after parturition, and in all these cases but two the labors had been easy and natural.

Dr. Lyman said he was inclined to take the opposite view from that of Dr. Chadwick, and thought it very fortunate that women with such tumors did not generally get pregnant. If a uterine fibroid diminishes during involution so may it take on an increased size during evolution. Dr. Lyman quoted Dr. Thomas, who thought it a great misfortune for a woman with uterine fibroid to become pregnant. Dr. Lyman inquired of Dr. Chadwick the grounds for his position.

Dr. Chadwick replied [to Dr. Lyman] that his statement was based on his own experience, which he knew to be at variance with the commonly accepted views.

Dr. Lyman remarked that the woman was very likely to miscarry, in which case the liability to unfortunate complications must be greatly increased by the presence of a fibroid in the organ.

Dr. Sinclair said he regarded Dr. Chadwick's view as correct, but had considered those cases which had disappeared during involution as sub-peritoneal.

Dr. Richardson said he would agree with Dr. Chadwick in part, in part differ. He had seen several cases of intra-mural fibroid which had disappeared as the result of pregnancy, although they were liable to occasion miscarriage, and had apparently in some cases been the cause of bad post-partum hæmorrhages. If the tumors have their origin near the placental site an irregular contraction of the uterus is liable, including the placental region, interfering with the proper closure of the uterine sinuses. In four of six or seven cases post-partum hæmorrhage had occurred. In three of the four it had been necessary to remove the placenta by hand to aid in arrest of the hæmorrhage, and in all these the tumor was under or near the placenta.

Dr. Forster, on the question of the influence of pregnancy in causing the removal of fibroids, remarked that in a case of an extra-mural tumor under his care, which Dr. Baker had seen in consultation, the latter had advised that a contemplated marriage be consummated, as a pregnancy following might cause the disappearance of the tumor.

Dr. Chadwick, in reply to questions, could not state whether the tumors in the cases referred to by him were intra-mural or sub-peritoneal, a point which could not be determined after the pregnancy had advanced two or three months, as was the case when he first saw his patients.

DR. SINCLAIR questioned whether there were not more or less of a pedicle in Dr. Chadwick's cases.

DR. CHADWICK said that there was no pedicle in his cases.

DR. RICHARDSON stated that he had seen two cases with pedicles, in both which pregnancy resulted disastrously.

DR. ELLIOT observed that the sense of the meeting seemed to be that mural fibroids should not be removed on account of the danger of septicæmia. He had seen several removed successfully. The cases cited showed how dangerous such may be. They should make us more careful about antiseptic precautions, but should not deter one from performing the operation. He thought that a more antiseptic operation would give better results than the cases here reported. The largest tumor of the kind he had seen was removed by Schroeder, and it was so large that it was difficult to pull it through the pelvis; the cervix was not only dilated, but slit on either side; the operation was done under full antiseptic precautions. Dr. Elliot himself used plugs to dilate the cervix, and had found no difficulty in accomplishing this, which, if not sufficient, could be augmented by slitting the cervix. Moreover, the dilatation improved under the manipulation.

PUERPERAL CONVULSIONS.

Paper by **DR. BLAKE**.

DR. BLAKE referred to the cases of Dr. Staples, of Dubuque, all cured by the subcutaneous injection of veratrum viride. In his own [Blake's] cases no morphia was used.

DR. HOMANS stated his belief that patients generally get well of convulsions unless these were apoplectic or there were disease of the kidneys; seventeen cases out of twenty recovered. The majority of ordinary cases were hysterical.

DR. RICHARDSON asked Dr. Homans whether he would terminate the labor in a case of ante-partum convulsions.

DR. HOMANS referred to a case in which, convulsions occurring at the seventh month, the patient was treated with rest, ether, bromide of potassium, and went on to full term and a natural labor.

DR. RICHARDSON said he was glad to hear that Dr. Blake put his reliance on chloral rather than morphia. He had seen forty-three cases of puerperal convulsions, and the only two that died were the only ones which had been bled. There were cases undoubtedly in which bleeding was the best treatment. In Dublin this summer he had observed that the practice was to do nothing, — let the woman alone, — but it had seemed to Dr. Richardson that by this course patients there had been lost which might otherwise have been saved. Cases that come on post partum, Dr. Richardson remarked, are of a very grave character.

DR. HOMANS said that when he first began to practice, if the woman was swollen and flushed, it was the practice to bleed.

DR. EDES quoted Dr. C. C. P. Clark as saying that every case of convulsions should get well if treated by the subcutaneous injection of morphia to the amount of three grains at once. He wished to know whether the Obstetrical Society had any experience with such large doses.

DR. LYMAN said that it was the practice in New York to administer morphia, but he had never heard of the large dose in that connection.

DR. RICHARDSON stated that he had used as much as two grains of morphia, but thought chloral was much better, and left the patient in a better condition. When the convulsions came on he used ether, but chloral regularly. Dr. Richardson asked if any one had seen a convulsion occur when the patient was completely etherized.

DR. C. ELLERY STEDMAN said he had seen one case occur, and he believed the etherization was complete.

DR. BLAKE objected to the use of morphia in these cases on the ground that it was liable to impair the activity of the kidneys.

DR. R. B. DIXON exhibited two instruments of his own invention, a trephine and a blunt hook and knife combined.

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PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY EVENING, May 23, 1884. The President, **DR. TYSON**, in the chair.

A CASE OF PAGET'S DISEASE.

Presented by **DR. W. G. MACCONNELL** for **DR. JOS. HEARN**.

This breast was removed at the Jefferson College clinic by Dr. Hearn, Saturday, May 17, 1884. History: Mrs. Baker, aged thirty-nine years, has been married for nineteen years, and has borne four children, and has had one miscarriage. No other member of her family has ever labored under any form of tumor. Four years ago, following a pustular eruption which she observed on her abdomen, a lump was noticed in the left breast, which was the seat of a lancinating pain of an intermittent character. Previous to the discovery of the lump an eruption of an eczematous nature was noticed; it had existed some seven or eight months before she noticed the lump. The nipple, at the time of the operation, was thoroughly retracted, indeed, had melted away. There was no axillary involvement, although there was noticed a gland at the upper and inner quadrant of the breast. On section of the tumor after its removal several small nodules of a hard, fibrous consistence were encountered. Microscopically I found them to be the seats of carcinoma of a scirrhous nature. The gland revealed a similar condition.

COLLOID CARCINOMA.

This tumor was removed by **DR. HEARN** at the Jefferson Medical College Hospital, about one week previous to the removal of the other breast. History: Miss Catharine Brooks, aged sixty-seven; general health good; family history that of phthisis. No other member of her family had ever labored under any form of tumor. About three years ago she felt a lancinating pain in the right breast. On examination she found a lump, which was hard, roundish, and about the size of an English walnut. It continuously tended to increase, when, at the end of eighteen months, it had attained the size of an egg. She consulted a quack, who applied a salve, which she states caused some bleeding. Two months before her admission to the hospital she states that the breast began to "gather," and one week previous to the operation "it broke, and a dark greenish fluid escaped," which was afterwards followed by the extrusion of a mass of greenish-colored slough.

The growth was attached to the overlying skin, but not to the pectoral tissues beneath; the subcutaneous veins were enlarged and prominent; no glandular involvement existed. On section the tumor was found to be densely hard, and the seat of small cavities filled with a glairy, gelatinous, semi-solid fluid. Microscopic examination showed alveoli filled with epithelium that had undergone fatty degeneration, not a few of them showing the peculiar laminated appearance peculiar to colloid. The connective tissue of the stroma was in a state of active proliferation, due, probably, to the inflammation resulting from the cystic change already mentioned.

SARCOMA OF TESTICLE.

Presented by Dr. G. de Schweinitz.

This growth was removed from S. H., aged thirty-seven, married, a patient of Dr. John Ashhurst, in the surgical ward of the University Hospital. His father and mother are living, and in good health. His grandparents died in old age, having led healthy lives. Of his two brothers and two sisters all are living, and three of them have been thus far in good physical condition. One sister had a growth removed from the orbit, probably a sarcoma, which is now beginning to recur. His own health has been good. He denies any venereal disease. Two and a half years ago he first began to notice a globular swelling at the bottom of the left testicle, which gradually increased in size until eight months ago, since which time the growth has been rapid, so that at the time of operation the circumference of the testicle measured fourteen and a half inches. Pain has been insignificant until last April, since which time he has suffered with severe dragging pains. The inguinal glands on both sides were slightly enlarged. The growth occupies the body of the testis, being surrounded by the tunica albuginea and tunica vaginalis, which are intact. It is a large, somewhat irregular, moderately soft, blood-stained mass. In one end there is an area of cystic degeneration. Microscopic examination shows this tumor to be a sarcoma of the round-cell variety, the cells being moderately large, containing oval nuclei or sometimes nucleoli. In places a faint reticular net-work is demonstrable, producing a picture similar to the "lymph-gland like" round-cell sarcomas.

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PHILADELPHIA CLINICAL SOCIETY.

G. BETTON MASSEY, M. D., RECORDING SECRETARY.

Stated meeting, May 23, 1884. Dr. Henry Beates, Jr., in the chair.

Dr. Mary Willets reported a

PUERPERAL CASE WITH NUMEROUS COMPLICATIONS.

Mrs. H., aged thirty, primipara, after a normal delivery did well for twelve days. Then, after pain in her back and limbs and chilly sensations, had a rise of temperature, and was attacked with nausea and vomiting. The temperature continued high for two weeks. There was nothing to account for the supra normal temperature except a laceration of the cervix uteri and some tenderness around this point. On the twenty-fifth day after delivery the patient complained of pain in her left leg. For more than a week there was pain and swelling both above and below the knee; the pain greatly increased on pressure and attempted extension of the limb, and was in the course of the femoral vein, but careful examination failed to discover anything abnormal. On the forty-third day, the patient having recovered sufficiently to go down stairs, we were suddenly confronted with well-developed mania, at first violent, but subsequently becoming merely loquacious. This continuing two days gave place to somnolence, and five days later to convalescence.

Dr. E. E. Montgomery remarked that the case was unusual from the lateness at which the fever appeared. During his present term at the Philadelphia Hospital measures had been instituted to prevent the contact of septic matter with the parturient parts. A solution of corrosive sublimate, one to two thousand parts, was used to sponge the parts after placental delivery, and cloths saturated with the solution were kept in place by absorbent cotton, oil silk, and a tail bandage. There had been but three cases of septicæmia during the present quarter.

Dr. A. H. Smith said the local examination which the reader of the paper had very properly made solved the whole problem. Together with the symptoms it showed the case to be one of pyæmic — not septicæmic — poisoning in a woman feeble and unable to resist the absorption of pus. Septicæmia cannot arise after all open surfaces have become purulent. The examination was valuable, and he thought it would be better if more care was generally exercised in this direction.

Dr. Philip M. Schiedt read a paper on the

CLINICAL PHENOMENA FOLLOWING THE PUERPERAL STATE IN TWO CASES.

In the first case he was suddenly summoned to the bedside of a woman aged about thirty-five, whom he found comatose, with undilated pupils, head drawn to left side, and flexed on the chest, a clammy sweat on forehead, and imperceptible pulse. The heart sounds were faintly detected, and the body and extremities warm. Restoratives and artificial respiration were without avail, and the patient soon expired.

The history of the case, subsequently ascertained from the family physician, was as follows: She had been delivered of a child after a natural labor two weeks previously, which was followed by a normal convalescence unaccompanied by fever or offensiveness of the lochial discharge. Her babe was healthy, was regularly nursed by her, and she was doing so well that her physician had ceased his visits. On the morning of her death she felt unusually well, but about nine o'clock complained of some headache, vomited a little mucus; had a heavy chill; became unconscious, and was found by me in the condition described, which soon terminated in death.

The notes were presented to the Society for the purpose of obtaining the opinions of its members as to the cause of death, the writer expressing a belief in its cardiac origin.

The other case was one of

TEMPORARY BLINDNESS FOLLOWING LABOR.

After a perfectly natural labor, three hours in duration, the mother failed to see her child when presented by the nurse. It was found that she was perfectly blind and unresponsive to the candle test. She remained fully conscious and in possession of other senses. This continued three days, and was followed by gradual and complete recovery. During this time there was nothing otherwise abnormal in her condition. There was no œdema, therefore no examination of the urine was made. Previous to confinement she had been well able to attend to her duties.

Dr. L. Brewer Hall, in discussing the second case, said the most plausible explanation of such rapidly disappearing blindness was œdema giving rise to choke disk. The cases reported have not been properly examined by an ophthalmologist, an omission frequently inexcusable. Some cases do not get well, and then we find an atrophy of the optic nerve. He had seen quite a large number of hysterical cases, at times monocular, and such cases are easily diagnosticated by feints and attempts to discover that they do see while off their guard. Some one should always be called in in these cases to make an ophthalmoscopic examination.

Dr. Albert H. Smith acknowledged the want of exact information, while the uræmic origin of such cases had been assumed.

Dr. G. Belton Massey denied the necessity of assuming that cases of hysterical blindness were mere malingerers. Such patients at times may be perfectly honest in their inability to see, the real condition being one of divorce between the volitional and intellectual powers of the mind.

Dr. E. E. Montgomery read a paper on

TRACHEOTOMY IN CROUP AND DIPHTHERIA

based on an experience of twelve cases, one of which, a case of diphtheria, had recovered, and was exhibited to the Society. Five of the operations were for diphtheria, the remainder for croup. In all the operation was one of last resort, and the series teach the importance of early operation. Death occurred most frequently between the third and fourth days; one died in fifteen hours, a second in thirty-six hours, and another on the ninth day. In the successful case the canula, owing to laryngeal spasm, remained until the twenty-fourth day. In operating he gives chloroform, and avoids hæmorrhage by transfixing a fold of skin, held by himself and assistant, making an incision 1″ long, completing the dissection to the trachea by the forceps and grooved director. After opening the trachea care is observed to remove all membrane previous to insertion of canula. After-treatment consists in attention to tube, keeping several thicknesses of tarlatan wet with hot carbolized water over it. The temperature of the room is maintained at between 75° F. and 80° F., and stimulants and good food given together with quinia, tincture ferric chloride, and corrosive sublimate, the latter in frequently repeated doses. The attempt is made to dispense with the tube from the fifth to the eighth day, but it should not be removed until respiration *per vias naturales* is fully established. From these cases he draws the following conclusions: (1.) That tracheotomy is justifiable in diphtheria as well as croup. (2.) That it should be performed in croup when it is evident that drugs do not control the progress of the disease, particularly when there is depression of the lower end of the sternum during inspiration; in diphtheria with the advent of suffocative symptoms. (3.) That in the performance of the operation the knife should only be used to incise the skin and trachea, the intervening tissue being torn by director and forceps. (4.) That the subsequent use of proper drugs will promote a favorable result.

Dr. Collins recalled several flattering cases which in a few days showed crape on the door. He doubted the propriety of anæsthesia, but thought the operation justifiable if only as a means of easing death.

Dr. William H. Parish said this operation, which was one of the easiest in performance, should be resorted to whenever the symptoms were of such a character as to show impending suffocation. To determine this required no little judgment, and he recalled a case of recovery without operation where both himself and Dr. Allis had agreed it should be performed. He treats diphtheria by large doses of chlorate pot. and iron.

Dr. W. H. Warder, in discussing the treatment of diphtheria, thought the chlorate of potash and tincture ferric chloride most successful in ordinary cases. In more malignant ones had resorted to calomel in five-grain doses. In a case which Dr. Pepper had seen with him the latter advised a continuance of this plan for forty-eight hours. At the end of this time forty grains had been taken. A large and offensive evacuation followed, and the child recovered. He did not think such large doses usually necessary, however. Much of the calomel passed without other change than oxidation.

Recent Literature.

Malignant Disease (Sarcoma and Carcinoma) of the Larynx. By Henry T. Butlin, F. R. C. S., Assistant Surgeon and Demonstrator of Diseases of the Larynx, St. Bartholomew's Hospital. London: J. & A. Churchill.

This little book will prove of value not only to laryngologists, but to all interested in the life-history of the malignant growths of which it treats. The author has already published a work entitled "Sarcoma and Carcinoma," of which the monograph before us may be considered a continuation. In the former work Mr. Butlin studied malignant disease as it affects the bones, œsophagus, tonsils, etc., while in this essay he confines himself to sarcoma and carcinoma as they occur in the larynx. The most important outcome of the inquiry, as the author says, is the discovery of the influence which is exercised over the whole course of a malignant tumor by its origin. To be convinced of this fact one need only compare the course of central with subperiosteal sarcoma of bone, of sarcoma of the breast with sarcoma of the tonsil, of squamous carcinoma (epithelioma) of the lip with squamous carcinoma of the tongue. The importance of the local study of these diseases on a larger scale than heretofore is insisted upon. The larynx is well suited for such a study, and the author's labors result in showing the wide difference which may exist in the course pursued by sarcoma and carcinoma of the same organ, and how even carcinomas arising from different parts of the same organ pursue habitually a very different course even when the structure of the tumor is the same. The cases reported number seventy-three, of which twenty-three are sarcomas and fifty are carcinomas. It is pointed out that this difference does not show the true numerical relation which exists between sarcoma and carcinoma of the larynx, for carcinoma is so common that individual cases are not usually published. The author has excluded all cases in which a microscopic examination has not been made. Krishaber's division of sarcoma and carcinoma of the larynx into intrinsic and extrinsic has been adopted. Intrinsic sarcoma of the larynx rarely, if ever, affects the lymphatic glands or becomes disseminated. The author thinks that the obstacle to glandular affection is mechanical, and suggests that as the cells proliferate the solid structures gradually swell, and the lymphatic vessels suffer a diminution of their calibre, which proceeds to their complete obliteration, and renders them incapable of transmitting the infecting material of the tumor. Before attempting any treatment we must be sure of the diagnosis, which is best accomplished by removing a portion of the growth by the intra-laryngeal method with forceps, and subjecting it to microscopical examination. Intrinsic sarcoma, even in advanced cases, may be successfully treated by complete removal of the part from which it grows, which may necessitate partial or complete extirpation of the larynx. Extrinsic carcinoma infiltrates deeply, and affects the lymphatic glands early. Attempts at removal even by extirpation of the larynx and the neighboring glands afford not the slightest prospect of success or even of temporary benefit. Intrinsic carcinoma is a much less formidable malady. In cases in which the disease is limited to the cavity of the larynx, and the glands are not affected, partial or complete extirpation of the larynx may be performed. But if the disease has spread beyond the larynx, or there is enlargement of the glands, the prospect is almost as hopeless as in cases of extrinsic carcinoma.

Cases, whether of sarcoma or carcinoma, which appear unsuited for a radical operation of whatever kind may often be greatly benefited by an early tracheotomy.

Dictionnaire Annuel des Progrès des Sciences et Institutions Médicales. Par P. Garnier, Médicin, etc., etc. Dix-neuvième année, 1883. Paris: Felix Alcan, Éditeur: 108 Boulevard, St. Germain. 1884. 501 pages. 12mo.

This very useful volume comes to us rather late though it may have been issued with due punctuality. It is a kind of French Braithwaite, with this essential difference, that it gives abstracts, not extracts merely, and marks out what of value an article contains, or wherein an advance has been made.

Next year, the twentieth of the series, the author promises a complete index which will be of great service to any one seeking what has been gained in any medical matter during the last twenty years.

In his usual summary of the last year's work the author gives due prominence to the labors of the microscopists. To such a degree have their activity and efforts been lately absorbed in the search and discovery of organisms attendant upon diseases, that he appears to think that the year 1883 will figure grandly in the annals of medicine on its millennial anniversary should the capital work done in it for tuberculosis justify the predictions already announced. For ourselves, however, we cannot fully anticipate for posterity such a "happy return of the day." To our mote-obscured vision these bacilloids appear to be great *beams* in the eyes of experimenters, rather than efficient causes of disease. So far as proof goes at present they seem somewhat analogous to larvæ which sometimes infest exposed ulcers, or pus-secreting surfaces. We beg pardon, hardly hoping, in these days of irreverence for the infinite and the infinitesimal alike, for forgiveness for such evidence of unreclaimed Philistinism. We refer the reader to the *Dictionnaire.*

Time and space will not allow of further notice of this Annual at present. Every one who wishes a ready reference book for what has been going on in the medical world during the period of its existence should have a copy at hand. *

The Veins of the Brain and its Envelopes. Their Anatomy and Bearing on the Intra-Cranial Circulation. By William Browning, M. D., Brooklyn. Brooklyn, N. Y.: F. B. O'Connor, Jr. 1884.

The first sixteen pages of this monograph appeared in the *Annals of Anatomy and Surgery*, now unhappily defunct, so that the author was obliged to publish as a thick pamphlet what was apparently meant to be a series of articles. We are glad he has done so, for it presents the results of much careful work of a kind that is carried on too rarely among us. Indeed, the anatomical part of this paper is the record of work done in Professor Braune's laboratory at Leipsic. The veins of the brain were carefully injected, classified, and described. The work is done in a thorough manner, and the book before us is very much the best authority we know of for the anatomy of the intra-cranial veins. The author, moreover, shows himself familiar with the literature of the subject. We are inclined to think he hardly does Rüdinger justice in the question of the originality of his views on the Torculæ. The work is necessarily of the driest, and little can be well extracted for special mention, but we must allude to the important discovery that the common views of the great vein of Galen are incorrect. It is usually described as running backwards into the straight sinus; in point of fact it winds up behind the splenium of the corpus callosum, and runs forward before turning back to join the sinus. The English of this paper leaves a good deal to be desired, the construction and idioms are so evidently German. It shows, however, German method and industry, and is of real value. T. D.

Female Hygiene and Female Diseases. By J. K. Shirk, M. D. 12mo, 107 pages. Lancaster, Pa.: The Lancaster Publishing Co., 1884.

This book is intended for the "instruction of the laity": it gives some good advice on matters of hygiene, and some that is, to say the least, questionable, *e. g.*, on page 16, that "every civilized woman should rest in the recumbent posture during a good part of every menstrual period." If however the author had confined himself to this part of his subject, his book might have been productive of good results; but he has attempted to describe in popular language the various diseases of women, their symptoms and causes, and has given advice and prescriptions for their treatment: this part of the book we believe will be productive of harm. No woman is the better, in our opinion, for knowing anything about her ovaries or fallopian tubes: nor do we believe it expedient to instruct the laity how to treat amenorrhœa. The author's motives in writing the book we do not question; but we cannot approve of the class of books to which this belongs.

C. M. G.

Medical and Surgical Journal.

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THE EIGHTH INTERNATIONAL MEDICAL CONGRESS.

The programme of the next International Medical Congress, which is to be held at Copenhagen in August, has just been issued. The session will open on Sunday, August 10th, and close on Saturday, August 16th. The programme as published contains a list of papers promised and subjects to be discussed, but the definite programme of each day's work has not been made public. As on previous occasions the official languages are to be French, German, and English. The addresses in the general meetings are to be given by Professors Virchow and Pasteur, Sir William Gull, Professors Tommasi Crudeli, of Rome, Verneuil, of Paris, and Panum, of Copenhagen. Sir William Gull will speak on behalf of the Collective Investigation Committee of the British Medical Association on International Collective Investigation of Disease.

There are to be fourteen Sections: Anatomy, Physiology, General Pathology and Pathological Anatomy, Medicine, Surgery, Obstetrics and Gynæcology, Ophthalmology, Pediatria, Dermatology and Syphilis, Psychiatria and Nervous Diseases, Laryngology, Otology, State Medicine, and Military Medicine. Certain of these Sections are to hold joint meetings to hear papers and consider certain subjects that equally concern both divisions. The Sections meet daily from ten to twelve and from one to three. The general meetings will be held from four to half past five, with some extraordinary assemblies in the evening at eight. The work laid out in the Sections gives promise of little leisure. The subjects chosen cover a wide field, and embrace most of the matters in which special interest has been shown of late.

The prominent position in the Congress of matters relating to bacteria, the germ theory and its applications, is very noticeable. Professor Pasteur's Address before the general meeting is to be on Morbific Micro-Organisms and Vaccina Matters. In the Section of Pathology Professor Chauveau, of Lyons, will consider the Tuberculosis of Domestic Animals as a Source of Human Tuberculosis. Professor Bang, of Copenhagen, will read a communication on Tuberculosis of Cows' Udders and Inoculation with Milk from Tuberculous Udders. Koch will discuss the Variability of Pathogenic Bacteria, Cornil, of Paris, will consider the Transformations of Cellular Elements in an Inflammatory Focus of Bacterial Nature. Drs. Friedlaender, of Berlin, and Salomonsen, of Copenhagen, will respectively demonstrate the Pneumonia-Micrococcus and Cultures of Bacteria in Capillary Tubes.

In the Section of Medicine Professor Bouchard, of Paris, will present a communication on the Antiseptic Treatment of Acute Infectious Diseases; Professor Ewald, of Berlin, on the Ætiology, Diagnosis, Prognosis, and Treatment of Tuberculosis as Influenced by Recent Experiences in Pathological Anatomy and Experimental Pathology. In the Section of Surgery the Most Important Methods of Antiseptic Treatment of Wounds will be treated by Professors Lister, Mosetig-Moorhof, of Vienna, Paul Bert, of Paris, and Esmarch, of Kiel, and Dr. Schede, of Hamburg. In the Section of Gynæcology Professor Mikulicz, of Crakow, will present a communication on Antiseptics in Laparotomy; Dr. Rupprecht, of Dresden, will discuss the Choice of Antiseptics for Treatment of Wounds in Children; Dr. Unna, of Hamburg, will consider the Rôle of Micro-organisms in Skin Diseases not Formerly Considered Parasitic, and the Antiseptic Treatment of Wounds in Time of War will be considered by Professor Esmarch, Sir W. MacCormac' Dr. Neudörfer, of Vienna, and Dr. Strube, of Berlin.

The Americans whose names appear as authors of communications promised are not numerous. Prof. Austin Flint will present a paper on a Uniform Nomenclature of Auscultatory Sounds in the Diagnosis of Diseases of the Chest; Dr. Solis Cohen will consider the Prognostic Significance of the Several Local Manifestations Observed in Tuberculosis of the Larynx; Dr. Lefferts, of New York, will treat of the Removal of Foreign Bodies from the Larynx; Dr. Bosworth, of the Singing Voice, its Proper Method of Training; and Dr. French, of Brooklyn, of Photography of the Larynx; and Dr. J. Orne Green, of Boston, will read a paper on the Diagnosis of Intra-Cranial Complications in Suppurative Inflammation of the Middle Ear.

Not only is the scientific programme inviting, but the opportunity for a visit to so charming a capital as Copenhagen should lead to a larger attendance than the few Americans who have promised to take part in the exercises would seem to indicate.

A NEW LINE OF RESEARCH FOR CEREBRAL PHYSIOLOGISTS.

It is one of the postulates of the new cerebral physiology that every member or organ has its representative centres in the hemispheres. The advocates of cerebral localizations have, with great definiteness, mapped out on the convolutions centres for movements of the eyes and mouth, extension or flexion of the arm and hand, complex movements of the thigh, leg, and foot, etc., and the organs of special sense, and even the viscera are believed to have an intimate relation with certain cell groupings in the hemispherical ganglia. The facts on which this doctrine is founded are already sufficiently known through the writings of

Ferrier, Charcot, and others. We wish to call attention to-day to one line of research which may possibly be fruitful in results of great corroborative value as far as the localization theory is concerned. If, corresponding to the members of the body, there are certain positive differentiated cortical foci, then must lesion of those members have some disturbing influence on their encephalic representatives, and suppression or removal of the former will be likely to be attended with atrophy of the latter. Facts confirmatory of this way of thinking are yet few in number. A case is recorded by Sander in *Centralblatt* for 1875, in which the loss of a limb was accompanied by marked wasting of the corresponding motor region of the cortex. Similar observations have now and then appeared in other journals. Some of these are, however, discordant, as is the case reported by Luys, where the atrophy occurred in a region of the cortex to which motor functions are not assigned.

Recently Raymond, of the Hôspice des Incurables, has communicated to the *Progrès Médical* the details of a case which is a contribution of some value on the positive side of the question. It concerns a patient aged thirty-one, who died in the Hôtel Dieu of tuberculous meningitis. Eleven years previously this patient had undergone amputation of the left arm at the shoulder. The meningeal tuberculous disease from which he died was consecutive to chronic pulmonary phthisis. The autopsy revealed the ordinary lesions of granular meningitis, but the striking feature, and that which makes it of interest in this connection, was the existence of pronounced atrophy in the right hemisphere of those very portions of the convolutions bounding the fissure of Rolando (ascending frontal and ascending parietal) to which have been assigned by Hitzig, Ferrier, and other recent experimenters the psycho-motor direction of the left upper extremity. The atrophy, it is true, was somewhat more extensive than the area pertaining to these centres, and the shrinkage of the superficial zones was more marked in front of than posteriorly to the fissure of Rolando, but the fact remains that there was found deficiency, as if by want of development or atrophy, of the supposed centres of all the movements of the left arm, forearm, and hand. No degenerative lesion or asymmetry of any other portion of the cerebro-spinal axis was noted.

It must be confessed that the evidential value of this observation, as of others of a like nature, needs qualification by the doctrine (if true) which has been formally stated by M. Féré, that the opposite lobes of the cerebral hemispheres are habitually asymmetrical.

THE ONE HUNDRED AND THIRD ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

The annual meeting of the Massachusetts Medical Society is still in progress as this number of the Journal goes to press. We therefore defer any reports or comments for another week.

At an adjourned business meeting on Tuesday afternoon, about a quarter of the membership being present, it was voted, by a large majority, to admit women to examination by the Censors, a vote which was concurred in at the meeting of the Councilors in the evening, sixty-three voting in the affirmative and forty-seven in the negative. This action we believe to have been the result of somewhat mixed motives, but whatever the motives or the method the Society has committed itself, and we have simply to chronicle the results.

MEDICAL NOTES.

— In a recent communication to the Académie de Médecine M. Luys took novel ground as to the mobility, or rather the locomobility, of the brain. He believes that the cerebral mass is subject to the laws of gravity, and that an empty space occupies whatever portion of the cranium is uppermost at the time being, varying, of course, according as the individual is upright, recumbent, or inverted. In lateral decubitus, for instance, the falx cerebri is displaced, and the vacant space is between the skull and the temporal lobe. He believes that this movement does not take place suddenly, but occupies five or six minutes in being accomplished. In the following session of the Académie M. Béclard opposed the opinion pronounced by M. Luys. He thought that the word "movement" was badly chosen to represent what passes in the cranium, and would prefer "commotion" or a change in the volume of the cerebral mass, which after all was very limited, and to be explained by the number of vessels it contained. He himself could not accept the idea of total displacements as entertained by M. Luys, for there did not exist in the cranial cavity any space that was not occupied either by the brain itself, the venous plexus, or the cephalo-rachidian liquid. M. Luys, in replying, maintained what he had already advanced, and was followed by M. Jules Guerin and M. Collin, who were both in favor of the theory of cerebral displacement under the conditions already mentioned. The clinical bearings of this theory, if it shall become established, will be important with reference to the relations of position, and especially of changes in posture upon vertigo, syncope, and other symptoms referable to circulatory conditions inside the cranium.

— It is reported of Bishop Smith, the senior bishop of the Protestant Episcopal Church, who died recently at the age of ninety years, that besides never having used alcohol or tobacco he possessed the more unique distinction of never having taken a dose of medicine during his life.

— The will of Samuel W. Swett, late of Boston, has been filed in the probate court, and contains a large number of munificent public bequests, disposing of some $250,000 in charity. The will is dated December 11, 1880. Medical and hospital interests are generously remembered, as will be seen from the following list: To the Massachusetts Institute of Technology, $10,000; to the old men's home, Boston, $5000, its corporate name being the Home for Aged Men; to the Massachusetts General Hospital, to aid that corporation in building and maintaining a hospital for convalescent patients, under such rules and regulations as the said corporation may think proper to make, the sum of $50,000, and in case the said corporation should not think it expedient to establish such hospital for convalescent patients, the income of the trust fund, or any part, or the whole of the fund itself may be used by said corporation in any manner the said corporation may think best for its interest; to the Boston North End Mission, $20,000; to the Missionary Society of Boston, $10,000; to the Boston Young Men's Christian Association, $5000; to the Young Men's Christian Union, $5000; to the American Board of Commissioners for Foreign Missions, $10,000; to the Provident Fraternity of Churches, $5000; to the Massachusetts Home Missionary Society, $10,000; to the Boston Provident Association, $10,000; to the Boston Marine Society, $10,000; to the Sailors' Snug Harbor, located at Quincy, Mass., $10,000; to the Temporary Home for the Destitute, located at Nos. 1 and 2 Pine Place, $5000; to the President and Fellows of Harvard College, for the use of the Medical Department, $20,000; to the Baldwin Street Home for Little Wanderers, $20,000; to the Boston Children's Aid Society, $5000; to the Children's Hospital of Boston, $10,000; to the New England Hospital for Women and Children of Boston, $10,000; to the Children's Mission for Destitute Children, $10,000.

NEW YORK.

— At the last meeting of the Academy of Medicine, held Thursday evening, June 5th, twenty-four new Fellows were admitted, and the President, Dr. Fordyce Barker (who has just returned from Europe), made an address in regard to the death of the senior ex-president, Dr. Willard Parker, and honorary Fellow, Dr. S. D. Gross. He also alluded in feeling terms to the bereavement of Dr. S. T. Hubbard, whose son, Dr. William H. Hubbard, recently died from disease contracted in the discharge of his duties as one of the house-staff of Bellevue Hospital, and resolutions tendering the sympathy of the Academy to Dr. Hubbard and his family were afterwards passed. Dr. R. W. Amidon then read a paper entitled A Plea for More Heroic Surgical Interference in Affections of the Brain, which was discussed by Drs. Garrish, Noyes, and Putzel, after which a resolution was adopted urging upon Governor Cleveland the signing of a bill recently passed by the Legislature, which provides for the purchase of suitable lands for a number of new parks in the upper part of the city. The Academy then adjourned to meet on the first Thursday in October.

— A clergyman temporarily residing in the city was summoned last week to appear in the Yorkville police court on the complaint of the Society for the Prevention of Cruelty to Children that he had permitted his daughter, a child six years of age, who had fractured her arm, to remain without medical attendance. He was a firm believer in the "faith cure," but when he learned that the Society was about to proceed against him he secured the services of two surgeons, and when he appeared in court was armed with a certificate that the child was being properly cared for, in consequence of which the complaint was dismissed.

— Dr. Thomas C. Chalmers, an old and highly respected physician of New York, died June 4th of uræmia, the result of cystitis and pyelitis. He was born at West Galway, Saratoga County, N. Y., in 1810, and was graduated with high rank from Union College in 1831. He received the degree of M. D. from the College of Physicians and Surgeons, New York, and was one of the original founders of the Academy of Medicine, of which he remained a Fellow up to the time of his death.

— The trial of James Brown, an ex-attendant, charged with manslaughter in the first degree for causing the death of Evan D. Hughes, a patient in the State Lunatic Asylum at Utica, in January last, was concluded on the 4th of June, resulting in the conviction of the accused of manslaughter in the second degree.

— The new buildings presented to the German Dispensary by the late Mrs. Oswald Ottendorfer were formally opened on the 24th of May. The principal address was delivered by Dr. A. Jacobi.

PHILADELPHIA.

— On Thursday evening, June 5th, a complimentary dinner was given by the profession of Philadelphia to Prof. Alfred Stillé in commemoration of his retiring from the chair of practice of medicine in the Medical Department of the University of Pennsylvania, a position from which he resigned at the close of the last session, after twenty years' service. Among the guests present were Dr. Stillé's life-long friend, Dr. F. C. Shattuck, of Boston, who shared his studies in Paris, Surgeon W. S. W. Ruschenberger, medical director United States Navy, now retired, Dr. Austin Flint, of New York, Surgeon J. S. Billings, United States Army, of Washington, and Traill Green, of Easton, Pa. Professor DaCosta presided in the place of Professor Gross, whose death had occasioned a postponement of the supper from the first time appointed. Seventy-seven covers were laid, and nearly all were present, including Drs. Agnew, Bartholow, Pepper, Brinton, Solis Cohen, Pancoast, Parvin, Tyson, H. C. Wood, J. Ashhurst, Hutchinson, Hays, C. Wilson, J. C. Wilson, S. Lewis, and many other prominent members of the profession. Addresses were made by Drs. DaCosta, Stillé, Shattuck, Billings, Pepper, and Flint. Letters of regret were received from Prof. Oliver Wendell Holmes, of Boston, John L. Atlee, of Lancaster, A. G. Moses, of St. Louis, Henry I. Bowditch, of Boston, and Edward Hartshorn, of Philadelphia. During the evening the chairman presented to Dr. Stillé an album containing the autographs of those present at the dinner. The whole affair was a memorable one, and was heartily enjoyed by all.

— Dr. William Pepper, formerly professor of Clinical Medicine, has been appointed to the vacant chair of

Practice of Medicine in the Medical Department of the University of Pennsylvania.

— Professor Gross having bequeathed his library to the Academy of Surgery of this city, it is understood that the bequest will be accepted, and a special deposit made of the books with the College of Physicians, where the Academy holds its meetings.

— At the June meeting of the College of Physicians, Dr. DaCosta took his seat as President, and in a few words thanked the College for the honor conferred. Dr. S. Weir Mitchell was unanimously elected Vice-President.

— At the quarterly meeting of the Philadelphia County Medical Society, held June 5th, an amendment made with a view of keeping out women candidates, by declaring that the Society shall consist of "male" members, was lost, having failed to get a two-thirds' vote. But a woman candidate was defeated as usual.

— The Point Airy Sanitarium, a health resort or park on Windmill Island, situated in the Delaware River, opposite the city, was opened June 5th. It was designed by some charitable persons with the object of providing some fresh air for poor children during the heated term, the temperature being much lower than in the city. There is no provision for keeping visitors over night, except in the little hospital, but a small steamer is owned by the Association, which plies back and forth all day long. From 1200 to 1400 persons can be accommodated every day. Last year 49,000 visitors were admitted. Some nourishing articles of food, sick diet, tea, etc., are provided for mothers and children, while toys and gymnastic apparatus afford them exercise. This sanitarium at a small expense is of inestimable benefit to the poor of the lower part of the city.

Correspondence.

LETTER FROM LONDON.

THE INTERNATIONAL HEALTH EXHIBITION.

London, *May* 22, 1884.

Mr. Editor, — The 'bus driver, with a bouquet in his button-hole, smilingly shouts to the stream of people pouring down the Strand, "*'ealth Exhibition, sir;*" the conductor says, as one passes up to amuse himself gazing at the human comedy from the top of his stage, "*Fine day, sir, for the four-in-'and meet, sir, at 'yde Park, sir, eleven o'clock, sir.*" John Bull instructing himself and John Bull amusing himself, both very serious matters, not to be treated lightly, and about which there must be no unnecessary waste of time or nonsense.

The horses were magnificent. A crowd is always interesting. The riding was some good, some bad, some very bad. The faces and figures of the ladies driving and on horseback, much to our surprise, were not so suggestive of health and strength as the general appearance of the corresponding class on the Mill Dam and the Brighton road, although the opposite was true of the thousands on foot.

Ten thousand people visit the Health Exhibition daily, attracted partly by the promenades in the charming gardens, illuminated at night, by the bands of music, the playing of the great organ in the Albert Hall, and the very entertaining and instructive historical representations of early costumes and models of the houses of London of past centuries. It is more than a health exhibition. It is a great and amusing six-months' show, at which the populace can divert itself, and at the same time learn an immense deal with regard to the economies, the conveniences, the elegances, and, so far as health is concerned, the necessities of the school, the workshop, and the household. It has a room where useful lessons are given in cookery, and cheap dinners may be studied practically; but the "first-class restaurants" are, to use a favorite English expression, nasty, — a serious fault in the eyes of those people who think that all this talk about filth-diseases and cleanliness has some influence in diminishing death-rates, but an immense value as a civilizing agent. For popular instruction the whole affair is admirably arranged, but the student of sanitary science will not find enough to repay him for the sacrifice of much time in getting there, except in so far as he is interested in the devices of the various manufacturers and shopkeepers for applying sanitary principles to the daily uses of life, all of which is to be learned chiefly from the exhibitions and advertisements of their wares by some sixteen hundred business firms, some of whom announce to the nobility and gentry the great things that they can do if you give them a chance. At lunch our eyes rest upon walls covered with convenient advice to go to Peter Robinson's for the newest fashions, with enticements to drink non-alcoholic, sparkling morella, a substitute for wine, or zoedone at lemonade prices, until we see that *The Lancet* has analyzed Camuset's champagne, and gives it unqualified praise, but we look in vain for the wonders that Eno's fruit salts can perform.

In the food department there are raw materials and machinery in motion to show the various processes of making them eatable; preserved provisions of all kinds; the processes of the dairy, from the gentle cow in the stall to the pretty dairy-maid patting the butter; every sort of drink, alcoholic and otherwise; diets for invalids and infants; methods of cooking, including bakeries, and the possible dangers to health from their mismanagement; adulterations; parasites found in meat; methods of preserving food; tobacco.

The relative values of different articles of dress, especially of underclothing, as to the various requirements of health and comfort, in different climates, and for all sorts of purposes; the effects of poisonous dyes, the costumes suitable for female operatives, for different trades and workshops, for nurses, soldiers, sailors, firemen; illustrations of badly-shaped boots, and spinal and thoracic deformities from tight lacing; the processes of manufacture of clothing, — all are admirably shown; but it is safe to say that the latest fashion of the returning narrow corsets in the displays from Regent Street will make more impression on the average young woman than the pictures of the squeezed livers.

Among the other departments the most important are water supply and drainage of the dwelling-house, illustrated admirably to the least detail, and especially with two dwellings, one to show bad and the other good sanitary arrangements; construction and fittings of the dwelling-house, including fabrics for such use, wall papers free from arsenic, etc.; heating, lighting, ventilating, and smoke abatement in dwellings, very fully treated; school hygiene, desks, and methods of instruction; ambulance equipments; workshops; the meteorology of health; demonstration in the laboratory of methods of examining food, air, water, soil, constructive materials of houses, disinfectants, etc.

There are to be conferences in the leading scientific societies, open to the visitors to the exhibition, on the subjects of dwellings for the poor; domestic sanitation in the urban and rural districts; industrial diseases; how infectious diseases are spread; notification of infectious diseases; disposal of the dead, cremation; meat supply; water supply and distribution; construction of houses with regard to sanitary arrangements; oral instruction of the deaf and dumb; electric lighting, municipal and domestic, or on other subjects connected with application of electrical science; food adulteration and analysis; sanitary legislation; some subject cognate to the work of the Society; the effect on the health of teachers and children of overwork in schools; ambulance work in peace and war; bee-keeping; tropical sanitation. Shilling handbooks are on sale throughout the exhibition by competent, many of them by eminent, writers on Healthy Villages, illustrated. Healthy Bed-Rooms and Nurseries, including the Lying-in Room. Healthy and Unhealthy Houses in Town and Country, illustrated. Healthy Furniture and Decoration, illustrated. Healthy Schools. Health in Workshops, illustrated. Manual of Heating, Lighting, and Ventilation, illustrated. Food. Principles of Cookery. Food and Cookery for Infants and Invalids. Alcoholic Drinks. Water and Unfermented Beverages. Fruits of all Countries, illustrated. Salt and other Condiments. Legal Obligations in respect to Dwellings of the Poor. "Our Duty," or Moral Responsibility of the Individual in regard to Health. Laboratory Guide to Public Health Investigation, illustrated. Physiology of Digestion and the Digestive Organs, illustrated. Fermentation. Spread of Infection. Scavengering and other such Work in Large Cities, illustrated. London Water Supply. Fires and Fire Brigades, illustrated. Athletics, Part I., illustrated. Athletics, Part II. Dress in relation to Health and Climate, illustrated. Accidental Injuries, their Prevention and First Management, illustrated. The Ambulance, illustrated. The Influence of Schools of Art on Manufacturing Industry. * * *

"THE 'TAXATION' THEORY OF EXPERT TESTIMONY."

Boston, *June* 9, 1884.

Mr. Editor, — Having read with great pleasure the article in your journal of June 5th on The "Taxation" Theory of Expert Testimony, I am tempted to express the opinion that not only is it, as you say, a greater injustice to call upon experts upon the same terms as are jurymen, and that they should rather be considered as officers of the court as are judges and sheriffs; but I would go farther, and maintain that the only excuse for not treating jurymen in the same way is the assumption that it is impracticable; in short, that it is a very high-handed act to force any man to serve the State in any capacity whatever in opposition to his own interests or wishes. Such an act may be excusable when our limited knowledge shows us no alternative; but while this consideration may, perhaps, be an excuse for conscription or for the drawing of juries, yet imperfections of civilization ought not to be pleaded when they do not exist, and there is certainly no necessity for compelling the services of experts. If there were, the least that could be done in honor would be payment for services at the market value. For my own part I can see no other ground that is not simply communism. Very truly yours, E. M. B.

RETAINED PLACENTA OF ABORTION, WITH HÆMORRHAGE.

Brighton, *June* 5, 1884.

Mr. Editor, — The practice which has been successful and satisfactory in the abortion cases that have fallen into my hands for the last fifteen years is, first, to stop the hæmorrhage, which is the one alarming symptom in nine cases out of ten which occasions the calling of the physician; and the most certain, sure, and effective way of doing this is to remove at once the placenta manually. If this is done the hæmorrhage ceases, the danger from septicæmia is practically nil, and, until this is done, "the anxious days,' and nights too, are a certainty; frightful hæmorrhages may, and in a certain per cent. of cases do, occur. In other cases the placenta is retained from inability of the uterus to throw it off, and putrefaction commences with its attendant danger of septicæmia. Many cases left to nature come out all right of themselves; but these last are not those that come under the observation of the physician.

Early in my practice I concluded, when an abortion was so far in progress that the fœtus had escaped, that the safest, most satisfactory, and common sense practice was to complete the abortion as quickly as possible. The deaths from abortion are mostly from effects of hæmorrhage and septicæmia. Any delay, therefore, in the removal of the placenta make "the anxious days" certain to come, provoke the occasion of hæmorrhage, and the possibility of attacks of septicæmia. With the complete removal of the secundines all apprehension from hæmorrhage and septicæmia is at an end.

In the treatment of disease if the cause is removed the disease is often soon cured. In abortion the hæmorrhage is due to the retained placenta. Septicæmia after abortion is caused by the retained placenta, or a portion of it. The most scientific treatment, then, of retained placenta after abortion, with resulting hæmorrhage or septicæmia, would seem to be its immediate removal, and in my experience the fingers are the best and only instruments needed. Any other method of treatment is but temporizing; plugging the vagina, by Dr. Lawson Tait, has been styled "barbarous and unscientific." Immediate removal of the placenta is but carrying out the perfect method of nature, which makes the effort in nearly all cases to remove it, and succeeds in most, but in certain of the cases to which physicians are called she fails from lack of expulsive force in the uterus. By her efforts, however, the uterus from being high up is forced down lower in the pelvis, is more easily reached, the os is made softer, more dilatable, and, with the left hand above the pubes, the forefinger of the right hand can be made to reach and remove the placenta in all cases.

Having practiced medicine in a town for seven years, near a successful abortionist, I presume it has been my lot to see more cases of hæmorrhage and septicæmia after abortion has been procured than usually falls to the lot of the general practitioner; unwittingly I contributed to his success by saving the lives of patients that came into my hands *in extremis*. The conclusions and deductions as above are the result of my experience.

Yours etc., MARSHALL L. BROWN, M. D.

Miscellany.

EFFECTS OF POLITICAL EVENTS ON THE FORMS OF INSANITY.

THE *Medical Times and Gazette* (May 3d) thus summarizes the introductory lecture of Dr. Legrand du Saulle (reported in No. 13 of *Progrès Médical*) at the Salpetrière this year, in which he pointed out that war and rioting only induce insanity in the predisposed. There was no increase in the number of the insane during the troubles that prevailed from 1847 to 1854, and it was the same during the events of 1870 and 1871. In his opinion, speculation, the thirst for gold, and sudden changes in fortune are the chief causes that provoke insanity. The constantly increasing resources of the Assistance Médicale, by enabling it to aid so large a number of patients, have materially influenced the statistics of mental diseases — for formerly a large number of epileptics, imbeciles, and persons suffering from senile dementia, who would have remained unnoticed in the rural districts, are now inmates of asylums. If the events of 1870–1871 have exerted any decided effect on the mental condition of the Parisian population, it is because they modified the conditions of existence. Thus, on the declaration of war, when a considerable number of young persons joined the colors, numerous cases of subacute alcoholism were met with among quite young people, as a consequence of the excesses committed under the influence of the emotion caused by the approaching departure. When the enemy approached, and investment was menaced, the population of the suburbs took refuge in Paris, and these unfortunate beings, in a state of constant anxiety and anguish, insufficiently aided and badly fed, furnished a good many cases of melancholic insanity. Other disturbances arose under the conditions of existence necessitated by the defense. The men passing their time at the fortifications and committing excesses in drink were in large numbers attacked with subacute alcoholism, while the ill-fed women presented the psychical disturbances due to inanition — hallucinations, melancholic delirium, etc. Still, insanity, properly so-called, seemed to have decreased. At the time of the bombardment, the inhabitants of Montrouge took refuge in the other districts, and a great many became subjects of panophobia or "perplexed melancholia," several of the women presenting, without any period of invasion, the phenomena of melancholia with stupor or stupidity. During all this period the epileptics in the Salpetrière underwent no increase in the number of their attacks. One single category of the insane exhibited a notable increase, namely, the *inventors*, who still continued numerous until the period of the Commune. In conformity with the documents on the hereditary and personal antecedents of the subjects of psychical disturbances during this period the existence of obsidional insanity cannot be admitted.

The pathogenic influence of the events of the siege was not only felt among adults, but was also very marked on the development of infants conceived at this epoch. The numerous disturbances in their evolution observed among infants born in the later months of 1871, and the exceptional mortality which occurred amongst them, caused them to be designated by the working population as *les enfants du siège* — a name synonymous with an ill-formed infant destined to a fatal lot. Among ninety-two infants conceived during the siege, Dr. Legrand du Saulle found that in sixty-four there were physical, intellectual, or moral anomalies, the remaining twenty-eight being in general small and sickly. As to the pathogenic influence under which these anomalies are developed, that must be a complex one, the principal elements of which are alcoholism, inanition, and the psychical condition determined by the moral shock under circumstances so eminently dramatic.

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INSTITUTION FOR FEEBLE-MINDED CHILDREN IN PENNSYLVANIA.

AT a meeting of the Board of Directors of the Pennsylvania Institution for Feeble-Minded Children, held lately at Elwyn, the condition of the feeble-minded children of the State was discussed. The census of 1880 reports the feeble-minded population of Pennsylvania to be 6503. Of this number 2323 are under eighteen years of age. The correspondence of the institution establishes the fact that at least 1500 feeble-minded children are in the homes of persons too poor to pay for their support in any institution, and yet too much attached to their unfortunate offspring to place them in county almshouses. The injury to the community from the presence of this element is such that those who examine this problem believe it would be wise economy to isolate the feeble-minded and idiotic, and establish in Delaware County, in connection with the present institution, an asylum village, to consist of farm-houses for those who are able to work, a hospital home for the helpless, and a central educational department. The institution already embraces these features, and by utilizing its farm lands the cost of maintenance has so diminished that it is now believed a plan embracing all this dependent population of the State is feasible.

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ANOTHER PREHISTORIC HUMAN SKELETON.

IN *Science* (May 2, 1884) we find figures illustrating the skull from a skeleton which was found about a month ago in one of the grottoes at Mentone, France (next to the one in which a skeleton was found some twelve years ago by Rivière). The description was forwarded by Mr. Wilson, the United States consul at Nice, under date of March 31st. The skeleton was found in a cavern at a depth of eight and a half metres, under well-defined strata; one a metre and a half thick composed of cinders, ashes, burnt earth, and charcoal. More or less worked flint chips were found with it comparing well with those found with Rivière's skeleton.

The skeleton was complete; but, as the result of a quarrel over the ownership, the body was stolen, and its whereabouts are still unknown. The skull was broken in the exhumation, but is nearly perfect; and, when found, a large chip flint was found resting against the top of the head, and two others resting like epaulets against the shoulders. The length of the skull, from the back of the head to the forehead, was eighteen centimetres, and from the back of the head to the projecting eyebrows, nineteen centimetres and a half; the breadth was fourteen centimetres. One femur was saved from loss, and measured forty-nine centimetres in length.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 31, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Measles.
New York	1,340,114	603	253	24.31	15.47	4.59	6.46	4.08
Philadelphia	927,995	366	127	16.74	12.42	—	2.70	1.89
Brooklyn	644.526	—	—	—	—	—	—	—
Chicago	632,100	263	132	28.50	19.50	9.00	10.50	15.75
Boston	423,800	177	60	17.36	14 56	3.36	5.04	—
Baltimore	408,520	142	59	15.40	13.30	6.30	.70	2.10
St. Louis	400,000	91	29	17.60	14.30	2.20	5.50	1.10
Cincinnati	272,400	75	22	7.98	15.96	2.66	—	—
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	69	12	15.95	24.65	4.25	1.45	1.45
Pittsburg	180,000	57	28	17.54	12.25	—	5.25	5.25
Milwaukee	142,400	50	29	20.00	2 00	8.00	2.00	2.00
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	18	5	11.11	5.55	5.55	—	—
Nashville	54,400	23	7	8.70	8.70	—	4.35	—
Charleston	52,286	30	18	23.33	16.66	23.33	—	—
Lowell	71,447	22	7	9.11	13 65	—	4.55	—
Worcester	69,442	22	9	22.75	13.65	—	18.20	—
Fall River	62,674	15	3	13.33	6.66	—	13.33	—
Cambridge	60,995	16	4	12.50	25.00	—	12.50	—
Lawrence	45,516	10	5	30.00	10.00	—	20.00	—
Lynn	44,895	11	3	18.18	18.18	—	—	—
Springfield	38,090	7	0	—	14.28	—	—	—
Somerville	31,350	11	4	18.18	18.18	—	—	—
Holyoke	30,515	12	5	33.33	8.33	8.33	8.33	—
New Bedford	30,144	8	2	—	25.00	—	—	—
Salem	29.503	10	3	10.00	10.00	10.00	—	—
Chelsea	24,347	8	2	—	12.50	—	—	—
Taunton	22,693	1	1	—	—	—	—	—
Gloucester	21,400	1	1	—	—	—	—	—
Haverhill	20,905	9	2	22.22	22.22	11.11	11.11	—
Newton	19,421	6	2	—	—	—	—	—
Brockton	18,323	3	0	—	—	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	0	—	50.00	—	—	—
Fitchburg	13,433	6	2	—	16.66	—	—	—
Eighty Massachusetts towns	312,595	78	13	14.08	28.16	10.24	10.24	—

Deaths reported 2205 (no reports from Brooklyn, Buffalo, and Providence): under five years of age, 917; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 467, consumption 337, lung diseases 230, diphtheria and croup 101, diarrhœal diseases 90, measles 68, scarlet fever 67, typhoid fever 36, whooping-cough 31, cerebro-spinal meningitis 22, malarial fevers 22, erysipelas 11, puerperal fever 10, small-pox nine. From *scarlet fever*, Philadelphia 22, Chicago 13, New York 11, Boston six, St. Louis and District of Columbia four each, Baltimore two, Cincinnati, Pittsburg, Milwaukee, New Haven, and Worcester one each. From *typhoid fever*, Philadelphia 14, New York six, Chicago four, Boston three, New Orleans, and Holyoke two each, Baltimore, District of Columbia, Pittsburg, Milwaukee, and Nashville one each. From *whooping-cough*, New York 14, Boston five, Philadelphia three, Baltimore New Orleans, and Pittsburg two each, Chicago, St. Louis, and Somerville one each. From *cerebro-spinal meningitis*, New York four, Chicago five, Philadelphia three, Baltimore and Lawrence two each, St. Louis, Cincinnati, Milwaukee, Somerville, Stoneham, and Leicester one each. From *malarial fevers*, New Orleans 10, New York seven, Chicago and St. Louis two each, Baltimore one. From *erysipelas*, New York seven, Philadelphia two, Chicago and Cincinnati one each. From *puerperal fever*, Chicago and Boston two each, New York, Baltimore, District of Columbia, Milwaukee, Lowell, and Westford one each. From *small-pox*, New Orleans seven, Philadelphia and Cincinnati one each.

In 100 cities and towns of Massachusetts, with an estimated population of 1,378,000 (estimated population of the State 1,955,104), the total death-rate for the week was 16.50 against 14.86 and 15.88 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending May 17th, the death-rate was 21.1. Deaths reported 3540: acute diseases of the respiratory organs (London) 295, whooping-cough 182, measles 151, scarlet fever 70, small-pox (London 30, Liverpool five, Sheffield and Hull three each, Sunderland and Newcastle one each) 43, fever 35, diarrhœa 35, diphtheria 23. The death-rates ranged from 16.2 in Brighton to 27.5 in Manchester; Sunderland 16.5; Bristol 18.6; Sheffield 18.9; Birkenhead 18.9; Leicester 19.6; London 19.9; Blackburn 20.3; Bradford 22.7; Birmingham 22.8; Liverpool 24.3; Leeds 25.5. In Edinburgh 24.7; Glasgow 27.6; Dublin 25.7.

For the week ending May 17th, in the Swiss towns, there were 34 deaths from consumption, typhoid fever 31, lung diseases 19, diarrhœal diseases 16, diphtheria and croup two, measles one, scarlet fever one, whooping-cough one, erysipelas one. The death-rates were, at Geneva 11.2; Zurich 23.6; Basle 17.8; Berne 32.2.

The meteorological record for the week ending May 31st, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1884.	Daily Mean.	Daily Mean.	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 25	29.937	57	73	51	72	80	93	82	NW	SE	SE	8	11	2	C	C	C	—	—
Mon., 26	29.956	51	57	49	91	88	98	92	SE	SE	SE	4	11	3	F	F	F	—	—
Tues., 27	29.822	53	62	48	96	89	100	95	NW	SE	SE	3	10	5	O	O	G	—	—
Wed., 28	29.849	50	59	44	99	100	94	98	SW	N	N	6	16	13	T	R	O	—	—
Thurs., 29	29.963	45	56	40	65	86	75	75	NW	NW	NW	14	10	9	C	O	C	—	—
Fri., 30	30.051	45	53	35	64	36	70	57	NW	W	SW	9	11	3	C	F	C	—	—
Sat., 31	30.271	52	65	39	84	66	79	76	W	SE	W	9	15	8	C	F	C	—	—
Mean, the Week.	29.978	50	61	44				80										14.05	0.85

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 31, 1884, TO JUNE 6, 1884.

Moore, John, lieutenant-colonel and assistant medical purveyor. Ordered to perform, in addition to his present duties, those of medical storekeeper, San Francisco, Cal.

Johnson, Henry, captain and medical storekeeper. Relieved from duty at the medical purveying depot at San Francisco, Cal., and ordered to report for duty at the medical purveying depot, New York City, relieving Captain Andrew V. Cherbonnier, medical storekeeper.

Captain Cherbonnier, on being relieved by Captain Johnson, will proceed to St. Louis, Mo., and report in person to Captain George T. Beall, medical storekeeper, and acting assistant medical purveyor, for duty at the purveying depot at St. Louis, relieving Captain Beall of his duties as medical storekeeper.

Paragraph 9, S. O. 128, A. G. O., June 3, 1884.

Fryer, Blencowe E., major and surgeon. Granted leave of absence for one year from July 1, 1884. Paragraph 7, S. O. 128, A. G. O., June 3, 1884.

Hall, John D., captain and assistant surgeon. Granted leave of absence for three months, to take effect on his arrival at St. Paul, Minn. Paragraph 8, S. O. 128, A. G. O., June 3, 1884.

Heger, Anthony, major and surgeon. Assigned to duty at Fort McHenry, Md., as post surgeon. Paragraph 1, S. O. 108, headquarters Department of the East, June 2, 1884.

Baily, Jos. C., major and surgeon. Now on leave of absence, is relieved from duty in Department of Texas, and ordered to report to commanding general, Department of the East, for assignment to duty at Fort Monroe, Va., to relieve Lieut.-Col. Charles Page, surgeon U. S. Army, on July 1, 1884, from duty at that station.

Lieut.-Col. Page, on being relieved by Major Baily, will proceed to Fort Leavenworth, Kans., and report to commanding general, Department of the Missouri, for assignment to duty as medical director of that department.

Paragraph 12, S. O. 125, A. G. O., May 29, 1884.

Wright, J. P., major and surgeon. Directed to perform, temporarily, in addition to his other duties, those of medical director, Department of the Missouri. Paragraph 2, S. O. 107, headquarters Department of Missouri, May 28, 1884.

Huntington, David L., major and surgeon. During the absence of the Surgeon-General directed to take charge of the office of the Surgeon-General and perform his duties. Paragraph 6, S. O. 129, A. G. O., June 4, 1884.

Bentley, Edwin, major and surgeon. Assigned to duty at Fort Clark, Texas, as post surgeon. Paragraph 1, S. O. 68, headquarters Department of Texas, May 31, 1884.

Koerper, Egon A., captain and assistant surgeon. Assigned to duty at Fort Keogh, M. T. Paragraph 1, S. O. 58, headquarters Department of Dakota, May 27, 1884.

Barnett, Richards, captain and assistant surgeon. Now on sick leave of absence, is relieved from duty at Columbus Barracks, Ohio, and ordered to report to commanding general, Department of the East, for assignment to duty. Paragraph 2, S. O. 129, A. G. O., June 4, 1884.

Middleton, Passmore, captain and assistant surgeon. Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 2, S. O. 107, headquarters Department of Missouri, May 28, 1884.

Wilson, George F., first lieutenant and assistant surgeon. Relieved from temporary duty at Fort Canby, Washington Territory, and ordered to return to his proper station (Fort Walla Walla, Washington Territory). Paragraph 2, S. O. 70, headquarters Department of Columbia, May 26, 1884.

Owen, William O., Jr., first lieutenant and assistant surgeon. Having reported at these headquarters, in compliance with paragraph 5, Department Special Orders, No. 62, current series, will return to, and take station at, Fort Stevens, Oregon.

In addition to his duties at Fort Stevens, Assistant Surgeon Owen will perform those of medical officer at Fort Canby, Washington Territory. Paragraph 1, S. O. 70, headquarterss Department of Columbia, May 26, 1884.

LIST OF OFFICIAL CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JUNE 7, 1884.

Murray, T. M., passed assistant surgeon, detached from U. S. S. Passaic, ordered to U. S. S. Constellation.

Martin, W., assistant surgeon, detached from U. S. S. Constellation, ordered to U. S. S. Passaic.

Craig, T. C., passed assistant surgeon, detached from U. S. S. Minnesota, ordered to U. S. S. Vandalia.

Deane, C. W., passed assistant surgeon, detached from U. S. S. Vandalia, ordered to U. S. S. Minnesota.

Hall, T. H., passed assistant surgeon, detached from U. S. S. Minnesota, ordered to Naval Hospital, Brooklyn.

Wales, P. S., medical director, to continue present duty until August 1, 1884.

Wells, H. M., surgeon, to temporary duty at Naval Laboratory.

Marsteller, E. H., passed assistant surgeon, detached from U. S. S. Vermont, ordered to U. S. S. Monongahela.

Scott, H. B., assistant surgeon, commission to date from July 11, 1883.

Means, V. C. B., assistant surgeon, commission to date from June 3, 1884.

Hesler, F. A., assistatnt surgeon, commission to date from June 3, 1884.

Rhode Island Medical Society. — The seventy third Annual Meeting of the Rhode Island Medical Society will be held at ten o'clock A. M., Thursday, June 19, 1884, in Lyceum Hall, 62 Westminster Street, Providence. The Annual Address will be delivered by George I. Chace, LL. D., at one o'clock, P. M. Tickets to the Annual Dinner, which will be served at the Narragansett Hotel, can be obtained of the Treasurer, Dr. C. H. Leonard. The Board of Censors will meet in the Medical Library, 54 North Main Street, Providence, at ten o'clock, A. M., on Tuesday, June 17th, and in Lyceum Hall on the morning of the Annual Meeting.

George D. Hersey, *Recording Secretary.*

Original Articles.

SEWAGE SYSTEMS AND THE EPURATION OF SEWAGE BY IRRIGATION AND AGRICULTURE.[1]

BY HENRY J. BARNES, M. D.

Many of the cities and towns of Massachusetts, as well as those throughout the country, have in the near future this question to dispose of in a scientific and practical manner. Political economy and the public health demand already in many communities attention to this subject. An epidemic of typhoid fever in a neighboring town would be a very dangerous menace to the health of the citizens of Boston in consequence of the water supply of the latter being the receptacle for the drainage and dejections of the inhabitants of the former. A beautiful lake in the vicinity of Boston is made so filthy by a large sewer discharging in it, that twice a public cry of reprobation has been raised against it. The valley of one of our large rivers has been rendered almost uninhabitable by the drainage of a large inland city. It is now said that the citizens of Chicago are much of the time drinking their own sewage as a result of taking water from a lake with which their sewerage system connects, and we may add that the city which is not troubled by its system of drainage is the exception and not the rule.

The effects of pollution by sewage of wells, springs, rivers, and ponds used for domestic purposes, are so generally recognized that no attempt is made to collate the many, many calamities which have befallen cities, towns, villages, and families through ignorance or indifference as to what disposition is made of the refuse matter of dwellings, and we must also acknowledge that a comprehensive system of disposing of sewage must be inaugurated in the near future, both in towns and by every individual hamlet. The present methods of gathering in cess-pools or subterranean channels, which discharge in a manner to jeopardize health and comfort of ourselves and neighbors, must be abandoned for a system which shall dispose of and purify the sewage in a practical manner, or we must give up some of our large rivers for sewerage systems, or construct at enormous expense metropolitan systems, both of which have proved unsatisfactory or failures in Europe.

London's metropolitan system, which discharges in the maritime Thames about twenty-one miles below the city, of which so much was expected, and cited as an example Boston might imitate, has proved far from what was anticipated. The sewage instead of going to sea, or being diluted to an extent which would render it innoxious, is deposited by the tides above and below the mouth of the sewer in such a quantity as to cause a great cry of indignation from the inhabitants living along the banks of the river, and numerous petitions to Parliament asking for relief have been presented.

Torquay and Brighton draining directly into the sea have experienced similar results, and their systems are pronounced failures. The once beautiful bay of Naples is to-day a reeking pool of filth. A recitation of the many examples of pollution of rivers both in Europe and America, and the attendant evil, is unnecessary, but the following list of English cities where the courts have enjoined drainage in rivers suggest what we may anticipate in this country; Banbury, Blackburn, Chorley, Doncaster, Harrowgate, Leamington, Merthyr-Tydfil, Rugby, Tunbridge Wells, Warwick, Kendal, Birmingham, Bolton le Moors, Bradford, Coventry, Leeds, Halifax, and Rochdale.

In 1870 the Royal Commissioners reporting on the pollution of the Mersey and the Ribble stated that "sewage discharged in running water is not materially changed for many hours by oxidation." This they demonstrated by the following experiment: A volume of filtered sewage from a drain of London was mixed with nine parts of pure water. Analysis of this mixture showed it to contain per 100,000 parts 267 parts of carbonaceous matter and .81 parts of nitrogenous matter. It was exposed each day to light and air, shaken and drawn by small siphons in a manner to cause a fall of over three feet from vessel to vessel. At the end of 96 hours there remained 250 parts of carbonaceous matter and .58 parts of nitrogenous matter, indicating a loss of but 17 parts of carbonaceous matter and .23 parts of nitrogenous matter. At the end of 192 hours it had lost but 25 per cent. of carbonaceous matter and $33\frac{1}{3}$ per cent. of nitrogenous matter. This experiment was made in a temperature of about 68° F., and designed to show the change likely to take place in the current of a river running at the rate of one mile per hour, and carrying ten per cent. of sewage. They concluded there was not a river in England long enough to dispose of a moderate amount of sewage through oxidation.

I. Babut du Maris says, "it has been proved that the water of rivers do not lose a material amount of azote nitrogen in a run of over three hundred miles. And the Prussian Government has consequently forbidden the pollution of rivers and sea-ports by the discharge of the detritus of cities.

The effects of imperfect sewerage systems are forcibly portrayed in a paper printed in the *Boston Medical and Surgical Journal* of February 22 and March 1, 1883. In that paper Dr. Morton Prince collates many epidemics of typhoid fever for this cause. He says, "it is estimated that in this State (Massachusetts) alone there are ten thousand cases of typhoid each year," and every one knows a large proportion may be fairly charged to defective drainage. How imperfect sewerage causes this disease was well illustrated at Nahant, Massachusetts, in 1881, and thoroughly reported by Mr. Ernest Bowditch. A paragraph from page 246 of the Supplementary Report of the State Board of Health 1882–83 would properly introduce the question discussed in this paper, as the successful epuration of sewage by irrigation and agriculture depends upon where, and to what extent, nature provides in the soil for the elimination of filth. Mr. Bowditch says, after noting the improvement in the sanitary condition of the town the year following the epidemic, "While the conclusions as to soil recovery may be derived from insufficient premises, perhaps calling attention to the subject may lead to the discovery of facts warranting systematic research in this direction that may be of great sanitary value." Dr. Frankland wrote in May, 1881: "There are in nature powerful agents for the destruction of disease. It cannot be doubted otherwise the human race would long ago have been exterminated. The problem is not entirely solved, but experience appears to demonstrate this action on sewage employed in irrigation; for when known to be infected by cholera and typhoid fever in England it has never produced these diseases in the inhabitants living on the sewage farms and consuming the produce."

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[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, April 30, 1884.

Many and varied are the systems adopted and methods employed with the object of disposing of sewage. Surface drainage, cess-pools, subterranean drainage, and the pneumatic system of Liernur, are employed for collecting and discharging in rivers, ponds, bays, oceans, and on the land are the most common means of distribution. Filtration, precipitation, the employment of chemical agents, irrigation, and agriculture are some of the measures adopted for this purpose of epuration.

CESS-POOLS.

Depositing sewage in cess-pools is one of the most common as well as antiquated methods employed. They are emptied at intervals varying from one week to five or more years. It involves the concentration of fermentescible matter and the consequent generation of gases dangerous to health, beside the vitiation of subsoil water. The soluble organic matter contained in them is capable of very long journeys under ground, with the loss of coloring matter only, as many analyses have proved. Their use should not be tolerated, except the walls are made impervious to liquids, and their being emptied at short intervals. A writer on the subject says: "The time is not far distant when they will be pronounced a relic of barbarism."

DOWNWARD INTERMITTENT FILTRATION PRACTICED AT KENDAL, ENGLAND.

The population is about 14,000. There are 450 water closets connected with the sewers, which discharge 868,000 gallons per day. A reservoir of deposit was first constructed, which overflowed on a farm of about fifteen acres, with the object of utilization by agriculture. The area of the farm proved insufficient to epurate the sewage completely, and five acres of filter beds were added. These, with the farm, suffice to purify the water. In 1875 the products of one third of the farm, consisting of cabbages, beets, celery, and rhubarb, sold for $500. Oats and rye on another third $375, and on the remaining five acres $225 worth of hay was raised, making a total of $1100 worth of produce from fifteen acres. The application of the sewage cost $550.

The operation of the same system constructed by I. Bailey Denton at Abingdon, Great Malvern, and Halstead, England, and at Forfar, Scotland, has proved satisfactory, inasmuch as sufficient matter is eliminated to allow the effluent discharge into neighboring rivers, although it contains a large amount of putrescible matter, as indicated by analyses. It just escapes the ban of the Pollution Act.

THE PNEUMATIC SYSTEM OF LIERNUR

is employed at Amsterdam for a limited number of the inhabitants. The sewer pipes are made of iron, with air-tight joints. An air-pump makes a vacuum. Closets are opened simultaneously once a day in section after section of the city, the contents are drawn to the mouth of the sewer, from which they are carried away in barrels and deposited on the land. Its enormous cost bars its employment where any other system can be used.

UPWARD FILTRATION AT BIRMINGHAM, ENGLAND.

Population about 350,000. Eight thousand water closets are connected with the sewers, which discharge about 14,000,000 gallons per day in the river Tame. An injunction was obtained to prevent the discharge in the river unless the sewage was first purified. A reservoir of deposit was built, and a system of upward filtration, but complaint of the continued pollution of the river necessitated its abandonment. The city then attempted irrigation and agriculture, but this was also enjoined. Finally, after much delay and litigation, the city bought 120 acres of land, and on the advice of an engineer constructed a new reservoir of deposit, where they treat the sewage with lime. To 13,434,860 gallons is added thirteen tons of lime each day. This clarifies the water to a certain extent by causing a deposit of about 300 tons per day, which is carted out and buried on the land.

It has been an easy matter to separate material in suspension from drain water by filtration, but as this represents only about one seventh part of the value of sewage for fertilizing purposes, the process, though simple, has never proved remunerative, and chemists have been employed to suggest agents which would precipitate the soluble matter, which represents six sevenths of the value. Lime has been employed at Tottenham, Blackburn, and Leicester, but the Royal Commissioners report of each a failure, inasmuch as the drain water after being thus treated contains a large amount of putrescible matter.

TREATMENT BY LIME AND CHLORIDE OF IRON AT NORTHAMPTON, ENGLAND.

To 250,000 gallons of sewage is added about 100 quarts of lime and six quarts of chloride of iron, which is thoroughly mixed, and afterwards passed by upward filtration through a layer of calcinated iron eight inches thick. The water comes out without color or odor, and is then allowed to flow into the river. At first there was no complaint, notwithstanding the presence of a large amount of putrescible matter, but later the river became offensive, and the court has enjoined the discharge there.

THE A. B. C. METHOD OF SILLAR.

A mixture consisting of six hundred parts of alum, twenty-five parts of burned clay, one part of blood, ten parts of salt, nineteen hundred parts of clay, fifteen parts of animal charcoal, five parts of magnesia, twenty parts of wood charcoal, ten parts of manganet of potash, two parts of calcined magnesia, is added to the sewage, to be treated in a proportion of about one pound of the mixture to 250 gallons, thoroughly agitated, and then allowed to settle in large reservoirs, which are alternately emptied, and the detritus taken out dried, and sold as a valuable fertilizer. The residuary water still contains putrescible matter, and notably more ammonia than the sewage before being treated.

PRECIPITATION BY CHEMICAL MEANS AT COVENTRY, ENGLAND.

Population 40,000. Five thousand water closets are connected with the sewers, which discharged 2,289,000 gallons of sewage in the river Sherburne. Complaint and litigation was the result. A reservoir of deposit was constructed, after which the sewage was allowed to filter across a gravel bed three feet thick. This proved unsatisfactory, as only solid matter was taken out, and the court again interfered with an injunction. A contract was then made with a fertilizer company, which agreed to epurate the sewage for fourteen years at $3750 per year, the company engaging to erect building and machinery, and furnish the necessary tools. An extractor first separates the solid matter. The liquid is then run into caldrons under the first group of buildings. Agitators mix impure sulphate of alumine with it at a boiling temperature. It is then run into a second set of vessels, where milk of lime is added and thoroughly mixed, then discharged alternately into four reservoirs in the open air, which are cleaned every fourth day. The liquid thus treated comes out sufficiently pure, and is allowed to filter over about four acres, and finally find its way into the river. Thirty tons of detritus is taken each day from the reservoirs, piled to dry, and subsequently treated by artificial heat. The works are not in operation at night, except the discharge of sewage on the filter beds. Twenty-two tons of coal, one ton of sulphuric acid, nine tons of sulphate of alumine, and four tons of lime are used each week. The company's net loss is about $7500 each year.

After long and costly experiments the greatest chemists have declared that in practice the only manner to epurate sewage is to send it on the land, which eliminates the polluting elements and fertilizing matter for the good of vegetation and the soil. Dr. Angus Smith says: "In all cases the best results are obtained by irrigation." And Dr. Carpenter certifies, in a notice read at the International Congress in 1881, "the only way ammonia could be eliminated from sewage is by irrigation."

A commission appointed by Parliament, composed of Messrs. Dennison, Frankland, and Morton, reported: "The actual resources of chemistry do not permit the hope that the polluting matter dissolved in sewage can be precipitated and sent away by any appliance of chemical reaction, and unless new chemical laws are discovered it is useless to attempt the employment of chemical agents. Epuration must be confided to Dame Nature."

"Millions of dollars have been expended in France in chemical experiments on sewage, all of which have been condemned." *I. Babut du Maris.*

At the Women's Prison in Sherborn, Massachusetts, epuration of sewage is attempted by what is known as Colonel Waring's method. Five acres of land are here employed in the water-shed of Lake Cochituate about two miles from the lake, with which it is connected by a brook, one of the tributaries of Boston's water supply. The sewage is distributed over the land by tile with broken joints laid fourteen inches below the surface, five feet apart. The effluent drainage is provided for by cross sections of tile laid five feet under ground, which, after collecting the water, discharge in the brook. This system is said by the prison authorities to work satisfactorily. "The water coming from the ground is as clear as spring water, and was selected by an expert as such on inspection." This only indicates clarification, and we regret that analyses made were not published, as no one seems to know where they are at the present time. There can be no doubt but the grass, which is the vegetation on the land, takes nourishment from the sewage, for the lines of drain are clearly marked by a better growth directly over them which does not extend to the intervals between. One of the defects of this system has already been experienced. Insoluble matter has filled the interstices between the tile, and prevented fluids from passing through, necessitating their being taken up and relaid. At a depth of fourteen inches the influence of vegetation and the infusoria must be lost on much of the sewage, which was probably disclosed by the analyses, rendering it desirable they should be pigeon-holed. Since writing the preceding, a visit to the prison more than confirms the anticipated objection to the system, and the following analyses, obtained in the office of the State Board of Health, are proof beyond dispute that the system amounts to nothing by way of purifying the sewage; and that the lake is practically a mammoth cesspool, the contents of which the citizens of Boston must drink: —

WOMEN'S PRISON SYSTEM. PARTS PER 100,000.

	Ammo.	Alb. Ammo.	Chlo.	Residue.
Supply End.	.240	.018	9.58	68.5
Flow End.	.232	.034	9.22	69.0

The exclusion of air from the sewage of this system keeps it fresh, the nitrogen is in an organic state, and consequently of no use to vegetation. A fertilizer should become ammoniacal by decomposition before it is capable of assimilation by plants. Analyses of sewage in Europe reveal the fact that there is no loss of fertilizing material in a closed conduit having a run of seven and one half miles. And examinations of the soil of sewage farms show that in all instances the sand one foot below the surface is as pure and white as that where irrigation is not practiced.

In the Mystic Valley the sewage of tanneries has for several years been pumped by the city of Boston into small reservoirs of deposit obviously too small to eliminate even the matter in suspension. From the tank there is an overflow into a shallow ditch several hundred feet long, in which are set several brush dams, after which it discharges into Mystic lower basin. The result of this treatment is to start putrefaction by warmth and free exposure to air, and thus produce a stench which people living in the vicinity claim has greatly reduced the value of real estate. It does not merit extended description as the efforts thus far made merely amount to a flirtation with the subject.

A few of the farmers living along the Blackstone River are beginning to appreciate the valuable fertilizing material conveyed by the current from Worcester, Mass. One farmer states that his meadow lands which were practically abandoned, it not paying to harvest the grass, now produce crops which add several hundred dollars a year to the value of his farm. Others are placing obstructions in the river with the object of turning the water on the land.

During the past ten years sanitarians and engineers have made great progress towards a solution of this question, and it is fair to presume, from the great increase in the number of cities and towns that have adopted irrigation and agriculture as the means of purifying sewage, that this method has proved the most satisfactory. Berlin has two large farms devoted to this object, one of 2035 acres and another of 1818 acres. A great many chemical experiments were tried before the adoption of the present system. They proved very expensive, and none purified the water, although many clarified it. Finally, after experimenting in irrigation and agriculture for eighteen months on a little field of about three hectares (less than seven and one half acres), such favorable results were realized that this system was adopted for the city, — the eminent Virchow working heartily in its favor. At the present time 1067 acres suffice to purify 15,060,000 gallons per day, the drainage of four fifths of the city, containing a population of over 600,000. There is some odor at the opening of the large sewer, but in the fields there is no smell, and the sanitary condition is all that could be desired. There never has been any complaint from the numerous adjoining habitations, and the effluent drain water of the farms is pure and clear, it being impossible to recognize by microscopy or chemistry any influences of the sewage. Vegetables and fruit trees grow luxuriantly on the land, and their roots make a perfect filter. Thirteen and one quarter tons of hay has been cut per hectare (a little less than two and one half acres).

(To be concluded.)

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CASE IN PRACTICE. CHRONIC PLEURITIS WITH EXCESSIVE SANGUINOLENT EFFUSION.[1]

BY CHARLES R. CRANDALL, M. D., PORTLAND, MAINE.

MRS. S., aged fifty-eight, of large stature and scrofulous temperament, always had good health until the present illness. When I was first called to see her, which was several weeks prior to the attack now referred to, she complained of difficulty with her breathing accompanied by a cough. Making physical examination of the organs of the thorax I found a localized bronchitis in the posterior lobe of the left lung, in the region of the lower part of the scapula. I noted also that she showed symptoms of marked prostration, and that her digestion was impaired. She was benefited by the treatment instituted, and soon after passed from observation.

In about three weeks I was again summoned, and was informed that she had never fully recovered her strength, although she had followed a course of tonic treatment which I had suggested. She was perceptibly weaker than when I first saw her, and her daughter complained that she was restless, irritable, wakeful, and suffered some from pain apparently due to flatulence. Despite supporting treatment and medication as indicated, she steadily declined in general health for a week or so longer. Finally her daughter informed me that at times her mother seemed a little short of breath, and especially so at night and during the day when she changed her position from the bed to her chair in an adjoining room. Again making a thorough examination I found the kidneys to be normal, but that the quantity of urine was scanty. The liver was also normal so far as could be ascertained. The heart was in a healthy state, but its action was feeble and slightly irregular. The left lung remained in good condition, although the respiratory murmurs were abnormally distinct and percussion resonance intensified. Upon examining the right lung a wonderful revelation was met in the form of an excessive pleuritic effusion, which evidently nearly filled the entire pleural cavity. On auscultation the respiratory murmur was nearly absent in every part of the lung, save some bronchial respiration in the upper portion. On percussion, with the patient in a sitting posture, dullness and flatness were elicited all over the posterior, lateral, and anterior surfaces of the right lung, excepting a small area on the anterior surface above the mammary gland. Vocal fremitus was greatly diminished. The chest was dilated over an inch, but the condition of the intercostal spaces could not be inspected owing to the presence of a thick layer of fat. But the most remarkable feature regarding the excessive effusion thus discovered was the fact of its rapid accumulation without one solitary symptom of chill, fever, pain, or distress calculated to call the attention of either the patient or the physician to the process taking place. The only symptom of a nature to attract attention to the chest at all was some difficulty in breathing, but this was so slight that it resembled the disturbance often noticed in cases of debility, and accompanied by a moderate degree of heart failure.

On the same day that I made the above diagnosis I performed the operation of thoracentesis, assisted by Dr. S. H. Weeks, and removed one hundred and fifty ounces (or over four quarts and a half) of fluid, the color of which was about the shade of a dark, thick port wine. The patient bore the operation without any untoward symptoms, and as the fluid escaped confessed to feeling a sense of relief. Air immediately refilled the entire lung, causing a little pain and slight cough. The respiratory murmur soon became quite normal, while the percussion note was greatly improved.

The fluid proved to be highly albuminous, and when tested by heat it so solidified in the test tube that it had to be broken up to favor removal. Examining the effused fluid under the microscope it was found to contain an abundance of fresh, red blood corpuscles, many of which arranged themselves in rows like rouleaux of coin, while others existed separately, and were shrunken and contracted into angular and star-like shapes. There were also numerous leucocytes having normal characteristics, and a few endothelial cells. Pus was not present, nor were there any indications of an attempt towards organization. The specific gravity was 1022.

REMARKS.

Two months have now passed since I performed thoracentesis upon this patient, and the results have been most gratifying. Effusion recurred slowly to a moderate extent, not sufficient, however, to justify a repetition of the operation. The condition of the lung has remained good, and the general health of the patient has steadily improved. For several weeks she has been dressed and about her house, and of late has done a little work, and gone out of doors.

The foregoing case affords many points of practical clinical interest, but I will avoid trespassing upon the valuable time of the meeting longer than to touch upon a few of the most important.

(1.) It illustrates the inestimable value of thorough investigation. This patient did not have a single sign or symptom well calculated to call attention to the diseased pleura. There had not been any pain, chills, fever, sweats, lividity, or acceleration of pulse. True she had been annoyed by slight failure of breathing upon exertion, but no more than we often see in debilitated patients whose respiration and circulation are practically normal. When I informed her that there was a collection of water in her pleural cavity she ridiculed the idea. Had I taken her word regarding the condition of her thorax, I should have been misled in a woful manner. The condition verified the observation of Flint, that chronic pleuritis is often developed imperceptibly, and that it is likely to be overlooked by those who do not employ the physical methods of examination.

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[1] Read before the Portland Medical Club, April 24, 1884.

(2.) The diagnosis of uncomplicated latent or chronic pleural effusion is easily made when it exists to any extent. The history of the case often aids materially, and especially so if it discloses difficult breathing, insufficiency of breath, a dry, hacking cough, and ill-defined pain or uneasiness in the lower lateral portion of the thorax. Now if to this be added a high-pitched percussion note at the apex of the lung with decided dullness or flatness at the base, feeble, or inaudible vesicular murmur over the portion of the lung, where dullness is most marked, decreased vocal fremitus where the effusion is greatest, and increased percussion resonance on the healthy side, accompanied by a marked accentuated vesicular murmur, a group of ordinary signs and symptoms are met with which are characteristic and unmistakable. Hydrothorax is to be excluded by the absence of cardiac and renal disease, and by the fact that the accumulation is unilateral instead of bilateral; but if doubt exists the introduction of a large-sized hypodermic-syringe needle, or one of the small aspiratory needles, will quickly clear up any obscurity. Exploratory punctures are easily made, and are of great service, for they aid in diagnosticating, convince both the physician and the patient, and display the character of the fluid if any be present.

(3.) Another practical point is that diagnosis should be made early, for the presence of a pleural effusion of any extent is always prejudicial. It deprives the patient of the necessary amount of oxygen, burdens the heart by interfering with the pulmonary circulation, and impairs digestion and nutrition by inducing secondary congestion of the liver and stomach. Moreover, the longer an excess of effusion remains in the pleural cavity the greater the danger of its undergoing degenerative changes and giving rise to empyema. Prognosis is rendered much more favorable by an early detection of the effusion, and a correspondingly prompt treatment. It is the neglected cases which more often give rise to malnutrition and tuberculosis.

(4.) Again this case displays in an impressive manner the great value of thoracentesis or paracentesis as a therapeutical agent. Here was a condition where, in all probability, ordinary absorbent and alterative remedies would have been powerless, owing to the enormous quantity of fluid present, or had they by chance afforded relief it would at best have been a long and wearisome process. On the contrary, this valuable method at once reëstablished normal respiration, and also favored circulation and general nutrition to an extent which soon became very evident. In addition to prompt relief, it promoted the action of remedies to such a degree that permanent improvement rapidly ensued, and reaccumulation was largely prevented.

(5.) In regard to the extreme bloody color of the effusion, it was, to say the least, very suspicious and suggestive. As it began to flow, the first thought was that the aspirator needle had punctured a large blood-vessel or else had wounded the structure of the liver or lung. Immediate examination, however, showed that the needle was properly entered, and that the peculiar fluid was only a highly tinged specimen, and by no means pure blood. The presence of blood under such conditions is ever suggestive of hæmorrhagic effusion due to malignant or tuberculous disease, but the history and symptoms in this instance were not of a character to sustain either theory. On the contrary, it was the opinion of both Dr. Weeks and myself that the presence of blood was due to the state of the patient's system, and to the high degree of congestion of the pleural surfaces. It is not at all impossible that the distention and weight of so much dense liquid favored exosmosis of the blood corpuscles, and ruptured some of the smaller vessels. The remarkable recovery of the patient is confirmatory of the view that the blood effusion did not originate in either tuberculosis or malignant disease.

(6.) Lastly I will say a few words regarding the treatment instituted and carried out after thoracentesis had been performed. As I estimated the case I saw three chief indications for medicinal remedies: —

(1.) To improve digestion and nutrition.

(2.) To promote the action of the heart and kidneys.

(3.) To further absorption by counter-irritation.

In order to meet the first I kept her upon a tonic composed of the fluid extract of cascara sagrada and the tincture of nux vomica given in the elixir of calisaya. I believed that more would be accomplished by stimulating the power and function of her blood-making organs and combating a condition of habitual constipation than by acting more directly upon the entire volume of blood with iron, as is generally advised. Conjoined with these remedies I advised a substantial albuminous diet of milk, eggs, beef, stale bread, and coffee of moderate strength. It is to be ever borne in mind in the treatment of this class of cases that the effusion is highly albuminous, and the demand for a restoration of this vital material to the economy is very great. Excessive waste needs to be counteracted by a corresponding supply.

With a view of stimulating the action of her heart and kidneys, and thereby promoting absorption, I have from first to last maintained the action of carbonate of ammonia given in Trousseau's diuretic wine. Regarding carbonate of ammonia in cases of pleural effusion, Bartholow says that "when an effusion is poured out the only agents which possess the property of resolving it are alkalies, and the most efficient of these is ammonia." The diuretic wine, containing as it does digitalis, acetate of potash, squills, and a mild stimulant, afforded a combination which met well the indication for a heart tonic, diuretic, and alterative.

For counter-irritation, employed with a view of modifying diseased action and furthering absorption, I used a succession of cantharidal blisters over the lower portion of the thorax on the affected side, and also the tincture of iodine. All and all the case is a most satisfactory illustration of the great value of surgical and medical therapeutics.

— A correspondent of the *Medical Record* writes *à propos* of Darwinism and circumcision: "The only explanation I have ever heard given by a scientific man to the fact of Jews continuing to be born with foreskins is the witty repartee, attributed to Professor Huxley, who immediately answered the question, when propounded by a country clergyman, with the quotation, 'There 's a divinity that shapes our ends, rough-hew them how we will.'"

PROGRESS IN DENTISTRY.

BY WILLIAM HERBERT ROLLINS.

A.

1. — DEVELOPMENT OF LOWER JAW.

Dr. J. Bland Sutton[1] states that the lower jaw is developed from six centres, each one of these corresponding to a separate bone in fishes. The following liable gives the names of the centres of ossification and the corresponding bones in the lower orders : —

Centre of Ossification in Man.		Corresponding Bones in Fishes, etc.
Mento-Meckelian	=	Mento-Mechelian.
Angle	=	Angular.
Condyle	=	Articular.
Coronoid	=	Surangular.
Splenial	=	Splenial.
Dentary	=	Dentary.

In his investigations he took as a guide this rule: "Whenever a nerve passes through a bone it marks the confluence of two or more ossific centres." Applying this to the lower jaw, we have to deal with three nerves: inferior dental, mental, mylo-hyoid. The inferior dental enters the bone by a foramen formed by the union of five ossific plates, the coronoid, condyloid, dentary, angular, and splenial; the nerve then travels in a tunnel formed on the outside by the dentary, and by the splenial on the inner side. The branches which go to the teeth pass up the foramina left between the splenial and dentary plates.

The mylo-hyoid runs in the groove which once lodged Meckel's cartilage.

The mental passes out of the bone through a fenestra formed by the dentary and mento-meckelian ossifications. The paper is too long to give more than a very brief abstract, though it is one of the most interesting investigations of the year.

2. — POLYGNATISM.

Dr. N. Meyer[2] reports a case in a first-born child of healthy parents. At birth there was a swelling about the size of a walnut on the left and outside the normal jaw. As the lower lip was large, a piece was removed eighteen months after birth. The first dentition did not begin till the fifteenth month, but was otherwise normal. At seven years a tooth erupted from the tumor; this was followed by nine others. At the age of fourteen the jaws presented the following appearance: In the upper jaw the teeth were normal. In the normal lower jaw there were four incisors, one canine, two bicuspids, and three molars. The supplementary jaw contained two molars, one bicuspid, two incisors, the other teeth having been extracted.

3. — DOUBLE CLEFT IN PALATE.[3]

The child was four months old. Instead of the ordinary medial fissure there was one on each side. The part between these clefts was one quarter of an inch wide, and extended into the posterior wall of the pharynx, with which it was continuous. The bony septum completely separated the pharynx into two parts. The most probable explanation of this peculiar condition is that the notochord, instead of ceasing at the pituitary fossa, extended further forward, the blastema surrounding it uniting with the plate descending from the coalesced trabeculæ cranii, forming the nasal septum.

4. — UNILATERAL HYPERTROPHY OF LOWER JAW.[4]

The patient was thirty-six years old. The vertical length of right ramus was three inches, that of the left one and a half inches. No cause could be found for the hypertrophy.

5. — EARLY ERUPTION OF MILK TEETH.

Magitot[5] says no interference should be allowed in the case of the early eruption of milk teeth, as in most cases the teeth do regain a certain amount of firmness in spite of their short roots. The only serious inconvenience caused by them is the difficulty of nursing, which may be overcome by artificial teats. A sufficient reason for not extracting is the chance of accidents, particularly of fatal hæmorrhage.

6. — SPONTANEOUS FRACTURE OF THE TEETH.

Several cases have been reported during the year. In each the symptoms have been alike. The patient heard a loud report, as though a gun were fired near the ear. The fractures did not come when the teeth were in use, so that they could not be traced to any hard substance. Various explanations have been given. One writer in describing his case suggests that the explosion was caused by the pressure of gas in the pulp chamber. Colman[6] denies this, as he has seen a fracture of this kind in a tooth with a living pulp. He thinks the cause is calcification in an inflamed pulp. He believes such a pulp is in a condition of tension; when this reaches a point greater than the resistance of the dentine fracture must result.

7. — THIRD DENTITION.

The existence of a third dentition in man has been denied by most writers. A case is reported in the *Dental Jairus* of a man ninety-five years of age who has recently cut nine new teeth, and there is evidence of others not yet erupted.

B.

1. — ORGANISMS PRESENT IN THE MOUTH.

Dr. W. D. Miller gives the following as almost always present: (1.) Leptothrix buccalis. (2.) Vibrio regula. (3.) Clostrydium butyricum. (4.) Mycoderma aceti. (5.) Saccharomyces mycoderma. (6.) Spirochete dentium. (7.) Leptothrix pusilla. (8.) Penicillium microsporum. (9.) Bacterium subtile. (10.) Bacterium termo.

2. — LEPTOTHRIX GIGANTEA.

Dr. W. D. Miller has discovered a new form of leptothrix, to which he has given this name. He has found it in the mouths of cattle, horses, dogs, and hogs. It appears as masses of threads radiating from the point of attachment. The threads are developed from cocci. The older threads are segmented into bacilli and cocci, so that in this fungus there can be no doubt of the connection of these three forms.

3. — RELATION OF FOOD TO TEETH.

Kirk[7] has under his care the teeth of four hundred children in the Pennsylvania Institute for Deaf and Dumb. He has observed an entire change in the children's teeth when they have been in the institution for a year. The teeth become so hard that it is necessary to retemper the instruments to make them hard enough to cut the dentine in preparing the cavities for filling. The teeth become more firmly placed in their sockets, making extraction difficult. Many cases of spontaneous arrest of caries and of new formation of dentine are seen. These favorable changes are due to the food, which consists largely in preparations of maize, oats, and wheat, from which the layer just under the silicious coating has not been removed in milling. Such grains, therefore, contain a large proportion of bone-forming material. With these coarse foods a liberal supply of milk and a small amount of meat and sugar are given.

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[1] British Journal of Dental Science, May 15, 1883.

[2] Archiv für [illegible] Chirurgie.

[3] Dr. Ma[illegible], British Journal of Dental Science, page 1144, 1883.

[4] Heath in British Journal of Dental Science, page 474, 1883.

[5] British Journal of Dental Science, May 16, 1883.

[6] British Journal of Dental Science, Dec., 1883.

[7] Independent Practitioner, January, 1884.

4. — CAUSES OF DEGENERATION OF THE TEETH IN THE BLACKS OF THE SOUTHERN STATES.

Dr. A. A. Hilzim[1] attributes this to the change in food and habits since the abolition of slavery. Formerly the negroes lived mostly on corn-meal and meat. To these were added, for breakfast, coffee; for dinner, vegetables. Sometimes wheat flour took the place of corn, but it was ground on the plantation, and not bolted. This food, served at regular hours and combined with plenty of fresh air, exercise, and sleep, made the teeth strong and hard. Now the negroes eat fine white-flour bread, spend a large part of their wages in sweetmeats, eat at irregular times, and sleep too little.

5. — TEETH IN INHERITED GOUT.

Mr. Duckworth,[2] as the result of an examination of three hundred cases, states that the teeth are remarkably large, regular, and strong. They are well enameled and free from decay. The edges of the incisors are not crenated. The color is yellow. The implantation firm. In these cases there is an abundance of tartar. The teeth are usually lost from absorption of the sockets.

6. — TEETH IN DIABETES.

Dr. Magitot[3] says an examination of the mouth always shows a lesion of the alveolar border. This begins by a slight alteration in the position of the teeth. Then follows an alveolar catarrh, which results in a marked absorption of the alveoli, causing the teeth to loosen and drop out, if the patient lives long enough.

7. — TEETH IN LOCOMOTOR ATAXY.

Dr. P. J. Thompson[4] gives the appearance of the teeth and jaws in two fatal cases. In the first case sections of the trifacial nerve near the pons Varolii showed sclerosis; the white substance had disappeared; the axis cylinders were choked in a bed of connective tissue; a few nervous bundles were healthy. In the second case both trifacial nerves were much atrophied, the left one being reduced to a thin gelatinous filament; the Gasserian ganglion on the same side was a flattened band of connective tissue. In both these cases the teeth had been lost, and the jaws presented a senile appearance from the absorption of the alveoli. These changes were thought to be caused by the sclerosis of the trifacial.

8. — TEETH IN INHERITED SYPHILIS.

A. Fournier[5] defines a syphilitic tooth as one whose development has been arrested in the intra-follicular state by syphilis. The results are arranged under four heads: Dental Erosions, Microdontism, Dental Amorphism, Vulnerability. Dental erosions are of many kinds. They consist of a more or less grooved or pitted condition of the enamel. The most important from a diagnostic point of view is the curved border of the incisors, to which the name of Hutchinson is attached. Fournier does not feel quite sure that other diseases may not cause this. (Magitot, in a paper read before the last International Medical Congress, stated that these grooves were caused by eclampsia.) The other erosures are not of much diagnostic value, as many other diseases may produce them.

Microdontism. This is a diminution in the size of the teeth. It is never a characteristic of the entire denture, and is usually confined to a single tooth standing among well-developed neighbors.

Dental Amorphism. This shows itself in several ways: (1.) Some tooth, a canine for example, takes the form of an incisor. (2.) Additional cusps may appear; the first molar often has a well-developed cusp on the side. (3.) The incisors take the form of axe blades, the crown being much too large for the necks. (4.) One or more teeth lose their characteristic form, and appear as irregular masses of enamel and dentine.

Vulnerability. The statements which the writer makes here are too vague to be of any diagnostic value.

C.

1. — EXTRACTION FOR REGULATING.

It has always been a matter of dispute which teeth should be taken out where room is required in regulating. At almost every dental meeting this subject comes up, and very rarely is anything more reliable than personal opinion advanced. Dr. Perry has attacked the problem in a sensible way, and gives his results in *British Journal of Dental Science*, January 1, 1884. He has tabulated 7277 extractions for disease, and finds that 2823 of these were first permanent molars, 737 were first bicuspids, and 944 were second bicuspids. As the statistics show that more first molars are lost than bicuspids we should, as a general rule, take out the first molar where the choice must be, as is usually the case, between this and a bicuspid.

2. — TRANSPLANTATION OF TEETH.

Dr. Redard read a paper at the last meeting of the French Association for the Advancement of Science, held at Rouen, in which he stated that out of seventy-seven cases seventy-five were successful. The operation is as follows: After extraction hold the tooth in a cold, wet cloth, and cut off the end of the root. Syringe out the socket with a weak germicide; then replace the tooth as soon as possible.

3. — FRACTURE OF JAW.

A curious case is reported in *British Medical Journal* for September 15, 1883. The patient, in falling, struck with his lower jaw a beam, which made a small cut. This was the only evidence of the accident. Two weeks later, while eating, he felt as if struck by a blow. An examination revealed a fracture.

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[1] Southern Dental Journal, March, 1884.

[2] British Journal of Dental Science, June 1, 1883.

[3] British Journal of Dental Science, page 473, 1883.

[4] British Journal of Dental Science, page 18, 1883.

[5] Dental Cosmos, January, February, March, 1884.

4. — NEURECTOMY OF INFERIOR DENTAL.

Dr. Sonnenberg[1] describes a new operation. The patient's head is held firmly back. An incision is begun one centimetre in front of the angle of the jaw. This is carried forward along the edge of the body for four centimetres. The inner surface of the bone is cleaned up to the internal lateral ligament. The insertion of the internal pterygoid is cut; a blunt hook is passed around the nerve, which can then easily be brought to the external opening, and a piece removed. The advantages are: a small wound; the operation is an easy one; there is little bleeding; the capsule of the submaxillary gland is not cut; the wound is a favorable one for healing; and, lastly, the scar is small and not conspicuous.

5. — TRANSFUSION FOR HÆMORRHAGE FOLLOWING EXTRACTION OF A TOOTH.

The patient, a soldier, aged twenty-two. The bleeding was at first slight, but continued all night. Plugging the alveolus, cautery, ergotin, perchloride of iron, ice, and various other things were tried. Ten days after the operation, the patient being almost dead, four ounces of blood were injected into the cephalic vein. The patient rallied, but the bleeding increased. A second transfusion was tried next day. During the operation the heart stopped. The length of time the heart remained quiet is not given. It began again, and from that time the patient made a rapid recovery.

6. — UNITED FRACTURE OF TEETH.

Dr. Van Horne reports[2] a case of fracture of an upper lateral, near the alveolus. A year after the accident the tooth was alive and firmly united.

(To be concluded.)

Reports of Societies.

ONE HUNDRED AND THIRD ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

PRELIMINARY DAY.

ON Tuesday, June 10th, as is the custom, the Fellows of the Massachusetts Medical Society were entertained after the manner common to the day preceding that of the annual meeting of the Society.

AT THE HOSPITALS.

At ten o'clock A. M. the Fellows responded to invitations from the Massachusetts General, the City, the new Children's, and the Lying-in Hospitals, at each of which they visited the wards and witnessed certain operative procedures.

At the City Hospital the visitors were shown through the surgical wards, which presented a very attractive appearance, and where were found many cases of unusual interest. The plaster posterior splint so generally used here in treatment of fractures of the leg, and which was the subject of a paper during the afternoon, was found in the various wards in its different applications. One of the cases of interest was a congenital dislocation of the hip in which an attempt is being made to restore the head of the femur to its proper position. At the rear of the main buildings could be seen the tents in process of erection for summer use. In the operating room the femoral was tied for aneurism of the calf by Dr. Homans. Several cataracts were removed by Dr. Wadsworth. Other operations of everyday occurrence were also done. The traumatic surgery of the hospital was exemplified by the case of a boy who had shattered his hand by a cartridge which he had exploded by a hammer. The boy was brought into the hospital during the visit. The application of plaster of Paris to the treatment of club-foot was also shown.

AT THE NEW MEDICAL BUILDING.

At twelve o'clock M., and at the new Harvard Medical building, the Fellows listened to an address by PROF. H. P. BOWDITCH on Methods of Instruction and Research in Physiology, with Demonstrations. Professor Bowditch received the Fellows in the lower lecture room, and there explained the arrangements which adapted the room for experimental lecture courses. Also described the lecture table with its movable central portion which can be wheeled into the physiological laboratory for the preparation of an experiment and be brought into place again for demonstration in the lecture room. A duplicate central portion is similarly used in the chemical laboratory, the lecture room being common to both departments. The fixed portion of the table contains at one end a pneumatic trough, at the other a sink, and is also supplied with gas, water, electricity, and compressed air. The convenience of the blackboards serving also for suspension of diagrams by means of a brass rod at the top and being movable by weight and pulley was explained. A hood revealed by pushing up the blackboards, and useful in experiments which develop unpleasant odors, was shown.

The Fellows being then invited into the physiological laboratory, witnessed experiments connected with original work now in progress and examined the apparatus, which had been arranged for their inspection. The demonstrations were the following: —

(1.) Blood pressure experiment on dog under ether and morphia. Effect of irritation of vagus nerve on rate of heart beat.

(2.) Study of the vaso-motor nerves of cat under ether and curare. Effect of irritation of sciatic nerve on size of leg recorded by means of the plethysmograph.

(3.) The same experiment with frog's legs.

(4.) Demonstration of the action of the semilunar valves of the ox.

(5.) Demonstration of the force of ciliary motion on the mucous membrane of the frog's mouth.

(6.) The effect of changes of temperature on the rate of beat of the frog's heart.

(7.) The phenomenon of subjective complementary motion shown in the after-image of a revolving spiral figure.

(8.) Reaction time studied by means of the pendulum myograph.

(9.) The development of the eggs of the snail studied under the microscope.

(10.) The methods of studying the bacillus of tubercle, with microscopic demonstrations.

(11.) Apparatus for artificial digestion with automatic regulation of temperature.

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[1] Medical Times and Gazette.

[2] Items of Interest, February, 1884.

PROFESSOR DWIGHT'S ADDRESS.

Prof. Thomas Dwight then met the Fellows in the anatomical lecture room, and addressed them on Modern Methods in Anatomy, with demonstrations. After an eloquent acknowledgment of the debt which modern anatomists owe to the pioneers of anatomy, Professor Dwight showed how errors still extant in modern works on anatomy are being corrected by the study of the anatomy of frozen subjects. Among others he instanced the position of the stomach, long and generally supposed to be horizontal, but really markedly oblique; also the form and relations of the liver, the shape and relations of the pharynx, etc. He then exhibited very fine frozen sections prepared by himself, and demonstrated the relations of various parts, thus showing the immense value of these sections. Proceeding to say that of all anatomical preparations he considered corrosion and metal methods superior to all others, he exhibited very beautiful examples of these methods, the corrosion specimens having been prepared by himself, and the metal specimens (in which Wood's fusible metal was used) by Dr. Mixter. He also showed a "soft preparation," an arm of the well-known case in which the humerus disappeared. The muscles were still flexible, and color good, although the preparation was made twelve years ago. Glycerine was the principal element in the preserving material. Dr. Dwight advocated this method of preservation for use of teachers.

Following his address Dr. Dwight invited the Fellows to a closer examination of his extremely fine models and preparations. The Anatomical Museum is a handsome room, but, very unfortunately, darkened by the masses of wood-work, in the place of which light iron should have been used.

At three o'clock p. m. the Fellows were called to order in Huntington Hall by President Hosmer to listen to the paper of Dr. George W. Gay, of Boston, on

THE PLASTER POSTERIOR SPLINT IN THE TREATMENT OF FRACTURES OF THE LEG,

and witness its practical application.

After explaining the nature and uses of the splint Dr. Gay, with a corps of assistants, made and applied the same to subjects. The material which forms a basis for the plaster is ordinary gauze. Measurements of the patient's leg having been taken, several thicknesses of gauze are so cut as to fit the leg when applied. The outside layer of gauze is tongued along its edges, and after the plaster paste has been applied and worked into the layers of gauze these tongues are brought forward and lapped over the inside layer, and thus bind the whole firmly together. A roller bandage of soft cotton-flannel having been already applied to the leg of the patient the splint of gauze and plaster is applied over this, its edges being brought from behind forward and lapped over the leg in front until they meet in the median line. An ordinary roller bandage is applied over this, and the splint is complete. Its advantages are (1) that it adapts itself to a rapidly swelling leg, its anterior edges invariably separating in direct ratio with the pressure, and thus need not be removed; (2) that the surgeon can apply it to any form of fracture, and leave it for the night without fear of sloughing or gangrene from unrelieved swelling, etc.; (3) the outer bandage and the splint can be removed without injury to the splint, which can be reapplied as firmly as before by means of straps which buckle; (4) it is a splint always open in front, and never requires to be cut open as in the old form of plaster splint, which often was spoiled during removal.

The Adjourned Meeting.

At four p. m. in the same place the Society held an adjourned meeting in accordance with the vote passed at the last annual meeting. President Hosmer in the chair.

ADOPTION OF THE CODE.

Upon opening the session the President called attention to the fact that the Code of Ethics, although accepted by the Councilors, had never been adopted by the Society, and asked for a motion. It was moved and carried that the Code be adopted.

COMMITTEE ON LEGISLATION.

Dr. H. O. Marcy then offered the ensuing motion: "*Resolved*, That a committee of one from each District Society be appointed with authority to secure from the Legislature an enactment to protect the public from incompetent and irregular practitioners of medicine."

This motion won an affirmative vote.

The Committee appointed is as follows: G. W. Doane, Barnstable; H. M. Holmes, Berkshire; N. Paige, Bristol North; J. Dwelly, Bristol South; W. Cogswell, Essex North; G. Osborne, Essex South; F. J. Canedy, Franklin; W. Holbrook, Hampden; F. Nickerson, Middlesex North; G. J. Townsend, Middlesex South; J. M. Harlow, Middlesex East; J. Stedman, Norfolk; B. A. Sawyer, Plymouth; H. O. Marcy, Suffolk; J. O. Marble, Worcester; J. P. Lynde, Worcester North.

AMENDMENT OF THE BY-LAWS — ADMISSION OF WOMEN.

Dr. H. I. Bowditch then offered this motion: —

Resolved, That the first four lines of By-law I. be stricken out and the following be substituted: "Candidates for admission into the Massachusetts Medical Society may be either *male* or *female*, and every candidate must by proper credentials and examination satisfy the Censors of said Society that he possesses the following qualifications," etc.

The President at once ruled that this motion was out of order, because at a meeting two years ago the Chair decided that a similar motion might be discussed by the Society, but that no amendment of a By-law could be made until it had been first referred to the Council, and the President was at that time sustained in his decision. Dr. Bowditch's motion, therefore, was not in order.

Dr. Bowditch appealed from this decision, and asked why a Fellow of the Massachusetts Medical Society could not propose an amendment to the By-laws.

The President simply repeated his former statement.

Dr. Hodgdon, with the remark that if a president from purest motives make a wrong decision, and this be shown by the common feeling of the Society to be inconsistent, such president should at once recede from his position, seconded Dr. Bowditch's appeal.

The President then said that the decision was not his, but was made by a former president and sustained by vote, and therefore was now parliamentary law. Dr. Bowditch's motion was consequently out of order.

DR. MILLET asked, "Suppose we decided *any* question two years ago, is that a reason why we cannot to-day vote to annul what we then did?" It must be so. Any society can rescind a vote. We cannot take away the chartered rights of the Council, but we can rescind any move. We can also unmake the Council we have made. Councilors have certain rights under the Charter, but they cannot act independently of the Society.

DR. DAVID HUNT was surprised that there could be any question of the right of the Society to change By-laws. The Charter, in Section III., in so many words gives that right.

DR. GEORGE C. SHATTUCK said: I understand that this practice of referring matters to the Council is a manner of facilitating work, as in boards of directors in corporations. Business is better done when the Board first consider a motion or amendment and then submit their decision to the larger body. We have over fifteen hundred members. Not one fourth of them are here. The Councilors are always well represented. Their decision is a fair one. Here a decision would not be fair. We have a right to change a By-law, but is it wise to do so before referring the matter to the Council? A quorum of ten Fellows is a legal quorum, so that even that number could make a change in the By-laws. This arrangement of reference is a convenience. It is a pity that any man should try to break it down in order to bring a particular question before the Society.

DR. HODGDON thought discussion irrelevant. His point was that on any subject it was impossible for the Society to recede if the ruling of the Chair be sustained.

DR. HOLMES, of Lexington, thought that *if* only one fourth of the Fellows were present it was due to lukewarmness. Why, then, cannot those who do come act?

After further discussion the **CHAIR** again said the ruling could not be changed, because it was law.

DR. E. T. WILLIAMS, of Roxbury, thought the ruling of two years ago illegal. If the Council pass a By-law they can reconsider but not amend it. Now the Society cannot amend a By-law, and thus nothing can be done. This must be illegal.

The **CHAIR** then said he was bound by all usage to hold to his ruling. If he be bound illegally then such limitation should be changed. According to Cushing a sustained ruling must act as a precedent for future action. If a law is clear it is understood. If equivocal it should be referred to competent authority. The Society is competent, and I think cannot admit that it can go behind this law.

DR. CUTLER moved that the decision of two years ago be reconsidered. Motion was seconded.

DR. C. P. PUTNAM said discussion was not in order. Whoever heard of a Chair who had the power to say a motion was out of order. The Society is the only power to say whether a motion be in order. If the Society interpret in a way differing from the Chair they have power to do so.

DR. WILLIAMS said the decision of the Chair had been appealed from. Any ruling can be appealed from. The appeal is the only question which can be considered.

DR. C. P. PUTNAM rose to a question of order, and asked whether the Chair decided that the motion of Dr. Cutler was before the house.

The **CHAIR** replied that the motion was not in order because the Society was not competent to change a By-law.

DR. MILLET appealed from this decision.

DR. WILLIAMS asked as to which appeal was before the meeting.

The **CHAIR** said it was Dr. Millet's appeal.

DR. WILLIAMS said that was a point of order, because the first appeal had been seconded, but not settled.

The **CHAIR** replied that the first appeal was not an appeal from the ruling of the present Chair, and therefore was no appeal.

DR. WEBBER inquired whether the appeal did not relate to a ruling of the Chair.

The **CHAIR** replied that the Chair did not rule, but that the Chair's decision was parliamentary law.

DR. WEBBER asked, "Is not that a ruling of the Chair?" Chair: "Yes." Several voices: "We appeal from that decision."

In this way the snarl began to unwind itself. The Chair naturally was forced to call upon the Society for votes sustaining the Chair in reference to Dr. Bowditch's appeal. The vote was *viva voce*, and decided in the negative. The Chair was not sustained.

Dr. Bowditch's motion was then recalled.

DR. MORSE, of Watertown, said the Society to-day was taking a stand which endangers its By-laws. Any number of Fellows can thus change the By-laws. The dignity of the Society is being threatened.

DR. BOWDITCH remarked that he expected his motion would be referred to the Councilors.

DR. BRONSON said that for many years this question has been presented to the Society, and sometimes before the Council. It must originate somewhere. According to the By-laws, if the question were decided in the affirmative by the Society it will be referred to the Council. It has been said that the Council does not fairly represent its constituents. Then that is the fault of the constituents who elect the Councilors. It was his opinion that if as a Society we design to carry out the convictions of our fathers, we meet to help the progress of medical science; and therefore he believed that any person of whatever sex or color who can answer the requirements should be admitted to the Society. Whatever the Fellows do here is a work of district societies done in mass. He asked for moderation. If the Fellows cannot get what they want to-day they can secure it legitimately one day by acting through the District Societies.

DR. HARVEY said the whole trouble of to-day is: Our By-laws do not provide the means by which these By-laws may be altered or amended. They are not explicit. The By-laws do say that a By-law cannot be changed without concurrent vote of Society and Council, but *not* how they can be changed or amended. In our District Societies By-laws may be changed if notice be given at a previous meeting. Notice of this motion to change a By-law was not given at a previous meeting, and therefore I think the Society should not be prepared to act. The question of the admission of women is not my point. I refer to the changing of By-laws in this way. It is not right thus to annul By-laws. I do not say the Society has no right to change By-laws. I merely say that no way to do so is provided. This is an innovation.

A Fellow asked, "Does not the action of the Society, in the absence of a By-law, establish a precedent?"

Dr. Harvey replied that this was precisely the point on which the President made his decision. It was a reference to a precedent.

The question was then called and a rising vote counted by tellers appointed by the Chair.

The decision was 209 ayes, 123 noes, and thus the motion passed.

It was then moved that Drs. H. I. Bowditch and Morrill Wyman be authorized to present the result of the vote to the Council that evening. Decided in the affirmative. And, to complete the details of this subject, the matter was presented to the Council, discussed, and the vote confirmed by another strong affirmative.

OFFICERS FOR 1884–1885.

During their meeting the Councilors appointed the officers of the Society for 1884–1885, as follows: —

President, Charles D. Homans, Boston; Vice-President, A. C. Deane, Greenfield; Treasurer, Frank W. Draper, Boston; Corresponding Secretary, Charles W. Swan, Boston; Recording Secretary, Francis W. Goss, Roxbury; Librarian, E. H. Brigham, Boston; Orator, F. K. Paddock, Pittsfield; Anniversary Chairman, Robert Amory, Boston.

On the Committee on Finances E. G. Cutler, of Boston, was appointed vice C. D. Homans. On the Committee to Procure Scientific Papers H. P. Walcott replaces Dr. Paddock, otherwise the committees remain unchanged.

THE ONE HUNDRED AND THIRD ANNUAL MEETING

of the Society was called to order by **President Hosmer** in Huntington Hall on Wednesday, June 11th, at nine A. M.

RECORDS, ADDITIONS, AND DEATHS.

Records of the preliminary and annual meetings of 1883 were read by **Secretary Goss**, also the records of the meeting of the previous day. The Secretary then read a list of Fellows admitted since the last annual meeting, in all ninety-seven. Then followed the names and ages of Fellows deceased during the past year, thirty in all — their average age being fifty-nine and two third years. Readers of the Journal may not have observed that the average age of deceased Fellows has been given in this report during the past seven years. During this period this is the first time that the average age has sunk below sixty-two. This is a remarkable average, in view of the fact that in all vital statistics the average age of the physician is set at thirty-eight years.

THE EXAMINATION OF CANDIDATES.

Dr. Millet presented the following preamble and resolution: —

Whereas the Charter of the Massachusetts Medical Society imposes upon the Censors of said Society, under a penalty, the duty of examining all persons who are desirous of obtaining a license, or letters testimonial, of their qualification to practice medicine and surgery in this Commonwealth; therefore,

Resolved, That the Censors of the Massachusetts Medical Society are hereby instructed and required to examine all persons, whether male or female, without reference to the time when, or place where, they acquired their medical education, who apply for such examination, without reference to admission to said Society; and such letters testimonial when issued shall entitle the holder to all rights and privileges of regular practice excepting membership of the Society.

In presenting his resolution Dr. Millet said that in 1859 the Legislature by a law undertook to dictate who should be members of the Society, though the Legislature had no reserved right to change the Society Charter. And he made the remarkable statement that since 1859 the Council has had no right to elect honorary members, and that such honorary members as within that time have been elected have been elected illegally. After reading his resolution Dr. Millet expressed the opinion that if the course therein set forth had been adopted this Society would not now be in its present dilemma.

Some discussion followed, and the motion was made that the whole matter be referred to the Standing Committee on By-laws of District Societies. Carried by vote in the affirmative.

TREASURER'S REPORT.

Dr. F. W. Draper, Treasurer, then read his annual report, which showed that the Society has in invested funds $32,420.17.

Income for the year	$7963.75.
Balance from old account	1539.42.
	$9503.17.

Outgo: —

Expenses of last annual meeting	$1818.78.
Other expenses	6121.53.
Balance to new account	1562.86.
	$9503.17.

Number of Fellows now on the Catalogue, 1529.

READING OF PAPERS.

An interesting paper on A Case of Chylous Deposit in the Abdomen was then read by **F. Nickerson**, M. D., of Lowell.

L. Huntress, M. D., of Lowell, next read a highly scientific and valuable essay on The Pitch of the Percussion Sound. This paper elicited remarks from Drs. Bowditch and Garland, who expressed their sense of its value.

An essay on Sanitary Forest Culture, by **J. F. A. Adams**, of Pittsfield, next followed. It aroused much interest, and the subject was discussed by Drs. Marcy and Blodgett.

Dr. Millet then moved that the subject of tree forestry be referred to the Legislative Committee already appointed, with the request that they bring the same in proper form before the Legislature.

The motion received an affirmative vote, as did **Dr. Bowditch**'s suggestion that Dr. Adams be added to this committee.

An instructive paper on Weight as an Indication of the Character of Risks for Life Insurance was then read by **J. Seaverns**, M. D., of Roxbury. Dr. Seaverns made a very generous distribution of printed statistics in relation to over and under weight.

Dr. C. W. Swan then read a Health Communication from the Secretary of the Middlesex North Society.

PRESENTATION OF DELEGATES.

The following delegates were then presented by the President: Dr. G. G. Hopkins, of the New York State Medical Society. Dr. E. North, of the New Jersey State Medical Society. Dr. C. M. Carleton Connecticut State Medical Society. Dr. Chas. O'Leary, Rhode Island State Medical Society. Dr. E. A. Pond, from the State Medical Society of Vermont.

Each delegate made felicitous remarks.

After an intermission of fifteen minutes the Annual Discourse was delivered at twelve M. by the orator, JOHN CROWELL, M. D., of Haverhill. At its termination the orator received a vote of thanks for his valuable and interesting address.

THE DINNER.

At one o'clock, P. M., the Fellows marched in the usual order to the Skating Rink, on Clarendon Street, where the annual dinner awaited them.

The Committee of Arrangements deserve great credit for their manner of seating the Society and its guests. Instead of placing the orator and invited guests on the side of the hall they were placed at tables upon a raised platform at the end of the hall. This not only was more convenient and suitable, but by this arrangement the speeches were much more distinctly heard.

Grace having been pronounced by the Rev. Dr. Courtney, the annual attack began. The dinner was unusually bountiful and enjoyable.

Upon the platform, on either side of the Anniversary Chairman, Dr. George B. Shattuck, sat his excellency Governor Robinson, Dr. Mackie of New Bedford, Surgeon-General Holt, the Rev. Frederick Courtney, Samuel Eliot, LL. D., Dr. George C. Shattuck, Dr. J. O. Green, of Lowell, Dr. Jarvis, Dr. Henry I. Bowditch, Mr. H. O. Houghton, the president-elect of the Society, Dr. Charles D. Homans, the retiring President, Dr. Alfred Hosmer, of Watertown, the orator, Dr. John Crowell, of Haverhill, ex-Mayor Dr. S. A. Green, Dr. Ira Russell, of Winchendon, Dr. H. P. Walcott of the State Board of Health, and Dr. Geo. D. Hersey, Secretary of Rhode Island State Medical Society.

DR. SHATTUCK'S ADDRESS.

Shortly after two o'clock Dr. Shattuck called the assembly to order and addressed them as follows: —

Fellows of the Massachusetts Medical Society. — It is my duty as your Anniversary Chairman, in behalf of my colleagues who compose your committee of arrangements, to welcome you to these festivities which it is the custom of our Society to provide at this season of the year as a fitting termination of our annual meeting, — festivities at which its own officials, the dignitaries of the State, distinguished representatives of other State medical societies, of other professions and pursuits in life, become our honored guests. It is my privilege also to congratulate you upon coming together to this eighty third annual dinner, once again as so often before in such goodly numbers from all parts of this State to show your respect for this organization, your interest in each other and in each others' work, and your appreciation of the benefits which accrue to you from your membership.

The Society has already fairly emerged from the period of reminiscence and celebration, incident to the completion of the first century of its existence, and is quietly at work making the records for the history of its second century, of which let us hope it may have no reason to be less proud than of the first. The past year has simply been one, like many others, of quiet steadfast work and duty conscientiously performed, years which are really as much more important than the epochs they go to make up as the creator is more important than the created. It is not, however, for me to detain you to tell you these things of which you are well aware, in regard to the past of the Massachusetts Medical Society, of which you feel secure. Our newly-elected president will perhaps prognosticate the future for you, and some of our distinguished guests are ready by this time, I am sure, with spontaneous words of encouragement and sympathy. I hasten to anticipate your impatience to hear them. In calling upon your new president, Dr. Charles D. Homans, to respond to the first toast of "The Future of the Massachusetts Medical Society," I shall venture to remind you that it is not the first time the name of Homans appears among those of your presidents, his father, Dr. John Homans, having presided over the meetings of this Society between the years 1859–1862. That knowledge of the past history of the Society which he must possess should help him to forecast the future, however full of changes.

DR. HOMANS' RESPONSE.

DR. HOMANS responded very briefly. He stated that in 1789 there were sixty-eight members of the Society, against 1529 in 1884. This was certainly a wonderful and most gratifying increase. There had been ninety-four new members added during the present year. Dr. Homans alluded to the action of the Society in admitting women, and remarked that perhaps twenty or thirty years hence the present scene would be a ball-room.

SPEECH OF EX-PRESIDENT HOSMER.

The next toast called upon the retiring President in the following words: —

"The official life of him who has been your President the past two years expires to-day. It is, however, hard to associate even official mortality with one of so much vigor; and we associate, rather, many useful years in which what his hands find to do we may be sure will be done with all his might, with the name of Ex-President Hosmer."

DR. ALFRED HOSMER, of Watertown, the retiring President of the Society, responded to the toast as follows: The subject of the Massachusetts Medical Society is a theme which can easily be expanded into a discourse so long and so large that this audience would hardly care to receive and digest it at a single session. Without penetrating its substance, I shall simply touch a small part of its surface, and leave it for the first guest of the day to serve such portion as he pleases as one of the courses at the next annual dinner. As undue importance may be attached to the words of the moribund, perhaps I ought to be cautious in respect to those utterances which are connected with the dissolution of the last tie that binds to official life. Inasmuch as moral qualities enter so largely into the constitution of good citizenship, and as this organization of ours is not wanting in analogy with that compact known as society, whose criminal laws are not always adequate, and whose civil laws sometimes almost forfeit their right to the name, I may, without breach of propriety, allude to matters ethical. I do not do this in the larger sense which includes what our Society has long needed, as much for the convenience as for the control of its Fellows, namely, a well-constructed and comprehensive Code of Ethics, but in a smaller way, that relates to something which is near to us on every side. I would speak of that which either is an obligation made up of three inseparable parts or consists of three duties so closely allied and so intimately connected that neither one can be neglected without detriment to the other two, while the performance of any one is the discharge of all. I mean the duty which every Fellow owes to the profession, to this Society, and to himself. This triple duty: let every Fellow discharge it without reserve and without presumption, and he will raise the profession, and rise with it, to a higher level of character; he will find in this Society a pride that will never cease to increase; and he must possess that self-respect without which there is no true manhood; and no one can become a physician, deserving the name, unless he first be a man.

GOVERNOR ROBINSON.

Our loyalty to the State, said Dr. Shattuck, is gratified and encouraged this year, as we always would like to have it, by the presence of his excellency the Governor. There are many departments of the State which attract more attention than those concerned with public health and what is now known as State Medicine, there are few of more vital importance to the welfare of the people, and none in which the administrators should be more carefully selected. Governor Robinson needs no introduction to a Massachusetts audience.

A hearty and vociferous greeting met Governor Robinson, who said: Let me bring to you the congratulations of the Commonwealth. Personally I rejoice to see so many of you present to-day. With all the satisfaction that you may take to yourselves I think of the many at home, your patients, who are having their day off also. Seriously, gentlemen, the only duty of the doctor is not in attendance in the sick room. With your education and skill you are something to the community and the State. No man educated to the practice of medicine has done his whole duty when he has taken care of the sick, reaped his profits, and settled down to the results. Ideas gained ought to stimulate to greater good, and the discussion of great questions relative to the people at large. "Governor," I was asked before dinner, "how shall you feel when you stand before a thousand doctors?" My reply was: "There's no danger if I keep my mouth shut." One cannot do justice to this occasion unless ready to recognize the great advance in the science and practice of medicine. Gentlemen, to-day we wonder at the uncertainty, dimness, and error through which these have groped. Honor to them, for they wrought out this advance. I, for one, congratulate you on the step you took yesterday. If a woman can cure me, or my children, or my wife, God bless her to do it. If the man can do it better give him the chance. Why, who objects to woman joining a fellow? In conclusion, the Governor said that as the seven-year term of the medical examiners would expire in a few days he had a good chance now to pick out the proper men for these places. Gentlemen, he continued, I ask you in all plainness and without reserve, will you come to the executive and tell him if you know a man on the present list unfitted for his place?

The Governor then made a strong appeal for maintaining the honor and dignity of the profession, and wished that the next century of the Society's history might be as useful as the last.

REV. DR. COURTNEY RESPONDS FOR THE CLERGY.

Dr. Shattuck then read the ensuing toast: —

The Clergy. "There are three classes of skilled professionals whose duties unite them so closely to the wants and rights of men as to make them necessary advisers and aiders in securing and protecting them in their individual possession of life, liberty, and happiness. They are the curés of souls, the curés of bodies, and the curés of property and personal rights, the Doctors of Divinity, the Doctors of Medicine, and the Doctors of the Law. All three classes of sick are 'halt and lame and blind,' all three are patients and clients, and all three classes of healers are Doctors, Counselors, and Ministers alike."

This excellent statement was lately made by a Doctor of Laws when addressing a meeting of Doctors of Medicine. As a Doctor of Medicine I now reproduce it in addressing a Doctor of Divinity, and call upon the Rev. Dr. Courtney.

The Rev. Frederick Courtney alluded to the temptations he felt to preach a good square sermon; he would, however, remember Bishop Wilberforce's story, that a good preacher was one who could take an audience after a good dinner, on a summer afternoon, and not allow one of them to go to sleep. Dr. Courtney drew several illustrations from the Scriptures not at all complimentary to the profession. But the clerical profession is in the same boat as the medical, he said, as far as calumnies go. Another point of resemblance is the conservatism of both professions. I suppose the opinion of those present is divided as to the advisability of admitting women to the Society. Perhaps, too, the medical profession, like the clerical, is given to a dislike of innovations; and I don't know that the *odium theologicum* is worse than the *odium medicum*, shall I call it? Another thing that troubles us both are the quacks. Dr. Courtney then spoke of the growing severance of the medical profession from Christianity, deprecating this tendency, which he feared was an increasing one.

MR. JUSTICE FIELD, OF THE SUPREME COURT.

The next speaker was introduced as follows: —

"Sir Edward Coke, as you know, is responsible for the statement that 'law is the perfection of reason.' But the judicious Hooker, in his Ecclesiastical Polity, tells us in words, which though often quoted, never lose their rotund sonorousness, that 'of law there can be no less acknowledged than that her seat is the bosom of God, her voice the harmony of the world; all things in heaven and earth do her homage, the very least as feeling her care, and the greatest as not exempt from her authority.' All this is represented to us to-day by Mr. Justice Field, of the supreme judicial bench of the State."

Mr. Justice Field in reply said: It was at one time thought to be the policy of this State to furnish patients for the doctors by overworking its judges. You have been many times before the court as witnesses, and I trust you have always been fairly treated. The law, medicine, and divinity are the three ancient professions. Yours is the oldest. You were doubtless called in when Eve ate her first apple, — if it was a green one. Medicine and law are closely connected. There are medico-legal societies and books on medical jurisprudence. Both professions are exposed to quacks, though yours is worse off in this respect; there are no Indian lawyers, nor vegetable lawyers, nor electric lawyers. In one sense yours is a suicidal profession; it is your duty so to promote the health of the people as to make doctors unnecessary. But I hope the members of this Society will not be so far diminished that you cannot celebrate this anniversary through the coming generations.

THE ORATOR OF THE DAY.

The chairman introduced the orator of the day, Dr. Crowell, as follows: —

"I think our having heard the orator of the day before dinner upon the Physician as a Popular Educator makes us only the more desirous to hear from him after dinner, and I call upon Dr. Crowell to say something in favor of the scientific investigator."

DR. J. CROWELL, in response, told the story of an eccentric divine who once said to his audience, "My hearers, there is a great deal of ordinary work to be done in the world, and, thank the Lord, there are a great many ordinary people to do it." As one of the ordinary workers, said Dr. Crowell, I wish to speak in behalf of this great majority, and express thanks to those extraordinary workers who do so much for us in the way of patient research and investigation. Dr. Crowell concluded by saying that the specialist has also done great service in curing the ordinary doctors of a certain false modesty in professional fees. The country doctors were plodding on in the old-fashioned way of small charges and long credit until our metropolitan friends came to the rescue, who received the fee of fifty or a hundred dollars with such a graceful nonchalance as to give great moral courage to their suburban brethren. With this worthy stimulus before us, we do now venture to charge two dollars a visit and five dollars for a consultation.

Other speeches were made by **DR. SAMUEL ELIOT** and **PROF. W. T. SEDGWICK** of the Institute of Technology, and letters of regret were read from **DR. J. S. BILLINGS**, of Washington, and **PROF. R. T. HOWARD**, of the McGill Medical College, Montreal.

The occasion was in every way successful and enjoyable, but might it not be suggested that if speakers at these annual dinners would but give the active principle (the alkaloid as it were) of what they have to say the speech-making would not only consume less time, but more speakers could be heard by that large number of Fellows who invariably are forced to seek their trains in the very middle of this pleasant feature of the entertainment? Nearly seven hundred Fellows were present. At intervals music of excellent quality was provided by the Germania orchestra.

MASSACHUSETTS MEDICAL SOCIETY.

COUNCILLORS' MEETING.

THE annual meeting of the Council was held at the Medical Library, Boston, on the evening of Tuesday, June 10, 1884. One hundred and sixteen councillors were present. The meeting was called to order by PRESIDENT HOSMER at seven o'clock.

After the reading of the record of the previous meeting by the Secretary, and its acceptance, the roll of those composing the Council for the year 1884–85 was read. The Secretary announced the names of ninety-seven Fellows who had been admitted during the year, and of thirty who had died.

FINANCES.

The Treasurer's report showed the year's receipts — including a balance of $1539.42 from the previous year's accounts — to be $9503.17. The disbursements amounted to $794.31, leaving a balance of $1562.86. The invested funds of the Society amount, as in the previous year, to $32,420.17. The Society now bears upon its catalogue the names of 1529 members. In accordance with the recommendation of the Committee on Finances, reporting through Dr. Homans, it was voted that $1328.43, being eighty-five per cent. of the balance remaining in the treasury, be distributed among the District Societies. In accordance with the recommendation of the same committee it was voted that the Treasurer sue two Fellows for their dues and remit the dues to two others.

REPORT OF COMMITTEE ON MEMBERSHIP.

DR. AYER, for the Committee on Membership and Resignations, reported a list of names of those desiring to become retired members, and of those wishing to resign. The Council voted in accordance with the recommendations of the committee. Several others were dropped from the roll for delinquency in assessments.

REPORT OF COMMITTEE ON PUBLICATIONS.

DR. SHATTUCK, for the Committee on Publications, reported that no essay had been received in competition for the Society's Prize. Also, that the committee were averse to subscription by the Society to the "Quarterly Epitome." The report was adopted.

REPORT OF COMMITTEE ON BY-LAWS.

DR. PRESBREY, for the Committee on By-laws of the District Societies, presented a report which stated that some of the District Societies have by their By-laws "Committees on Ethics." Inasmuch as a district society has nothing to do with ethics and discipline, and can invest a so-called Committee on Ethics with no powers which do not already belong to its members by virtue of their membership in the Society, such a committee is superfluous, and ought not to exist, and any district by-law whose purpose is to create and empower such a committee is liable to mislead and embarrass, and ought to be abolished.

It was voted to accept the committee's report.

ELECTION OF OFFICERS.

At this stage of the meeting the Committee on Nominations reported the following list of candidates for the offices of the Society for the ensuing year, and the same were elected by ballot: Dr. Charles D. Homans, Boston, President; Dr. Adam C. Deane, Greenfield, Vice-President; Dr. Frank W. Draper, Boston, Treasurer; Dr. Charles W. Swan, Boston, Corresponding Secretary; Dr. Francis W. Goss, Roxbury, Recording Secretary; Dr. Edwin H. Brigham, Boston, Librarian.

Dr. Franklin K. Paddock, of Pittsfield, was chosen Orator, and Dr. Robert Amory, of Boston, Anniversary Chairman for the next annual meeting.

The President introduced the President-elect, who made a brief and fitting response.

THE NEXT MEETING.

It was voted that the next annual meeting be held in Boston on the second Wednesday in June, 1885.

APPOINTMENT OF COMMITTEES.

The President nominated, and the following were appointed to constitute the standing committees: —

Of Arrangements. — C. E. Wing, A. T. Cabot, H. C. Haven, C. H. Williams, J. W. Elliot, F. H. Hooper.

On Publications. — G. C. Shattuck, R. M. Hodges, B. E. Cotting.

On Resignations. — J. Ayer, F. Minot, D. W. Cheever.

On Finances. — W. W. Wellington, B. S. Shaw, E. G. Cutler.

To Procure Scientific Papers. — C. W. Swan, G. S. Stebbins, J. R. Chadwick, R. H. Fitz, H. P. Walcott.

On Ethics and Discipline. — G. J. Townsend, G. E. Francis, A. H. Johnson, C. Howe, F. C. Shattuck.

On Medical Diplomas. — W. L. Richardson, A. H. Cowdrey, E. J. Forster.

PETITION FOR A NEW DISTRICT SOCIETY.

A petition was presented from several physicians residing in certain towns in the Norfolk District, and from Hingham, in the Plymouth District, requesting that they might be allowed to form a society to be called the Norfolk South District Medical Society. The petition was referred to Drs. Hodges, C. E. Stedman, and Spooner as a committee to report thereon at the next meeting.

AMENDMENT OF BY-LAWS. ELIGIBILITY OF WOMEN.

As was anticipated the most animated part of the meeting was the debate on the amendment to By-law I., making women eligible as candidates for Fellowship in the Society. The debate was opened by Dr. Bowditch, who, with Dr. Wyman, constituted the committee from the adjourned meeting of the Society, held during the afternoon, to present to the Council for its concurrent action the following: —

Voted, That the first four lines of By-law I. be stricken out, and the following be put in their place, namely, —

"Candidates for admission into the Massachusetts Medical Society may be either male or female, and every candidate must, by proper credentials and examination, satisfy the Censors of said Society that he possesses the following qualifications for Fellowship."

The adoption of this amendment was strongly advocated by Drs. Bowditch, Wyman, Bronson, and H. P. Bowditch, and vigorously opposed by Drs. Shattuck, Dwight, Warren, Minot, Reynolds, and Harvey. On motion of **Dr. Hodgdon** the vote was taken by ayes and nays. The amendment was carried by sixty-three in the affirmative to forty-seven in the negative.

The vote by districts was as follows: —

	Ayes.	Nays.
Barnstable	1	0.
Berkshire	1	0.
Bristol North	2	0.
Bristol South	2	3.
Essex North	1	1.
Essex South	3	4.
Franklin	0	0.
Hampden	1	0.
Hampshire	0	1.
Middlesex North	0	0.
Middlesex South	17	1.
Middlesex East	2	0.
Norfolk	9	5.
Plymouth	5	0.
Suffolk	11	27.
Worcester	8	2.
Worcester North	0	3.
Total	63	47.

Adjournment was voted at 9.20 P. M.

—The New York State Pharmaceutical Association held a convention at the College of Pharmacy last week, and after the election of officers the names of ten delegates were selected to be sent to the Governor, who will appoint five of the list on the State Board of Pharmacy.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

DECEMBER 8, 1883.

A CASE OF RENAL ABSCESS.

Dr. C. Ellery Stedman read the case.

Mrs. B. M., aged twenty-two, was admitted to the Nervous and Renal Department of the City Hospital, November 10, 1883. Dr. Webber asked Dr. Stedman to see her, and as the latter thought he found signs of inflammatory action in the pelvis the patient was transferred to his care. She was very pale, feeble, and near her end, the eyeballs rolled up, and the features pinched. She was in no condition to bear questioning, but the following history was elicited: Of her family antecedents little could be learned. Her catamenia have been regular, lasting eight days, of which the first two were painful. She used twelve napkins. Eight months ago she miscarried at the third month. She was last unwell from the 17th to the 20th of May last inclusive, and considers herself six months advanced in pregnancy. For months has had leucorrhœa. For eighteen months she reports she has had inflammation of the bladder. Whether this is the name she gives to her malady or is the diagnosis of a physician is not recorded. During the last six weeks there has been sharp paroxysmal pain in the lower part of the left back, but she dates the commencement of her present trouble at about twelve days ago, since which time she has been in bed. At that period there began sudden sharp pain in the left lumbar region, radiating downwards toward the bladder; this pain has been constant, sharp, and worse on movement, micturition, and defecation, — somewhat relieved by drawing up her legs, — located specially on the left side, but also general in the abdomen. From the first there has been vomiting of yellow matter, frequent both on an empty stomach and after eating and drinking. There is no appetite, and the bowels are constipated; a movement was had by enema four days ago, but caused the patient great pain. Passing urine gives her so much pain that she voluntarily retains it, acute distress preceding and following the act. The urine on the 11th was cloudy, contained one third per cent. albumen, and had a sediment of normal blood, a large amount of pus, and triple phosphate crystals. She had never passed gravel or stone. There are now no chills, headache, or delirium. Temperature when admitted 10th November was 100.5° F., on the 13th 99° F., and the pulse 130, regular and weak. The tongue dry and cracked, with a brown coat. The heart gives out a loud murmur over the pulmonary orifice, and is a little enlarged, perhaps, to the left. The abdomen is distended, and universally, though not excessively, tender. In the hypogastrium, reaching to within two inches of the umbilicus, is a tumor with well-defined border, extending on the right into the lumbar region; this tumor is felt to change its shape; no fœtal heart is heard; above the tumor the abdomen is resonant. The areolæ are dark, and there is milk in the breasts. A dark line runs from pubes to umbilicus. In the left loin, in the neighborhood of the spleen, is a feeling of resistance, over which is resonance. The patient lies with knees drawn up, and features pinched, complaining of pain in the back and tenderness over lower end of spine. The next day the record says that she vomited little during the night, but required several subcutaneous injections of one fourth of a grain of morphia. During the next three days vomiting increased in frequency; nutrient enemata were either not retained or came away little if at all changed. There was no delirium, and she died at ten minutes past ten o'clock P. M. of the 17th November.

Dr. Gannett made the autopsy thirty-six hours after death. Nothing of especial interest is recorded till the left kidney was reached. This organ was represented by a lobulated, sacculated mass measuring twenty-four by fourteen centimetres. Its form was a series of sacs or pouches about the size of a peach, and contained a thick, greenish-yellow, offensive pus. No renal substance remained except a thin layer over the lower border, perhaps five millimetres in thickness. The ureter on this side was dilated throughout to the size of the forefinger, its mucous membrane somewhat injected, reddened, and covered with a layer of pus. The right kidney was of usual size, density, and color, the capsule easily detached, leaving a smooth surface; on section the surface showed a uniform dark-red color, in which the distinctions of various sections could be made out. The right ureter was of usual size throughout. The liver was slightly enlarged, of usual color and density. The bladder was empty and contracted, containing a small amount of pus. The mucous membrane about the trigonum thickened, reddened, velvety, in many places of a reddish-blue color. The uterus contained a fœtus with the usual appearances in the sixth month of pregnancy.

The diagnosis of this case was not assured. The history of a cystitis made the appearance of pus and blood in the urine seem natural. There was no distinct tumor in the left loin, only pain and a sense of resistance to the touch, and resonance existed, as the colon superimposed would demand. The choice lay between perinephritic abscess or pyelo-nephritis, the latter being correct. An interesting case of the former disease, with suppurating kidney, was published by Dr. Lyman in the *Boston Medical and Surgical Journal*, cv., 21. This, too, was made interesting by its complication with early pregnancy; there was a tumor in the right renal region; the urine was alkaline, one fourth per cent. albumen, much pus. The tumor was discharged of pus by several operations, but the patient failed, died, and no autopsy could be had. The case resembled that now reported in several respects, but at no time since our patient was seen did operative interference seem proper.

There was history of cystitis for eighteen months, but who gave the name to the affection is not known. From Dr. Gannett's report of the autopsy it would appear that hydronephrosis had existed, as shown by the greatly dilated ureter, which may have been dammed at its entrance to the bladder by inflammation of that viscus; or hydronephrosis may have been congenital, or acquired, not recording symptoms, but waiting for some action like pregnancy to be set up and close the ureter. Says Roberts: "Simple stagnation of the urine (like decomposition) from an obstruction in the ureter usually causes only dilatation [hydronephrosis]; but if it occur suddenly the pressure of the dammed-up urine may excite acute pyelitis. Severer inflammatory changes occur if the stagnant urine becomes decomposed and its urea converted into carbonate of ammonia. It is probable that the intractable, generally fatal pyelitis which sometimes follows pregnancy arises in this way."

But in regard to pyelitis in pregnancy, in the time and with the means at my disposal, I have been unable to collect any examples, though doubtless many cases are scattered through medical literature.

Dr. Richardson inquired if there were any history of previous inflammatory trouble, such as might have bound the uterus down on the affected side.

Dr. Boardman quoted Ziemssen in support of the view that dilated kidney was sometimes the result of pressure of the gravid uterus upon the ureter, although the most frequent cause was there stated to be occlusion of the ureter by renal calculus, and a very common cause catarrh of the bladder extending up along the ureter. Cases were recorded which were due to perinephritic abscess, and some in which there was caries of the vertebræ, but in those cases when the pus entered from without there was no true pus cavity in the kidney.

Dr. Edes thought malignant disease of the uterus a most common cause, when invading also the surrounding tissues, of compression of the ureters, and consequent hydronephrosis and atrophy of the kidneys.

Dr. Lyman said it was important that these things should be discussed with reference to the treatment, and especially with reference to an early evacuation of pus.

UMBILICAL HÆMORRHAGE.

Dr. Richardson reported a case of hæmophilia, which will be published. In one similar case which Dr. Richardson had seen in the Boston Lying-In Hospital, on the third day after birth, there was first epistaxis, six hours later bleeding from the mouth, then from the navel, and the child died thirty-six hours later.

Dr. Hodgdon said he had seen half a dozen such cases, almost uniformly fatal, with hæmorrhage from the cord and from the mouth and nose, and, in females, from the vagina. In two of the cases there were purpuric spots. The treatment was astringents and pressure over the cord, and chloride of iron internally.

Dr. Fifield remarked that he had reported to this Society, two or three years ago, a case successfully treated by the application of plaster of Paris, first mixed with a little salt, then with water, and spooned on while setting. There was not a drop of blood lost after the application. Dr. Fifield was unable to state where he got the idea, but on reporting the case at the Boston Society for Medical Improvement some of the members reported successful treatment by the same means. He had heard a nurse describe a case which the attending physician sewed up, over and over, as a woman sews a seam, without attempting to transfix, and it succeeded. Dr. Fifield thought that the only rational way was by compression. In the case first mentioned the plaster remained on about four days. There was no tendency in that case to hæmorrhage elsewhere. The blood welled up from a pit or depression, as in Dr. Richardson's case.

Dr. Lyman said that, no doubt, these cases arise from want of coagulability of the blood, and asked if the child in the case reported presented icterus or anæmia (to which a negative answer was returned). It from thin blood the bleeding occurs, neither compression nor ligature will avail in the majority of cases; if from other or accidental causes the hæmorrhage is arrested here as easily and by the same methods as in other parts of the body.

Dr. Richardson stated that the mother had used cream-of-tartar water, three or four tumblers daily.

Dr. Fifield remarked that a better styptic than iron was the fluid extract of hamamelis, the power of which in repressing hæmorrhage was perfectly wonderful. Two years ago he was called to New York to see a patient who had had hæmorrhage, and whom he had treated with ergotine subcutaneously, but the extract of hamamelis had subsequently had more effect than anything else tried. Dr. Fifield had recently seen cases of pulmonary hæmorrhage which had been arrested by about two doses of the hamamelis. Ergot, he thought, was too slow in its action.

Dr. Boardman said he would venture the opinion that ergot would have no effect on the now atrophied vessels of the umbilicus in Dr. Richardson's case. In the treatment of these cases it would seem to be well first to make a diagnosis, the fact being that hæmorrhage is frequent in cases of icterus neonatorum, but not so much the cause of death as that which causes the icterus. With the diagnosis of hæmophilia the methods suggested would seem to be poor treatment, except that by means of the plaster of Paris or the actual cautery, ordinary styptics having failed. As to the diagnosis, it is erroneous to regard the want of coagulability of the blood as denoting hæmophilia. From the article of Immermann, in Ziemssen, it appears that quite the reverse is true in the early stage of hæmorrhage; that the blood in bleeders is not paler in color than in healthy persons; that it maintains its coagulability for a long time during hæmorrhage; that it is not deficient in red corpuscles, but, on the contrary, "contains an unusually large amount of these [coagulable] elements."

In the present case, however, there has been no icterus, and the blood appears to have been notably non-coagulable; yet the diagnosis of hæmophilia seems to be confirmed by the subsequent appearance of spots of discoloration. Possibly, in the new-born infant there is a comparative deficiency of the coagulable elements of the blood, which fact may explain away, in these cases, the apparent contradiction of experience. Upon this point, however, he had no information.

Dr. Abbot thought the bitartrate of potash should not be left out of the account in considering the probable cause of the hæmorrhages. The continuous use of it, in considerable quantities, for some weeks, by the mother, was calculated to produce an impression on the fœtus, as was well known to be the case with certain powerful drugs, such as chloral and other sedatives, even when the mother experienced no ill effects.

Dr. Richardson said that the mother passed several large clots, as she had done in two previous deliveries.

Dr. J. Stedman referred to a case of umbilical hæmorrhage to which he was called in the night, a patient of the late Dr. Susan Dimock, who had tried a variety of remedies without avail. Dr. Stedman took a piece of fine, soft sponge, wet it and squeezed the water out, powdered the sponge with subsulphate of iron, applied this to the umbilicus, over the sponge laid a patch of lint, then a strip of adhesive plaster, and finally a bandage. The hæmorrhage ceased, and did not recur. The dressing was left on for several days. The bleeding began the day of the separation of the cord.

A CASE SHOWING THE EFFECTS OF HOT WATER ON PAPILLARY TUMORS OF THE BLADDER.

Dr. Baker reported the case of a patient, aged fifty, who nine months ago began to pass blood with the urine, with no pain, but a gradual increase in the hæmorrhage. He was sent for to see the patient two or three weeks ago, and examined the bladder through the dilated urethra, and found four papillary tumors of the bladder, the largest of them being of the size of a large English walnut, and pedunculated, the smallest of the size of a filbert, also pedunculated. The interior surface of the bladder was villous. It would have been a comparatively simple thing then to have removed the pedunculated tumors, but there was a good deal of cystitis, and Dr. Baker thought it would be better to open the bladder into the vagina, which was done. The tumors were let alone. Five or six quarts of hot water were injected per urethram, returning through the artificial vesico-vaginal fistula by the vagina, four times a day for several days, when the smaller of the growths, which came down towards the opening, was compressed and removed with the scissors, styptic cotton being used to control the hæmorrhage. In a week or ten days ether was administered, and through the fistula it was discovered that the growths had diminished certainly three quarters in size, so that the larger was not greater than the first joint of the thumb, and was comparatively bloodless, while the whole bladder was less congested. The work of removal was comparatively simple, and free from hæmorrhage. The inner surface of the bladder was then thoroughly curetted, the oozing being controlled by sponge and styptics. The case had gone on well since, and, so far as immediate recovery was concerned, promised well. Dr. Gannett had examined the growths, and found nothing malignant. The wall of the bladder at the site of the incision was fully or more than half an inch thick, but not especially indurated.

Recent Literature.

Chemistry: Inorganic and Organic, with Experiments. By **Charles Loudon Bloxam**, Professor of Chemistry in King's College, London, etc. From the Fifth and Revised English edition. With two hundred and ninety-two Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1883.

Professor Bloxam's book is, in most respects, a very satisfactory one. We know of no treatise on chemistry which contains so much practical information in the same number of pages. It contains nearly 300 illustrations of judiciously selected experiments, which add much to the value of the work as a text-book. Such matter as would be comparatively unimportant to the majority of students, for example, the chemistry of rare elements and compounds, has been printed in smaller type, so that the book can be readily adapted not only to the needs of those who desire a tolerably complete course of chemistry, but also, by the omission of the smaller type, to the needs of those who desire only a general knowledge of the subject without going into all the details.

The table of contents is deserving of mention. It covers seventeen pages and is, in fact, a complete abstract of the whole subject, and may be usefully employed by the student in reviewing the book.

We notice with pleasure that in the present edition some changes have been made in the theoretical portion, to bring the book more into harmony with modern views on this subject.

Professor Bloxam still adheres in general to the English weights and measures and to the Fahrenheit thermometric degrees. We hope to see a change in this respect in subsequent editions.

We take pleasure in recommending this work both as a satisfactory text-book, and as a useful book of reference for those who desire such a book but do not feel able to own any of the more expensive treatises and dictionaries.

Medical and Surgical Journal.

THURSDAY, JUNE 19, 1884.

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THE MASSACHUSETTS MEDICAL SOCIETY AND WOMEN.

In the other columns of this issue a full report of the late meetings of the Massachusetts Medical Society and of its Councilors will be found. The reunion of the Society was fully as successful and agreeable as usual. The only unusual feature, the vote by the Society and the Councilors that women be admitted to examination by its Censors, we were merely able to announce with but little comment last week, nor are we quite sure that it is worth while to do more than that even now. The time for argument is gone by, and there are no new ones on either side to be adduced.

There are, however, a few things which should be said before the matter becomes past history, though some of them be repetitions. At the meeting of the Society 332 members out of 1529 were present, of whom 209 voted in favor of admitting women and 123 against their admission. At the Councilor's meeting, 110 out of 172 Councilors voting, sixty-three voted in favor of admission and forty-seven against. It is evident from this that the organization is not moved to its inmost depths by the question. The result would seem to represent the favor shown to the persistent suitor. A comparatively small number of radicals by nature, of ardent enthusiasts who persuaded themselves that this cause was synonymous with abstract justice, and of clamorous agitators whose restlessness is now free for something else, were pretty sure sooner or later to find themselves in possession of the field at least long enough for their object; but this moment came sooner than might have been expected owing to the introduction of another element of discussion, namely, the right of the Society to change its own By-laws.

Two years ago the President of the Society ruled at one of these adjourned meetings, at which it was hoped to secure a vote favorable to the admission of women, that the initiative of new business or of any change in By-laws must take place in the Council. This ruling was at the time sustained by the members present by a small majority, but the same ruling was voted down this year vigorously, and this ruling has probably had much to do with the vote to admit women at the present time. What the real sentiment of the Society is upon that subject is not known, and is now of little consequence; but there is still in Massachusetts enough of that spirit which, in England, sent Strafford to the scaffold, and here, whilst encouraging Ann Hutchinson's Antinomian pranks, put John Winthrop in Coventry. The idea of the representatives being greater than their constituency, of the part controlling the whole, of the stream rising higher than its source, was thoroughly distasteful, and aroused a feeling which a plentiful use of such expressions as usurpation, oligarchy, and tyranny served to foment still further, a feeling which should not be confounded with a recognition of the justice, the wisdom, or the necessity of encouraging the practice of medicine by women. We are not undertaking the defense of the parliamentary rulings of the Society's presiding officers, but we do not hesitate to say that there is nothing for the Society to be proud of in the management of these adjourned meetings. If the By-laws are insufficient or unsatisfactory a usual and dignified method should be provided for changing them. If the Councilors do not represent the districts it is easy to elect others by fair, open, and legitimate methods. The Council is unquestionably better adapted for the origination and transaction of business than the Society, which is unwieldy, meets at long intervals, and then only for a short time. The meeting on the afternoon of June 10th manifested sufficiently clearly the drawbacks inherent to the transaction of serious and important business by the Society where the occupation of a certain number seemed to be to vociferate "Question!" "Question!" Whatever may be said of the President's parliamentary law his good nature was very praiseworthy, notwithstanding which it seemed at one time as though his office would be voted abolished. Now that the claims of women are satisfied would it not be well for the Society and its Council to improve this moment of tranquillity, and to adopt a manual of parliamentary procedure, and to revise its By-laws? Let the Society understand distinctly where, when, and how its business is to be transacted. As things are at present, we believe some of those who were most active in promoting the precedent set at the last meeting will be among the first to regret their action.

The question of the admission of women to the Massachusetts Medical Society is settled; that of the wisdom or profit of their attempting the practice of medicine, save in very exceptional cases or under very exceptional circumstances, is entirely open. We shall say a few words and then take leave of it, we hope, for some time to come. We have seen no reason to change the views consistently held by this journal as to the fitness of women to practice medicine and as to the wisdom of encouraging them to do so. We are aware that we are not on the *popular* side of this question, that our views are called ungenerous by those who believe there must be a selfish motive, and narrow by those with whom novelty is synonymous with wisdom. But we dislike demagogism, whether in politics, in society, or in the professions, and do not think improvements necessarily result from change. We believe that women in this particular community are already aided and abetted in too many foolish fads and fancies. There is too much bad piano playing and too little good cooking and sewing taught them. They, more than men, are too much encouraged already to *attempt* uncommon things rather than to find an interest and profit in doing ordinary things thoroughly well. In regard to this particular fad of encouraging them to practice medicine, we know that some of those who have been in favor of it, and have even now voted to admit women to examination by the Massachusetts Medical Society, but who are candid, acknowledge that their experience derived from consultations with our best female practitioners, and from cases sent to such for treatment, tends to convince them it is a mistaken movement. If the sum total of human happiness can be increased by the pursuit by women of what have hitherto been regarded as virile occupations so much the better, but both theory and practice lead us to believe it as little in regard to medicine as to law, theology, or politics. No action of medical societies or of legislatures can alter the male and female physiology, and the experience of ages is the best index of the mental, moral, and physical fitness of each sex for the profitable exercise of certain functions. If we desire to prove these problems over again for ourselves in this age and community there will undoubtedly be a limit to the amount of harm which will result, and it may keep us out of worse mischief.

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THE IMPORTANCE OF A KNOWLEDGE OF THE PHYSICAL CHARACTERS OF DRUGS.

AMONG the wants which the average young man feels in entering upon the practice of his profession is a practical familiarity with the physical properties of the drugs which he prescribes. In former days when the medical student spent some time as an assistant to a physician, especially when the dispensing of drugs was a part of the doctor's and more particularly of his assistant's duty, there was opportunity to become habituated to the taste, odor, and appearance of medicines. But many young practitioners of the present day, while tolerably familiar with the common therapeutical action of remedies, and possibly even having given some attention to physiological experiments on the action of drugs upon the nervous, circulatory, and other systems of the body, are yet liable in the early part of their practice to mortifying errors of tact and judgment in their selection of remedies, which could have been avoided by a better knowledge of the physical properties of the instruments they use. Outright violations of the principles of pharmacal compatibility are, perhaps, not so common as the choice of remedies and combinations, which, while therapeutically correct, and even pharmaceutically not incompatible, yet in taste and looks offend unnecessarily the senses of the patient. "Elegant preparations" are freely offered by the manufacturing pharmacists, and physicians often resort to them chiefly because they themselves lack either the time or the knowledge requisite to make up palatable prescriptions of their own. Undoubtedly many practitioners owe their success largely to a study of what may be called the æsthetics of prescribing.

The foregoing remarks have been suggested by an exhibit, which we noted with pleasure, at the recent meeting of our State Medical Society. In the museum of the new building of the Harvard Medical School there are a series of alcoves devoted to a full, methodical, and exceedingly valuable display of the principal drugs of the Pharmacopœia, arranged by the lecturer on this department in the School. The first alcoves are devoted to the drugs of organic (animal and vegetable) origin. These are arranged in alphabetical order of the crude drugs. Accompanying each specimen is a photograph (and many of the photographs are of great artistic excellence) of the growing plant. The pharmacopœal, botanical, and common names are all written upon the descriptive card. The specimen generally includes the part of the plant used in medicine, bark, root, leaf, etc., and also the powdered crude drug. Next come the pharmaceutical derivatives, tinctures, extracts, etc., in due order. The alkaloids are also displayed, each in connection with its constituent drug. An important feature of the exhibit is the quantitative assays of the drugs. For instance, under cinchona we find, besides specimens of each of the different barks, a bottle containing exactly one hundred grammes of a bark of standard purity and strength. Next this is placed a bottle containing the amount of quinine assayed from the particular specimen of bark. Then follow the other alkaloids derived from an equal quantity of the same specimen. Under opium the relative amounts of the various alkaloids and of meconic acid contained in one hundred grammes of the drug are represented in an especially striking manner.

After the organic come the inorganic drugs arranged in the same methodical way. All this, admirable as it is, appeals simply to the eye of the student, and we were glad to find that provision was made elsewhere for giving him the further knowledge which is so needful. In cases placed about the reading-room upon the lower floor of the building were specimens of all the common drugs, accessible at all times to the senses of touch, smell, and taste. Here, as readily as behind the counter of a pharmacy, might one learn what was needful to know of the physical characteristics of drugs. Such knowledge, it is to be hoped, will soon be afforded every medical student as a very important part of his professional outfit.

MEDICAL NOTES.

— The heredity record on 132 cases of cancer under treatment at the Middlesex Hospital during the year 1882 was as follows: In thirty-four cases of uterine cancer there was a history of previous malignant disease in eight families, or in 23.7 per cent.; in forty-one cases of breast-cancer, in ten families, or in 24.3 per cent.; in twenty-eight cases of cancer of the tongue, mouth, and lip, in one family, or in 3.5 per cent.; whilst in eighteen miscellaneous cancers, including ten of the rectum, no history of any previous malignant disease could be obtained. Thus, of the whole 121 cases, there was a history of previous malignant disease in nineteen families, or in 15.7 per cent.

— In an article by Dr. Reichel, of Breslau, copied into the *St. Louis Courier of Medicine* from the *Berlin. klin. Woch.*, he describes a case of general erythema caused by sublimate dressing. A man had been operated on for relief of genu valgum; the leg from foot to pubes was enveloped in sublimate gauze. On the ninth day burning and itching of the limb necessitated the removal of the gauze. The leg was œdematous, and covered with a papulo-vesicular eczema. A general erythema was now developed; the whole body, except the face and neck, was thickly covered with small red spots. The general health was good; no salivation; temperature raised. Salicylic dressing was substituted, and on same day temperature became normal; and in four days after the whole rash was gone.

— Dr. Lawson Tait, of Birmingham, England, is about to visit this continent for the purpose of giving an address on abdominal surgery before the Canada Medical Association at Montreal, August 25th.

— The correspondents of the *Medical Press and Circular* are very generally by the ears over the question "What is medical advertising?" which was raised by one signing himself "Anti-humbug" some weeks ago. Several contributions upon the subject have appeared, and a good deal of covert sarcasm has been aimed at various leaders of the profession. The issuing of bulletins by the attending physician whenever any noble peer has sneezed unduly or a member of the royal family has the stomach ache is justly made an especial object of ridicule. The attempts of some writers to establish a distinction between legitimate and illegitimate advertising are rather laughable. But meantime it certainly does remain a difficult point to determine exactly where the dividing line lies between self-respect and self-exaltation.

— A correspondent of *Science* (June 6th) describes a tailed child which was recently born in Louisville, Ky. A visit was made by a party of four, which included a prominent physician. The writer says: —

"We found a female negro child, eight weeks old, normally formed in all respects, except that slightly to the left of the median line, and about an inch above the lower end of the spinal column, is a fleshy, pedunculated protuberance about two and one half inches long. At the base it measures one and one quarter inches in circumference. A quarter of an inch from the base it is somewhat larger, and from that it tapers gradually to a small blunt point. It closely resembles a pig's tail in shape, but shows no signs of bone or cartilage. There seems to be a slight mole-like protuberance at the point of attachment. The appendage has grown in length about a quarter of an inch since the birth of the child.

"The mother, Lucy Clark, is a quadroon, seventeen years old, and the father a negro of twenty, both normally formed.

"In Darwin's Descent of Man, vol. i., p. 28, he speaks of a similar case, and refers to an article in *Revue des Cours Scientifiques*, 1867–68, p. 625. A more complete article is that by Dr. Max Bartels, in *Archiv für Anthropologie* for 1880. He describes twenty-one cases of persons born with tails, most of them being fleshy protuberances like the one just described."

— We learn from the *London Medical Times* that in a paper lately read before the Académie de Médicine Dr. Marc Sée stated that he has deduced the following conclusions from his anatomical measurements: "(1.) In the normal state the united calibres of the two bronchi are equal to the calibre of the trachea, and I may add that, according to a few measurements which I have made, the united calibres of the bronchial subdivisions equal the calibre of the bronchus from which they originate. The respiratory passages, therefore, represent a cylinder and not a cone. (2.) In the pathological condition the equilibrium between the capacity of the trachea and bronchi may be destroyed, either in favor of the bronchi, as in chronic tuberculosis, or to the advantage of the trachea, as in emphysema."

— The *Annales des Maladies de l'Oreille, du Larynx et des Organes Connexes*, founded in 1874 by Isambert and Krishaber, deceased, and Ladreit de Lacharrière, is to be made, under the direction of the surviving editor, an international journal, and is to be published in both French and English.

The direction and publication will remain in Paris, and the editors selected for the laryngological and otological departments respectively are, in England, Morell Mackenzie and Woakes, in Belgium, Capart and Ch. Delstauche, and in America, J. Solis Cohen and Clarence J. Blake.

— Dr. William Goodell, of Philadelphia, recommends the following prescription in pruritus vulvæ: Carbolic acid, one drachm; morphine sulphate, ten grains; boracic acid, two drachms; vaseline, two ounces. Also pat the parts with a sponge soaked in boiling-hot water.

— The house No. 421 Shawmut Avenue in this city, which has been secured for the Home for Aged Couples, was formally opened last week in the presence of a distinguished company and with agreeable festivities.

— A correspondent of the *British Medical Journal* calls attention to the following prescription, which was made up for a lady, and which gave rise to alarming results on account of the solubility of strychnia in chloroform and the insolubility of the latter in water: —

℞. Liquoris strychniæ ʒi.; spiritûs chloroformi ʒiij.; aquæ ad ℥iss. M. A teaspoonful to be taken three times a day in water. "Upon taking the final dose, which tasted unusually hot," adds the writer, "my patient was seized with spasmodic contraction of the extensors of the feet and legs, the limbs being forcibly projected under the table at which she sat. These symptoms soon passed off, but were alarming for the time. On my being shown the bottle which had contained the medicine a drop or two of water was seen remaining in it, and beneath this a globule of chloroform, which proved to be highly charged with strychnia.

"The prescription was faulty. Chloroform is a powerful solvent of sulphate of strychnia, and itself is not very soluble in water. More was ordered than the menstruum could take up; the surplus, therefore, appropriated to itself a large amount of the salt and fell with it to the bottom of the bottle."

— Governor Robinson at a meeting of the Executive Council last week renominated twenty-five medical examiners in various parts of the State, among them Medical Examiners Draper and Harris, of Boston.

— In a recent article in *Macmillan's* on a great Town-Hospital, intended to inform the general public on hospital patients and methods, the writer (a trained nurse?) speaks of the carbolic spray being played upon the wound of a patient, and remarks exegetically for the benefit of the reader that this is done for the purpose of keeping the wound warm!

NEW YORK.

— At a meeting of the Society of Medical Jurisprudence and State Medicine, held at the Academy of Medicine June 11th, a paper by Prof. J. G. Kiernan, of Chicago (formerly of New York), entitled Some Suggestions Concerning the Dwight Insurance Case, was read by H. W. Sackett, Esq. In it the writer said "The decision in the Dwight case was fully warranted, even allowing that the deceased was a suicide. Supposing Colonel Dwight was insane, and with an insane idea of smartness had committed suicide with a vague notion of making money for his friends, would that act vitiate his policy? Under the laws of Iowa it would not, and legally the policy could not be declared void." The question was stated to be simply one of a contract with an insane person, and not of fraud. The paper was discussed by Drs. Spitzka and Harwood.

— An informal opening of the "Health Home" at Coney Island, organized under the auspices of the Children's Aid Society, took place on the 11th of June. The party of ladies and gentlemen who attended it first visited the "Summer Home" at Bath, L. I., which was the gift of Mr. A. B. Stone, and which receives some four thousand poor children during the season. They then went to the new sanitarium on the western part of Coney Island. It is in an excellent situation, with a superb ocean view, and the building, which is picturesque and convenient, with piazzas a hundred feet in length, has been presented to the Society by Mr. D. Willis James. There will be a resident physician, and in addition to the large numbers going to the place for the day, parties of sick and convalescent children, with their mothers, will be kept for a week or more at a time.

Miscellany.

THE PRINCIPLES OF MODERN THERAPEUSIS.

From an introductory lecture by Prof. H. C. Wood, published in the *Philadelphia Medical Times* (May 31st), we make the following extracts: —

"The modern physiological school of therapeutics starts with the understanding that there is at present no known law of therapeutics, — unless it is that of antagonisms — by which is meant that it is possible, when a mass of living protoplasm is depressed by some agent, to overcome the depression by a second agent, which is stimulant to the protoplasm; or, in other words, that whilst some agencies increase the molecular movements of the protoplasm, others lessen them, and that it is at least theoretically possible to balance more or less perfectly one of these forces against the other.

"The great therapeutic departure of the last decade is the general abandonment of the statistical method of therapeutic research, and the substitution therefor of the so-called physiological method. According to the latter plan, disease is to be first studied in its natural history, so as to determine whether it has a definite course which cannot be arrested, and, if so, what is the progress of such course; whether the natural tendency of the disease is towards recovery or towards death, and, if the former, why this tendency is sometimes not fulfilled, — that is, how death is produced in the exceptional cases. If the tendency of a disease is fatal, then the study of the possibility of arresting the disease becomes a problem of great interest.

"Having, by studies of the character just glanced at, determined what is possible and useful to be done, the therapeutist next studies the drugs and remedial agencies at command. By investigations upon man and the lower animals he endeavors to learn exactly how these drugs act upon the human system, first in health and afterwards in disease.

"When he has by these two classes of studies learned, in the first place, what he wishes to do, and, in the second place, what he has to work with, he adapts his means to his ends by reasoning not different from that which guides the chemist, the engineer, or any one dealing with difficult force-problems. . . .

"The modern scientific therapeutist, knowing what he desires to do, studies his instruments. To do this he experiments upon animals, because the modern conscience refuses to allow of human vivisection. It has been over and over again denied that we can reason from the action of drugs upon animals to their action upon man; but it is not worth while, at present and in this place, to attempt to show in detail the absurdity of such denial. The whole evidence of modern science indicates that, at least in his animal organism, man is not a mysterious creature apart from the rest of creation, but is an animal having structural and chemical relations, within and without, similar to those of other animals. . . .

"Summing up into a sentence, it may be said that the general principles which underlie rational therapeutics are to know what can be done and what it is desirable shall be done; then to know the means at command; and, finally, to adapt the means to the end.

"At present, the therapeutist is forced to supplement this principle by a pure empiricism, on account of the imperfection of our knowledge, not so much of the action of therapeutic remedies as of the nature of disease. We have no idea as to the nature of malaria, or of its immediate action upon the human organism; how, then, can we tell in what way quinine acts as a specific against it, — a fact which we abundantly know, empirically? The best therapeutic practice of to-day is therefore a mixture of science and empiricism; but the science has enormously increased in the last twenty years, and is advancing with arithmetical progression."

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MRS. HOPKINS OF HARTFORD UPON CONNECTICUT.

Mr. Hopkins, the governour of Hartford upon Connecticut, came to Boston, and brought his wife with him (a godly young woman and of special parts), who was fallen into a sad infirmity, the loss of her understanding and reason, which had been growing upon her divers years, by occasion of her giving herself wholly to reading and writing, and had written many books. Her husband, being very loving and tender of her, was loth to grieve her; but he saw his error when it was too late. For if she had attended her household affairs, and such things as belong to women, and not gone out of her way to meddle in such things as are proper for men, whose minds are stronger, &c., she had kept her wits, and might have improved them usefully and honorably in the place God had set her. He brought her to Boston and left her with her brother, one Mr. Yale, a merchant, to try what means might be had here for her. But no help could be had. — *John Winthrop's History of New England*, vol. ii., p. 265.

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EXCISION OF THE RECTUM FOR CANCER.

Mr. Harrison Cripps recently read before the Clinical Society of London[1] the notes of three cases of cancer of the rectum in which he had excised the lower part of the bowel, the operations having been performed respectively seventeen months, eighteen months, and four years ago. In the first case, that of a man aged sixty-eight, the symptoms had existed for two years. The disease consisted of a hard, irregular mass on the posterior and right wall of the rectum, about two thirds of the circumference of the bowel involved, the disease not extending more than two and three quarters of an inch from the anus. The lower three inches of the bowel were removed with the exception of about one fourth of its circumference on the anterior wall. The patient was much troubled during his convalescence from symptoms arising from enlarged prostate, but was discharged in a satisfactory condition so far as the bowel was concerned. At the end of a twelvemonth his medical attendant wrote that he was alive and comparatively comfortable; no return of the disease could be detected, but he was unable completely to retain his fæces. Mr. Cripps had examined this patient since sending in the paper, and found that he was suffering considerably from prostatic troubles. There was some hardness in this neighborhood, but no certain symptoms of recurrence. The second case was that of a lady aged sixty. The disease extended all round the bowel on the anterior wall, nearly as high as four inches. Mr. Cripps did not regard the case, from its extent, as a very favorable one for operation, but at the wish of the patient undertook its removal. The bowel had to be dissected for two inches from the peritonæum. The patient made a very satisfactory recovery. She suffered much from contraction, but there was no recurrence for more than a year; the disease then recommenced. The last case was that of a lady, aged forty, who was recommended to the author by Dr. Matthews Duncan. The disease consisted of a hard, ulcerated mass, involving one half the circumference of the bowel to a height of two inches, and filling the ischio-rectal fossa. The disease was removed in July, 1880, and proved, under the microscope, to be a typical example of adenoid cancer. The patient has been frequently examined since. She has completely regained her old strength and health, has no pain or discomfort whatever, and remains, after nearly four years, perfectly free from any symptom of recurrence.

The remarkably favorable results secured by Mr. Cripps were not in accord with those attained by a number of the speakers who took part in the discussion. The president, Sir Andrew Clark, in summing up, said that the discussion had shown that whilst excision of the rectum served to give relief for a time it did not tend to prolong life. He mentioned one case in which he had diagnosticated cancer six years before the patient's death. He considered that the limit of eighteen months, so frequently laid down in books, was not in accordance with general experience.

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QUICK TIME ON SNOW-SHOES.

Some question having been raised, says *Science*, in relation to the distance traveled by the Lapps of Baron Nordenskiöld's party in their excursion into central Greenland Mr. Oscar Dickson arranged for a series of races on *skidor* ("snow-shoes") at Quickjock in Lapland. The distance which they claimed to have traveled over the Greenland ice was two hundred and thirty kilometres, going and returning in fifty-seven hours. For this reason the courses were arranged so as to have a total length of two hundred and twenty-seven kilometres. The races took place on the 3d of April last, and were spread over six days. The following results were obtained: —

The first prize, three hundred and fifty francs, was gained by Pavo Lars Tuorda, one of those who had visited Greenland with Nordenskiöld, and who traveled over the above-mentioned distance, equivalent to one hundred and forty-one miles, in twenty-one hours twenty-two minutes, including all stoppages. The second prize was gained by Pehr Olof Landta, who came in half a minute later. The third and fourth prizes were awarded for the times of twenty-one hours thirty-three and a half minutes and twenty-one hours and fifty-six minutes, respectively. Four others received a gratuity of thirty-five francs for having covered the distance in less than twenty-six hours. All arrived in good condition, unexhausted, and took part in the festivities which followed the races. Many of them had also traveled from seventy to a hundred kilometres before the race to get to the point where the course began. It will be observed that the result completely confirms the claims of the Lapps on their journey in Greenland as far as a parallel performance can do so.

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[1] Medical Times and Gazette, April 26th.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 7, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	630	254	18.56	15.04	3.36	5.92	1.60
Philadelphia	927,995	354	133	15.40	15.96	2.52	3.26	3.92
Brooklyn	644,526	241	90	18.06	16.38	4.15	3.36	2.94
Chicago	632,100	203	107	23.52	9.31	3.92	4.41	2.45
Boston	423,800	169	46	15.93	24.78	1.18	8.26	1.18
Baltimore	408,520	132	47	17.48	12.92	7.63	3.04	1.52
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	107	32	12.09	13.02	2.79	2.79	2.79
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	86	33	12.76	15.08	3.48	3.48	3.80
Pittsburg	180,000	72	34	23.63	—	—	11.12	1.39
Milwaukee	142,400	54	28	5.55	11.11	—	1.85	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	21	6	9.52	19.14	—	—	—
Nashville	54,400	13	4	—	15.38	—	—	—
Charleston	52,286	43	20	13.99	16.33	11.66	—	—
Lowell	71,447	20	5	15.00	25.00	—	—	15.00
Worcester	69,442	13	5	15.38	15.38	7.69	7.69	—
Fall River	62,674	34	16	8.82	8.82	—	2.94	—
Cambridge	60,995	20	5	15.00	25.00	5.00	5.00	—
Lawrence	45,516	11	4	18.18	18.18	—	18.18	—
Lynn	44,895	11	2	9.09	36.36	—	9.09	—
Springfield	38,090	14	3	7.14	21.42	7.14	—	—
Somerville	31,350	7	1	28.56	28.56	14.28	14.28	—
Holyoke	30,515	11	4	18.18	—	—	—	9.09
New Bedford	30,144	13	1	7.69	30.76	—	—	—
Salem	29,503	13	4	15.38	30.76	—	7.69	—
Chelsea	24,347	2	2	—	—	—	—	—
Taunton	22,693	12	4	25.00	25.00	—	8.33	8.33
Gloucester	21,400	3	1	—	33.33	—	—	—
Haverhill	20,905	—	—	—	—	—	—	—
Newton	19,421	1	1	—	—	—	—	—
Brockton	18,323	6	3	—	16.66	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	2	—	25.00	—	—	—
Fitchburg	13,433	3	0	—	—	—	—	—
Eighty-three Massachusetts towns	338,641	66	9	3.04	22.80	—	—	—

Deaths reported 2389 (no reports from St. Louis, New Orleans, Buffalo, and Providence): under five years of age, 906; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 394, consumption 377, lung diseases 225, diphtheria and croup 108, diarrhœal diseases 75, scarlet fever 53, measles 53, whooping-cough 29, typhoid fever 29, malarial fevers 13, puerperal fever 11, cerebro-spinal meningitis 10, erysipelas nine, small-pox four. From *measles*, New York 28, Chicago 14, Pittsburg four, Philadelphia, Brooklyn, Boston, Baltimore, District of Columbia, Fall River, and Taunton one each. From *whooping-cough*, Brooklyn eight, New York six, Philadelphia, Chicago, and Boston three each, Pittsburg two, Baltimore, District of Columbia, New Bedford, and Peabody one each. From *typhoid fever*, Philadelphia eight, Chicago five, Cincinnati three, Brooklyn, Boston, and Baltimore two each, New York, Milwaukee, New Haven, Charleston, Cambridge, Holyoke, and Wakefield one each. From *malarial fevers*, New York six, Baltimore three, Brooklyn two, Philadelphia and Chicago one each. From *puerperal fever*, Brooklyn four, Chicago three, Boston two, New York and Cincinnati one each. From *cerebro-spinal meningitis*, New York four, Philadelphia two, Milwaukee, New Haven, Fall River, and Salem one each. From *erysipelas*, Philadelphia four, New York and Boston two each, Brooklyn one. From *small-pox*, Pittsburg two, Philadelphia one.

In 100 cities and towns of Massachusetts, with an estimated population of 1,351,385 (estimated population of the State 1,955,104), the total death-rate for the week was 16.31 against 16.50 and 14.86 for the previous two weeks.

Cases reported in Boston: scarlet fever 51, diphtheria 32, typhoid fever six, and measles three; in Milwaukee, scarlet fever 15 and diphtheria seven.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending May 24th, the death-rate was 19.9. Deaths reported 3343: acute diseases of the respiratory organs (London) 261, measles 156, whooping-cough 138, scarlet fever 68, diarrhœa 46, fever 37, diphtheria 28, small-pox (London 17, Sheffield three, Liverpool two, Derby and Sunderland one each) 24. The death-rates ranged from 10.9 in Birkenhead to 28.1 in Oldham; Leicester 16.9; London 18.5; Bradford 18.9; Sheffield 19.3; Birmingham 20.6; Liverpool 21.2; Leeds 22; Nottingham 22.4; Manchester 25.1; Newcastle-on-Tyne 25.2; Blackburn 25.5. In Edinburgh 18.8; Glasgow 25.8; Dublin 23.8.

For the week ending May 24th, in the Swiss towns, there were 35 deaths from consumption, typhoid fever 19, lung diseases 18, diarrhœal diseases 18, diphtheria and croup seven, scarlet fever three, erysipelas two, whooping-cough one. The death-rates were, at Geneva 18.3; Zurich 15.8; Basle 22.6; Berne 14.4.

The meteorological record for the week ending June 7th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
June, 1884.	Daily Mean.	Daily Mean	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 1	30.370	50	57	45	80	80	62	74	W	E	N	2	12	7	C	C	C	—	—
Mon., 2	30.154	53	64	42	59	64	75	66	NW	E	NW	12	14	14	C	C	F	—	—
Tues., 3	29.894	65	78	50	72	71	73	72	W	NE	W	3	5	8	C	O	C	—	—
Wed., 4	29.984	70	83	60	84	57	64	68	NW	NE	W	7	8	11	C	C	C	—	—
Thurs., 5	30.078	75	89	63	75	47	67	63	W	SW	SW	7	9	9	C	C	H	—	—
Fri., 6	30.058	74	88	63	66	55	74	65	SW	SW	W	10	14	11	C	C	C	—	—
Sat., 7	29.995	76	90	64	78	42	73	62	W	W	SW	8	5	6	O	F	C	—	—
Mean, the Week.	30.046	66	78	55				67										0.45	0.03

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

LIST OF OFFICIAL CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JUNE 14, 1884.

Austin, A. A., passed assistant surgeon, detached from U. S. S. St. Louis, ordered to Naval Rendezvous, Philadelphia.

Edgar, T. M., passed assistant surgeon, detached from U. S. S. Wabash, ordered to U. S. S. Nantucket.

Baldwin, L. B., passed assistant surgeon, ordered to U. S. S. Wabash.

Whitaker, H. W., assistant surgeon, detached from Naval Rendezvous, Philadelphia, ordered for examination preliminary to promotion.

Hesler, F. A., assistant surgeon, ordered to U. S. S. Minnesota.

Means, V. C. B., assistant surgeon, ordered to U. S. S. Vermont.

Browne, T. M., medical director, to attend the International Health Exhibition at Liverpool, Eng., and delegate to International Medical Congress at Copenhagen, per steamer of July 2d.

Tryon, I. R., surgeon, to same duty with Medical Director Browne, and on completion of this duty to report for duty on U. S. S. Quinnebaug.

Hugg, J., surgeon, detached from Quinnebaug; on reporting of relief to return home and report arrival.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM JUNE 7, 1884, TO JUNE 13, 1884.

The Army Medical Examining Board, New York City, is dissolved, to take effect June 14, 1884.

Brown, **Jos. B.**, lieutenant-colonel and surgeon. Upon completion of the business of the A. M. B., directed to comply with S. O. 44, current series, A. G. O., and return to New York City.

Clements, **Bennett A.**, major and surgeon. Directed to await orders in New York City.

Kimball, **James P.**, captain and assistant surgeon. Granted leave of absence for two months and fourteen days, to take effect June 14, 1884, and ordered to relieve, August 28, 1884, Captain Robert H. White, assistant surgeon, from duty at U. S. Military Academy, West Point, N. Y.

Captain White, on being relieved, ordered to report in person to the commanding general, Department of California, for assignment to duty.

Sternberg, **George M.**, major and surgeon. Relieved from temporary duty in S. G. O., and ordered to assume the duties of attending surgeon and examiner of recruits at Baltimore, Md. S. O. 131, A. G. O., June 6, 1884.

Finley, J. A., captain and assistant surgeon. Relieved from duty at Fort Stockton, Texas, and assigned to duty as post surgeon at Fort Concho, Texas. Paragraph 4, S. O. 64, headquarters Department of Texas, June 2, 1884.

Middleton, **Passmore**, captain and assistant surgeon. Leave of absence extended three months on surgeon's certificate of disability. Paragraph 3, S. O. 134, A. G. O., June 10, 1884.

Barnett, **Richards**, captain and assistant surgeon. Assigned to duty as post surgeon, Mount Vernon Barracks, Ala. Paragraph 2, S. O. 113, headquarters Department of the East, June 9, 1884.

Gardner, **Edwin F.**, captain and assistant surgeon. Relieved from duty at Fort Walla Walla, Wash. Ter., and assigned to duty as post surgeon, Fort Canby, Wash. Ter. Paragraph 1, S. O. 75, headquarters Department of Columbia, June 3, 1884.

Cuningham, T. A., captain and assistant surgeon. Ordered to relieve Assistant Surgeon C. B. Byrne, U. S. A., from duty at Fort Lewis, Col. Assistant Surgeon Byrne, when so relieved, ordered to proceed to Fort Gibson, I. T., and report to the post commander for duty. Paragraph 2, S. O. 112, headqarters Department of Missouri, June 4, 1884.

Banister, J. M., first lieutenant and assistant surgeon. Granted leave of absence for one month and seven days, to commence June 13th. S. O. 22, headquarters Division of the Atlantic, June 5, 1884.

McCreery, **George**, first lieutenant and assistant surgeon. Granted leave of absence for two months, with permission to apply to the Adjutant General of the Army for two months' extension. Paragraph 3, S. O. 56, headquarters Division of Missouri, June 5, 1884.

Books and Pamphlets Received. — The General Practitioner's Guide to Diseases and Injuries of the Eye and Eyelids. By Louis H. Tosswill, B. A., M. B., etc., etc. London: J. & A. Churchill. 1884.

A Glioma of the Right Eye spreading by Metastasis through many Periosteal Centres. By Julian J. Chisholm, M. D. Baltimore, Md. (Reprint.) 1884.

Department of the Interior. Bureau of Education. Preliminary Circular respecting the Exhibition of Education at the World's Industrial and Cotton Centennial Exposition. Washington. 1884.

Report on the Epidemic of Enteric Fever in Port Jervis. State Board of Health of New York.

Twenty-Third Annual Report of the Cincinnati Hospital to the Mayor of Cincinnati for the Fiscal Year ending December 31, 1883.

Proceedings of an Informal Conference of the U. S. Commissioners of the World's Industrial and Cotton and Centennial Exposition, etc. Washington. 1884.

Dartmouth Medical College. Eighty-eighth Annual Course of Lectures, New Hampshire Medical Institution. Hanover, N. H. 1884.

Notes on a Copy of Dr. William Douglass' Almanack for 1743, touching on the Subject of Medicine in Massachusetts before his Time. By Samuel Abbott Green, M. D.

A Treatise on Ophthalmology for the General Practitioner. Illustrated by Adolf Alt, M. D. Chicago, Ill.: J. H. Chambers & Co. 1884.

Health Hints for Travelers. By John C. Sundberg, M. D. Philadelphia: D. G. Brinton. 1884.

Die Nauheimer Sprudel und Sprudelstrombäder von Dr. August Schott und Dr. Theodor Schott in Bad Nauheim. Separat-Abdruck aus der Berl. klin. Wochens. 1884. No. 19.

Original Articles.

SIX GENERIC DRUG MODIFICATIONS.[1]

BY HENRY M. FIELD, M. D.

> "I CONCLUDE, therefore, of this and other medicines, as Thucydides of the plague at Athens, no remedy could be prescribed for it, *nam quod uni profuit hoc aliis erat exitio*; there is no catholic medicine to be had, — that which helps one is pernicious to another." — ROBERT BURTON.

WHAT Virchow calls the "mystery of individuality" continually confronts the physician in the prescribing of remedies. Other mysteries may, with growing familiarity, become less obscure; skill and confidence otherwise enlarge with use and experience, but the oldest and the wisest practitioner must still confess himself frequently baffled by the mysterious modifications which the individual constitution continually introduces into the operation of his most familiar remedies. "When," observes a recent writer, "we recall only a few of the minutiæ which must be taken into account, for example, the infinitely great difference in the distribution of blood-vessels in organs, the multiform arrangement of glandular tissues in glands, the deviations in innervation of organs, the difference in size of individual nerves, and in the distribution of nerve plexuses, the variations in the gross and in the histological construction of the same muscles in different individuals, we must confess that not only is our present ignorance great, but that it will always continue."

In this connection and of what has been well called anatomical idiosyncrasy, an observation connected with the ophthalmological use of atropia affords a good illustration. Instilled into the eye in whatever quantity, employed in collyria for however long a time, atropia should exert no influence beyond its local effect, and such is the general result of its use. There is, however, rarely observed constitutional implication, and this has been traced to an anatomical peculiarity. It is not any part of the salt absorbed from the eye that affects the system, but such portion of it as was taken up by the lachrymal ducts and so conveyed to the throat and stomach. "Susceptibility, therefore, to this mode of action stands in direct ratio to the width of the tear-passages. Proof of this statement is furnished, according to R. Liebreich, by those who have impermeable tear-ducts, and whose general condition is never affected, even by the largest doses used for a long period."[2]

Such are but a few, and these the more obvious and superficial, of the conditions which determine individuality. The problem has other elements at once more controlling and recondite, not easily expressed in words, but the reality of which is recognized by every thoughtful physician. "The possibility of explanation," says Virchow, "is no test of knowledge, for we know many things empirically whose causes we cannot comprehend. No exact investigation, either anatomical or physiological, pathological or therapeutical, has ever succeeded in lifting the veil which conceals the conditions governing individual peculiarities. In all times it has been regarded as the peculiar prerogative of exceptionally gifted spirits or of great experience to possess that subtle insight which enables one to recognize, even approximately, the specific character of the individual."

What may be called *indicia* of idiosyncrasy are greatly to be desired; such as past experience has possessed us of are at best few and uncertain. Jonathan Hutchinson has remarked that all persons of dark complexion bear mercurial treatment well and require larger doses than those who are fair; nay, more, that individuals of the former class may enjoy better health while taking mercury, "and are not infrequently much and permanently benefited by a long course." On the other hand, dark-complexioned people do not bear tonics well, they are apt not to be helped by sea-air; "the need of purgatives is greater in them." In those of fair complexion belladonna is observed to exert its highest power. Just as we know that acne is most liable to appear in individuals of a certain quality of skin and at a certain period of life, so we may expect that the iodides and bromides, pushed a little under these circumstances, will produce characteristic cutaneous eruptions. Finally, we know — and a most unhappy piece of knowledge it often is — that it is just in the constitution which most needs the staying and tranquilizing influence of opium, that is, in the hyperæsthetic and neuralgic female, that its anodyne and hypnotic virtues are most apt to fail us, while in such systems it may play the rôle of a veritable fiend.

The hope that what experience did not impart, an *a priori* method of studying and reasoning might supply, naturally a product of the deductive philosophy of an earlier age, was doubtless directly concerned in the determination of temperaments by the ancients, an effort towards specific knowledge in the direction of individualism. And it must be admitted, though their terms be far from scientific, we all of us still find them very convenient. Indeed, the attempt at classification in individuality has not been wholly resigned to the contemporaries and successors of Galen and Paracelsus; and it is hardly more than twenty years ago that so prominent a practitioner as Dr. Laycock wrote quite exhaustively upon the subject. It is doubtful, however, if we are made any better off for his six temperaments than for the four we had previously. Such studies have their value in our scientific age, when the minds of men are so generally given to the pursuit of the demonstrable and of that alone which is capable of strict definition. Once that the disease were determined it is not at all sure that the practitioner trained in the school of Laennec would treat a pneumonia better than would he who was taught in the school of Hippocrates; and quite likely the latter would be nearer right in prognosis. Just here is suggested a danger that we may lose much as medicine makes its transition from art to science. The "gifted spirits" of Virchow are not the anatomists or the pathologists, they are not of necessity the clinicians, full men though they may be, and exact in the practical knowledge of hospitals and schools; they are rather those who, some way, find the largest success in the treatment of disease, whose wide range of therapeutic resources is both intuitive and acquired, whose sense, aided or not by instruments of precision, looks deeper and sees farther than that of other men, who wrest secrets from nature, and, in the language of the French proverb, are concerned "not with sicknesses but with the sick." It was a good pathologist who gave three good reasons why his patient could not get well, but it was a better doctor who, against all reason, rescued him.

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[1] Annual Address delivered before the Middlesex South District Medical Society, at Cambridge, April 16, 1884. Published by vote of the Society.

[2] Lewin.

The occasional extraordinary behavior of quinine affords a good illustration of what we mean by idiosyncrasy. We do not now refer to what has been called quinine poisoning, a condition which may accrue from quite small doses, and which is variously characterized by determination of blood to the head, œdema of the face, itching of cutaneous surfaces, great excitement, and even delirium, followed by extensive desquamation. This pertains to individuality, but it has been well described in certain cases published in the journals and the books. But in the exceptional condition now in mind quinine acts in a way the exact opposite of its otherwise observed and characteristic action. Intrinsically a corroborant, a dynaphor, as the French conveniently call it, that is, a force-begetting, force-imparting remedy, it now acts to prostrate and overwhelm. The patient complains of increased weariness; there is trembling of the hands, unsteadiness of gait, a feeling of great weakness in the legs, more or less complete, and perhaps extreme, suffusion of perspiration, with conjoined depression of spirits, melancholy, impaired mental power, etc., etc. Such syndroma, which, in another and otherwise caused, quinia should be calculated directly to antagonize, to relieve or lift altogether, follow so soon after the ingestion of the remedy, and are so surely aggravated by successive doses, that soon, it may well be, both physician and patient are brought to suspect the source of the mischief.[1]

A somewhat prevalent misconception or inadequate knowledge among the profession upon the general subject of quinia incompatibility is well illustrated by remarks of Dr. David Young, of Rome, in a recent article contributed to the *Practitioner*. He speaks of a "belief on the part of many patients, a belief also shared in by not a few eminent physicians, that they cannot take quinine in any form or dose; and I have met with such patients in Italy," continues the doctor, "who told me they were advised by their own medical men at home to assure any physician whom they might have occasion to consult that they could not take quinine." He suspects that there is a "physiological reason" for this fact of intolerance, and that "ere long investigation will discover what this reason is," and proceeds to remark upon the "curious fact that the same wide-spread belief exists in regard to the use of iron." The illustration is an unfortunate one; the analogy cannot be maintained, for the fact is, as I conceive it, that iron intolerance, when presented, is, indeed, almost invariably due to a "physiological reason," a temporary physiological condition which it is for the physician to estimate and remove; for example, a state of pyrexia, of biliousness, a failure in selection of the right pharmaceutical preparation, or in determination of the right dose; whereas quinine intolerance, when it exists, is an established fact, and has its source in the very nature of the man, or, in a word, is what we have recognized it to be, a phenomenon of idiosyncrasy.

Iodine, as misdirected by individual constitution, is a not infrequent occasion of surprise, annoyance, or aggravation. For this we may perhaps be partly prepared when we consider the wonderful power of this drug to penetrate the system, the wonderful speed of its circuit, and the extraordinary range of its possible elimination; a threefold quality which may well bring it into collision with a lurking idiosyncrasy. Ingested into the stomach as metalloid or salt, the promptitude with which it may be rendered in the renal flux or returned in the saliva is familiar to every physiologist. I have, at least on two occasions, had patients to whom I had made application of a few drops tincture iodine, upon absorbent cotton by shielded applicator to the interior of the uterus, declare that iodine had been used because it was tasted in the mouth. Hardly more than three minutes — and surely not five — had elapsed before this impression was made. Here the area of absorption must have been confined to the endometrium, none of the remedy having come in contact with any part of the vaginal wall.

The inherent power which every active remedy has to exert desirable and undesirable properties at the same time is also well illustrated by iodine as modified by individualism. Lewin's experience is here to the point: "Given for the purpose of producing a diminution in volume of hyperplastic glands, as the cervical lymphatic or the thyroid, etc., it produced the desired effect and at the same time a serious atrophy of glands previously healthy, as the mammæ or testicles." Iodine, like opium, may accomplish the purpose of its exhibition, but in so malignant a way that the relief afforded costs seriously through the discomforts it imposes. This is well illustrated by the experience of a patient of mine, a young medical man, who had found in iodide of potassium a complete, and the only effectual remedy for a painful asthma. The drug, however, produced synchronously such a degree of lachrymal and nasal catarrh, such a persistent foul taste in mouth and foul odor of breath, that the victim of idiosyncrasy, after repeated unfortunate trials, gave up all treatment and resigned himself as patiently as he might to his old enemy.

Iodide is so prolific in individual constitutional disturbances that we leave the subject with reluctance, but can give space for but little further remark. The power which idiosyncrasy, indeed, may assert in this connection is well shown by Hutchinson's observation, who has repeatedly seen doses of only half a grain produce definite symptoms of poisoning in the course of a couple of days; and yet has known a patient to swallow one and a half ounces a day of the best Apothecary Hall iodide for a week together without any especial effect except the production of a degree of lassitude.

The morphology of skin eruptions, under varied constitutional iodism, presents a wide range, and may obtrude problems hard to solve. In one instance an infant was treated for small-pox by "an experienced and sagacious surgeon," and kept carefully quarantined for a month, — to present in the end only a case of iodide of potassium poisoning. A man was treated in hospital for syphilis, pretty surely killed by iodide of potassium, and then declared never to have had syphilis at all. Such experience as this is calculated to enforce the eleventh aphorism of Arnoldus, which asserts that the "wise and conservative physician never hastens to have recourse to medicine *nisi necessitate cogente*."

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[1] I am glad to find, in Hutchinson on "Pedigree of Disease," the recognition of a principle which I learned, some time ago, to apply in my own practice, especially in respect of the present material, but which I have not seen stated elsewhere. "It by no means follows," he remarks, "that because a patient has an idiosyncrasy against some drug we ought wholly to abstain from its use. Rather the [illegible] proves in the majority of cases that in [illegible]." He [illegible] syphilitic [illegible] by [illegible] half grain doses iodide of potassium. I have [illegible] this method in many cases, and accomplished for medicinal purpose with one half to two grains quinine and at the same time avoided unfortunate [illegible] impression.

The misinterpretation which follows has its amusing side. In 1862 the dermatologist Bazin, of Paris, published a description of a new form of skin disease, for which he proposed the name "*hydroa*." Other observers followed with similar accounts. Later, an authority objected both to the term and to the claim of novelty, and pronounced the disease a variety of "urticaria bullosa." It was not till some time after 1870 that proof was afforded that all were alike at fault, and in "hydroa" was recognized only an extraordinary idiosyncrasic sport of iodine.[1]

One illustration more. It has been lately pointed out by a French author that the medicinal employment of the oil of turpentine may occasion a condition of the kidneys which causes the urine, on chemical examination, to simulate albuminuria. This fact is alluded to in my recent monograph on The Balsamics, and a simple device given by which the error can be set aside. In a volume of papers by Dr. Seguin of New York, — Opera Minora, — published the present year, a corresponding charge is brought against iodide of potassium as respects microscopic examination of the urine. He reports three cases attended by conditions which warrant the statement that iodide of potassium "may give rise to the formation of hyaline and epithelial casts without (there being) albuminuria or other rational symptom of Bright's disease." This, so far as I know, is the latest observed — as well as one of the most singular — freaks of idiosyncrasy in the conduct of this versatile drug.

(To be continued.)

SEWAGE SYSTEMS AND THE EPURATION OF SEWAGE BY IRRIGATION AND AGRICULTURE.[1]

BY HENRY J. BARNES, M. D.

Dantzic, situated about three miles from the Baltic, on account of pollution of its harbor at the mouth of the Vistula, constructed a sewer to discharge on a sandy island having little or no soil, where the occasional tufts of grass were frequently covered with sand carried by the wind. As a result the island is now in a high state of cultivation. In some tracts the land rents to peasants at from twenty to thirty dollars per acre. The frosts of winter do not interfere with the successful operation, as the water delivered by the sewer melts the snow and ice, so that it finds its way into the ground quite as well as in summer, and without injury to the slumbering vegetation. Odessa, Breslau, and Florence also have sewage farms. M. A. Durand-Claye, from whose reports this information is derived, says that "in Germany it is admitted without question that municipal healthfulness depends upon three principles: first, the total discharge of water-closets in sewers; second, the distribution of an abundant supply of water in dwellings, and frequent flushing of drains; third, the purification of sewage by soil and vegetation."

In England there are two hundred cities and towns disposing of sewage by irrigation and agriculture. On the farms at Edinburgh are located beautiful nurseries for the children of the city. At Lochend a farm taking sewage from this city has produced $200 worth of hay per acre. The Metropolitan Sewer Company of London rents land at $100 per acre for grazing. Sixteen acres at Rugby furnish feed for fifty-four head of cattle, and at Aldershot, Branbury, Bedford, Croydon, Norwood, Warwick, and Worthing the reports in detail show an equally wonderful production from the land treated in this manner.

Leamington, with 26,000 inhabitants, spent $40,000 in chemical experiments, after which the A. B. C. Company in 1869 attempted to purify the sewage, but gave it up in 1871. It was then allowed to flow into the River Leam. A lawsuit followed, costing the city $25,000, in which it was defeated, and compelled at an expense of $7500 more to purify the river. Lord Warwick then consented to receive the sewage on his estate, the city contracting to deliver it at the highest point of the farm for a period of thirty-two years, for which Lord Warwick engages to pay $2250 annually. The sewage amounts to a little over 1,000,000 gallons per day, and is distributed over the land, which has not been leveled, by what is known as the "donkey back" system, — elevated open drains, on the sides of which is the vegetation. It has transformed the poorest parts of the farm into soil of much fertility, and financially has proved a great success. From eight to nine cuts of Italian rye grass two feet high are made each year. Celery, strawberries, and currants grow remarkably well. The beef, milk, and butter are in great demand and bring the highest prices. The laborers are in the best of health, and Lord Warwick has received numerous prizes and silver cups for one of the best kept farms in the kingdom. A more detailed account may be found in Babut du Maris' work.

The sewage farm at Croydon is surrounded by beautiful villas, it being a fashionable resort. The land which twenty years ago sold for $300 per acre is now worth from $2,000 to $5,000. There has been but one complaint of the farm during the past twelve years, and this resulted from excessive irrigation during a long period of stormy weather, when the hay could not be dried on the land.

A public footpath crosses the sewage farm at Abingdon. There has been no complaint from bad odor.

Babut du Maris says, "It has been claimed that prolonged irrigation will produce disease by the presence of bacteria in the sewage. Experience is to the contrary. The farms at Edinburgh have received sewage for more than two centuries, that at Buntzlau for two and a half centuries, and for more than ten centuries this has been in practice in China. Vegetation has never ceased to be vigorous and healthy, and the inhabitants have never been known to suffer in consequence of irrigation."

I am informed by a gentleman who has resided seven or eight years in China that in all the large cities the detritus is carried into the suburbs by hand buckets and deposited on the land for the benefit of vegetation, and in many instances the same pails serve to bring back drinking water, with no ill effect except in a few northern cities, where the sewage is put on the leaves of vegetation; there the tape-worm is very common. Dr. Williams, in his work entitled "The Middle Kingdom," does not include typhus, typhoid, scarlet fever, or diphtheria in a list of the prevalent diseases of China.

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[1] Hutchinson remarks of this drug and of its derivatives: "Not even the syphilitic virus itself is capable of producing a greater multiplicity of pathological changes in the integument. Now it is a hæmorrhage, now a thrombosis, now an erythema, now a bulla: the commonest of all forms is an acne: but in addition to it and to those I have named we may have, at the same time, pustules, button-like tubercles, and in aggravated cases enormous soft tuberous growths."

[2] Concluded from page 580.

It is difficult to make comparisons or draw conclusions when considering this question financially, for the paramount objects to be attained vary in different communities. One town may seek only to get rid of the sewage, another its most profitable employment on the land, another relief from the pollution of a water-course or preservation of its navigability; grotesque and unprofitable experiments and local conditions all contributing to make balance sheets of great diversity in showing either profit or loss. Many examples of each are available, and should of course be carefully studied.

The city of Paris, for many years harassed by constant complaint and litigation as a result of discharging sewage in the Seine, some years since established sewage farms on the plains of Gennevilliers, the history of which is told in a report to the municipal council by the sixth Commission appointed to treat with the state for the concession of such public lands at Achères as are necessary for the epuration of the sewage by irrigation and agriculture.

Before the execution of the measures conceived by M. Belgrand for the general healthfulness of Paris, the rain water and the washings of the streets flowed into the Seine, either directly, or by a great number of drains emptying on the quays of each bank the whole length of Paris. This mode of drainage resulted in the immediate and pronounced pollution of the river, which reached the maximum at the point where it leaves the city. The work of Belgrand had for its result the concentration of four fifths of the drain water in a large sewer opening into the river at Clichy while the remainder was discharged at St. Denis. At the same time the water for domestic supply was largely increased. In 1860 30,000,000 gallons per day were furnished for this purpose; in 1882 92,000,000 gallons were required each day, or 34,020,000,000 gallons per year. This, with the rain water which falls on the city, estimated at from 9,576,000,000 to 11,340,000,000 gallons, makes a total of 44,100,000,000 to 45,360,000,000 gallons, which, were it not for evaporation and other loss, should be carried by the sewers. This loss amounts to something like 18,900,000,000 gallons per year as indicated by gauges in the two sewers, which register 26,208,000,000 gallons, — about 42 per cent. disappearing by evaporation. At low water of the Seine it is equal to one part of drain water to twenty of river water, and at high water to one part in 350. As a result of currents and obstacles in the river, mixing did not take place; and the right bank — the most densely peopled — received on a very long margin the totality of the drain water, depositing all the way organic matter brought in suspension. Protestations from people living along the right bank of the river followed very closely the opening of the two great sewers; and the state government required the city of Paris to seriously consider methods of purifying the sewage before discharging it into the river. The savants, engineers, chemists, traders, and agriculturists discussed the subject in all its phases, and to the latter we are indebted for a practical solution of the problem.

Filtrage was naturally the first system to be tried. It was soon found that, besides the actual difficulties of filtration on so large a scale, this mode of treatment had the capital vice of leaving in the water soluble organic matter capable of fermentation, and later, chemical agents were resorted to with the object of precipitating the soluble matter, but only incomplete results were obtained, which were slow, costly, and inapplicable on so large a scale.

We now come to the experiment which after fifteen years of study and persevering effort has given a result most complete and satisfactory. Epuration and utilization by agriculture, and filtration by spreading the sewage on permeable land have accomplished this end. It is based on simple principles, of which the demonstration is now made. All argilo-silicious and permeable soils, sufficiently thick and well drained, have the property of retaining in their superior layers all the organic matter in suspension and solution contained in drain water spread on the surface of the land. Such soil can receive without being made damp or marshy one inch of water per day, or twenty-six feet per year. It transforms the retained organic matter, rendering it capable of assimilation by plants. A very ingenious experiment just made shows this valuable property in the vegetable mould. A hollow column two metres in height was filled with earth in a manner to reproduce exactly the soil as found at Gennevilliers. Through this was passed sewage in a relative quantity to that employed in irrigation and at equal intervals with its use on the land. Epuration took place as completely as in the natural earth. Chloroform was then passed through the column, which at once arrested epuration, and the sewage traversed the column without being purified. Paralyzation of the infusoria stopped oxidation of the organic matter. This experiment has been demonstrated by M. Schloessing, and is described in the report to the Council of Hygiene. If the surface irrigated is under cultivation the fertilizing matter is immediately utilized; if not, it accumulates without loss and transforms the poorest soil into land of extreme fertility.

A very large proportion of the water used in irrigation is evaporated either directly or by the plants in vegetation. The residuary water coming from the subsoil drains is of a remarkable purity, and does not suggest either by aspect or composition the sewage from which it proceeds. Irrigation is the most economical and efficacious means of conveying directly to the plants the fertilizing matter of sewage.

Trusting in these principles, and fortified by the works of Messrs. De Freycinet, Schloessing, Mariè-Davy, and Frankland, the engineers of the municipal service have, since 1867, pursued studies and made experiments for which, notably since 1872, the council has furnished a large amount of money. These efforts have had as a result the great and actual demonstration at Gennevilliers, which evidence impresses favorably all unprejudiced persons who take the trouble to visit the lands.

After some experimental cultivation at Clichy in 1867 and 1868 the irrigation of the plains of Gennevilliers was begun in 1869 by Messrs. Mille and Durand-Claye. In 1870 and 1872 the territory comprised but a few hectares. It has increased each year, until now over 500 hectares are thus employed (about 1200 acres, which receive nearly one fourth the sewage of the city). In the beginning the water distributed was limited to a few thousand cubic metres. In 1872 111,000,000 gallons were used. In 1881 4,685,000,000 gallons were discharged on the land. In May of this year (1881) 684,500,000 gallons — 22,050,000 gallons per day, or 44,100 gallons per hectare per day — these plains absorbed. In 1882, at the time of the report, the distribution reached 34,020,000 gallons per day, or 79,300 gallons per hectare, which represents a sheet of water spread over the surface equal to a little over one inch per day.

The progress, the slowness of which astonishes us now, has not been obtained without difficulty. At the origin, the engineers, relying too much on the very great permeability of the land, had not thought it necessary to establish subsoil drainage. The natural drainage, in consequence of an abundant irrigation, was found insufficient. The level of the subsoil water rose; a few cellars were flooded at Gennevilliers, and gravel quarries were inundated. This was sufficient excuse for a claim for excessive damages against so rich a victim as the city of Paris. To increase the indemnity and to compel a compromise, all possible arguments were employed. Doctor was opposed to doctor, and hygienist to statistician, when it was only a question of a few thousand francs damage to the claimants. These demands were opposed by the engineers, who in turn were very decidedly sustained and supplied with money by the municipal council. The necessary work to insure the drainage of the plains and to remove all pretext for damages was done, and to-day the complaint is rather of the lowering of the subsoil water. Nevertheless irrigation at Gennevilliers created a prosperity until then unknown, and a time arrived when the community, frightened by the possible result of its demands and outcries, — which threatened to be the suppression of irrigation, — asked for a contract, the principal article of which was that the city should engage to continue irrigation on the plains of Gennevilliers for twelve years.

The efficacy of this system of epuration is manifest, and presents a brilliant proof. The effluent drain water has fewer micro-organisms than the water of the Seine when it enters Paris. It has the purity of spring water coming from the earth. To demonstrate the utility of the system as applied to agriculture has been slow and difficult, and not less laborious than to test the efficacy of the epuration.

The slowness of experiments in agriculture may be understood when we remember that to reach an end we must go through all the phases of vegetation, from the sowing of the seed to the harvest. Under our climate it is a campaign of a year. If we neglect a detail, if we make a mistake at the time of sowing or planting, at the time of plowing or watering, the harvest may be a failure, and we must begin again. The difficulty was increased by local circumstances. Amongst the cultivators of land in the suburbs of Paris, no one knew the practical working of a sewage farm. One of the persistent workers who has been rewarded by success said recently that it required more than four years to acquire the necessary knowledge. To-day the cultivators are in complete possession of their art, and in the recent horticultural exhibition every one admired the remarkable products, which received honorable distinctions.

In agriculture, successes which would be shown by beautiful samples obtained in the fields of experiment would be objects of curiosity. It is necessary to secure economical results, and these go far beyond the utmost expectations. For the landlord of the soil the rent value of the hectare has increased fivefold, from ninety to 450 francs. For the farmer or cultivator the prosperity has not been less. The net value of vegetable products rose from little or nothing to 4000 francs per hectare.

In a sanitary point of view the results have not been less satisfactory, and here again it is necessary to observe the facts on the ground. One sees a numerous population, robust and healthy in proportion to its prosperity. Its vigor assures a healthy nutrition equivalent to its works, which is the best hygiene.

As to the effects of irrigation, the same occurs at Gennevilliers which always takes place where irrigation is practiced: from the moment it is made frequent, without stagnation, and at regular intervals, a condition which is far from favorable for the development of paludal influences. The determining causes are eliminated; a constant activity is maintained in the vegetable life, which absorbs in its circulation all its own residues and all the organic elements placed within reach. Highly to the honor of the city of Paris be it said that, by the perseverance of its representatives, by the science and devotion of its engineers, the problem of epuration of the residues of cities and of their utilization by agriculture is absolutely and definitely solved. We have no longer the experiment of Gennevilliers; we have a system permanent and regular for the future.

The population of Gennevilliers has increased by farmers coming to occupy the lands thirty-four per cent. in ten years.

Among the city documents of Paris lately presented to the city of Boston, and placed in the Public Library, may be seen photographs of the departments of this branch of the municipal service, as well as of the products of the land. The commission, in recommending the acceptance by the city of the terms which the state proposes for the extension of the work so as to include the sewage of the entire city, recommends a municipal ordinance which shall require all the water-closets in the city to be connected with the drains, and an absolute abandonment of cess-pools, which now are so common in Paris. Up to the present time the city has declined to accede to the terms of the state, as they are deemed too exacting, and require a very large amount of money for the purchase of the land. The success of epuration by this method is not questioned. The work of Babut du Maris, lately published, says "the city has just obtained 2500 acres for the extension of the sewage farm."

The highly satisfactory operation of this system at Dantzic, where the rigorous climate of winter is as great an obstacle to overcome as here in Massachusetts, is sufficient proof that frost is not an objection to its employment on our soil. The land freezes four feet deep at Dantzic. The Vistula is frozen over from the middle of November to March, yet the temperature of the sewage at the mouth of the sewer never goes below 37° F. Irrigation is continued throughout the year with quite as much success in epuration in winter as in summer, although vegetation flourishes but four out of the twelve months.

Sewage in freezing, says Babut du Maris, eliminates its dissolved fertilizing material as thoroughly as salt water eliminates salt by the same process.

There must be abundance of land in the valley of the Blackstone, the Merrimac, and the Connecticut suitable for farms of this character. There is land bordering on Lake Cochituate well adapted to farming, for the protection of the lake from the sewage of Pegan Brook. In Arlington, Belmont, and Medford are vegetable farms favorably located, and soil well suited to this system; and before this community embarks in a scheme to build a metropolitan sewer from Natick to tide-water, which when finished will be of doubtful utility, judging from the experience of London, this system should be tested, with the object of requiring each and every community to take care of its own sewage.

We have in the soil a chemical laboratory, a perfect filter, oxidation, vegetation, the influences of animal life and the infusoria combining to protect the subsoil water, and so far as experience goes or chemical analyses can demonstrate, these processes of nature are amply sufficient.

We do not hesitate to cover with fertilizing material fields in which are located springs and wells. We are only solicitous lest the surface water should convey the material to them, and we raise an embankment above the level of the surrounding land, and otherwise leave to nature the protection of our drinking water with full confidence in "*vis conservatrix naturæ*," and if her processes are not complete and perfect the whole world is gradually becoming saturated with filth.

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PROGRESS IN DENTISTRY.[1]

BY WILLIAM HERBERT ROLLINS.

D.

1. — PYORRHŒA ALVEOLARIS.

Many theories have been advanced to explain the origin of this disease. A. Witzel, in a paper read before the German Dental Association,[2] states that the disease is not an ulceration of the gum or a primary inflammation of the dental periosteum, but is a caries of the dental alveoli, caused by a septic irritation of the medulla of the bone. He advises extraction of all teeth where the sockets have been destroyed for one half their length. The other teeth are to be thoroughly cleaned, and a strong (?) solution of carbolic acid (one to one hundred) is to be injected into the pockets by means of a syringe.

2. — CAUSES OF CARIES.

The most important investigations recently made to determine the nature of decay in the teeth are those of W. D. Miller. He finds that the dentine when attacked by decay shows, even in the deepest layers, a loss of lime salts. This loss is a real solution by acids, and cannot be accounted for by the action of any agent which affects only the organic matter of the teeth. This view of the matter is contrary to the statements of the editor of the *New England Journal of Dentistry*, who found that the lime salts were but slightly diminished, and that no lime in combination with organic acids could be found in decayed dentine. He therefore reasoned that acids played no part in decay. Miller, in support of his view, has made many thousand experiments and cultures, a brief outline of which may be of interest. He put some starch into a small tube, which was tied to a molar tooth, and kept in the mouth over night. In the morning the contents of the tube were acid. Both the starch and the tube were sterilized before placing in the mouth. The same result occurred in a mixture of fresh saliva and starch out of the mouth, but if the mixture of starch and saliva were heated to 100° C. it did not become acid. The ferment, therefore, existed in the saliva. To determine whether it was organized or unorganized the saliva was shaken in a test tube with sulphuric ether, starch was then added, and the mixture put in an incubator. After a few hours sugar could be found, but no acid. The acidity found in the first experiments must, therefore, have been due to an organized ferment (fungi). A mixture of saliva and grape sugar was exposed to a temperature of 67° C. for twenty minutes. In a few hours it became acid. This confirmed the previous experiment, as the ptyaline must have been killed by the heat, so the acid could only have come from the germs present in the mixture. A perfectly sterilized mixture of saliva and sugar was exposed to the action of a piece of decayed dentine the size of a pin-head. In a few hours it became acid. A drop of this mixture infected other sterilized solutions. This could be carried on indefinitely. It was, therefore, evident that the ferment had the power of reproduction, which was an additional proof that it was an organized body.

To determine the nature of the acid fresh saliva was mixed with starch, and allowed to ferment. The mixture was then filtered and heated to 100° C. The filtrate was evaporated to concentrate it. A few drops of it added to methyl violet did not change the color. The remainder of the filtrate was shaken with sulphurous ether. When the ether became clear it was distilled. A portion of the residue was found by a polaris trobometer to be optically inactive. The remainder was mixed with oxide of zinc, boiled and filtered. Crystals of lactate of zinc were found in the filtrate.

To see if the fungi were capable of producing caries out of the mouth pieces of dentine were placed in a mixture of sterilized saliva and starch, which was then infected with a pure culture of the fungus found in the deepest layers of decayed dentine. When these pieces were afterwards examined under the microscope it was found impossible to distinguish them from dentine affected by natural caries. Miller thinks he has shown that caries is due to a fungus which generates lactic acid, the acid acting on the lime salts. When these have been dissolved other germs finish the work by destroying the organic basis of the dentine. Among these latter germs bacterium termo is always present.

Underwood and Milles, who have been investigating the same subject, also consider that germs play an important part in caries. They do not think Miller's investigations reliable, because they have always found that no invaded tubule in carious dentine contains more than one form of fungi. If cocci are present in one tube they are never mixed with threads or bacilli, though either of these forms may be present in adjacent tubes. They state that Miller in figuring several forms in the same tube has proved his ignorance of the nature and methods of growth of these organisms. Their experiments do not seem, however, to have been made with the same amount of care that Miller has shown, nor have they reached any very definite conclusion.

3. — COURSE OF CARIES.

According to Miller starch and saliva at the temperature of the body become acid in a few hours. Therefore in every mouth acid is generated, and capillary attraction will draw this into the minute pits and fissures of the enamel. The extent to which the acid will act depends directly on its strength, and inversely upon the density of the tooth. The superficial layers of dentine completely lose their lime salts. The same is true of dentine in bread and saliva out of the mouth. The destruction of the organic basis of the dentine soon follows the solution of its lime salts, and is caused by germs. The fungi of the mouth do not directly decalcify dentine; they do this through the lactic acid, which is generated from sugar and starch.

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[1] Continued from page 584.

[2] New England Journal of Dentistry, May, 1883.

4. — DISEASES OF THE EYE PRODUCED BY CARIOUS TEETH.

Dr. Galezowski mentions[1] several diseases of the eye caused by dental irritation. They are reflex asthenopia, reflex kerato iritis and irido choroiditis, reflex mydriasis, and spasmodic contraction of the lids and of the oculo motor muscles.

5. — SYPHILITIC INOCULATION FROM A DENTAL INSTRUMENT.

Dr. J. T. Tripp reports[2] a case. Though seldom mentioned, such cases are probably not rare. They show the great importance of keeping all dental instruments perfectly clean, for not only syphilis but other diseases may be contracted in this way. If every dentist would make it a rule never to use an instrument which was not perfectly bright the danger would be much diminished, as the care required to keep the instruments in this condition would be pretty sure to make them incapable of inoculating.

6. — REFLEX IRRITATION FROM DENTAL CARIES.[3]

For four years the patient, a young girl, was attacked once a week with violent contractions of the muscles on the left side of her face, the head at the same time being drawn down to the shoulder. These contractions had produced a great prominence of the muscles of the affected side. On extraction of a decayed molar the contractions ceased.

7. — CONGESTION OF TONGUE CAUSED BY CELLULOID.

Dr. Brownlee reports[4] a case. The palate, lips, and cheeks in contact with the celluloid were highly congested. The tongue was much swollen, deeply grooved, and bright scarlet. The pain was constant and increasing. No treatment was given except to make a new set of teeth on rubber instead of celluloid. The parts returned to their normal condition in a few weeks.

E.

1. — LIME IN THE TREATMENT OF SENSITIVE DENTINE.

P. Calvo recommends the following treatment: First dry the cavity, then put in fresh, dry lime and seal the opening. In this way the action of the lime extends over some time so that it does not give rise to pain as it will do if water is allowed to come in contact with it immediately. He states that the dentine loses its sensibility without any risk of injury to the pulp.

2. — SODIUM CARBONATE IN TREATING ROOT CANALS.

Dr. Kirk packs the root canal and pulp chamber with the salt in powder, and then fills the remainder of the cavity with a temporary filling. After a few days the latter is removed, and the soda washed out. The canal will then be found perfectly free from odor.

3. — MENTHOL IN THE TREATMENT OF INFLAMED PULPS.

A saturated solution of the crystals in alcohol has been found of value as an application for the relief of pain caused by exposure of the pulp. Its use in pyorrhœa alveolaris has also been recommended in the form of an injection into the pockets formed between the root and its periosteum.

4. — NITROUS OXIDE AND OXYGEN.

The suggestion of Paul Bert to use a mixture of nitrous oxide and oxygen to prolong the effect of a primary inhalation of nitrous oxide has been found of value.

5. — ACTION OF ARSENIC ON THE DENTAL PULPS.

Bödecker has studied the effect of this much-used pulp destroyer, and has published his results.[5] Witzel had stated that arsenic was an admirable agent in the treatment of suppurating pulps, the upper parts of which were excised after the application. He said the body of the pulp remained healthy, and that the treatment was a valuable one. Bödecker tried it, but finding it unsuccessful made a series of experiments, of which the following is an abstract: Holes were drilled into the dentine, taking care not to reach the pulp chamber. A layer of sound dentine was, therefore, present between the arsenic and the pulp. The teeth were extracted in from three to six days after the application. They were then immediately opened and put into the proper reagents. An examination of the nerve fibres showed that the myelin was separated into irregular masses. When the arsenic had acted for six days he found a granular substance in the fibres, which was colored by rose aniline. All vestiges of the myelin had disappeared, globules stained black by hyperosmic acid taking its place. Viewed under the microscope the dentine tubes in sections, stained with hyperosmic acid, showed, in the vicinity of the hole in which arsenic had been placed, much enlargement. They were filled with irregularly-shaped, black bodies, which were supposed to be altered fibrils, because in following up a tube containing them he found the dentine fibres less changed as they receded from the centre of inflammation. The increase in the diameter of the tubes had taken place by an invasion of the basis tissue, which had also lost part of its lime salts.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

MEDICAL SERVICE. UNUSUAL CASES OF SCURVY.

REPORTED BY R. T. EDES, M. D.,
Visiting Physician.

THE British ship Earl Granville sailed from Iloilo, around the Cape of Good Hope, on August 4th, with a crew of thirteen men, beside five who messed in the cabin. There occurred on board several cases of a peculiar character, three of which were sent to the Boston City Hospital, and seem to be of sufficient interest to be reported.

It will be noticed that the dates given by the hospital books, which represent the statements of the patients themselves, do not agree with those taken from the ship's log. The latter undoubtedly mean, not the beginning of the sickness, but the days on which the patients became too sick to work.

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[1] British Journal of Dental Science, page 73, 1883.
[2] British Journal of Dental Science, page 77, 1883.
[3] British Journal of Dental Science, January 1, 1884.
[4] British Dental Journal, January, 1884.
[5] Dental Cosmos, October, 1883.

The food, as required by the scale of provisions in the articles of agreement, is said to have been good and abundant. The water was good, if some rain-water caught (as far as could be ascertained some time in November) be excepted. This water was used for about a week after being caught, but its use was discontinued when from its appearance and an oily or tarry surface it was suspected that it might not be wholesome. The officers drank this water, but for those in the cabin it was filtered. The men represent this water as having dripped from the masts and rigging and recently-painted deck-houses, and as having been very bad. This is somewhat doubtful.

From all that has been learned it is believed that the men were supplied with a certain amount of lime-juice and antiscorbutic food, but that the first was not given as soon as it ought to have been, and the latter not in sufficient quantity to prevent or cure sickness in the case of men who, in consequence of other complications, or from a predisposition to scurvy when they commenced the voyage, were injuriously affected by salt provisions.

The following are entries taken from the master's log: —

William B., October 25th, stricture. Returned to duty November 24th.

William C., December 6th, feet and legs swelling, appearing to have dropsy. Died on January 31st.

Mauritz C., January 18th, feet and legs swelling.

John R., January 25th, scurvy.

Olinto C., January 28th, pains in legs, and feet swelling.

James B., January 29th, legs swelling.

William B., January 29th, stoppage of water, and severe pains in legs and body.

The cases after entering the hospital were as follows: —

William B., aged thirty-seven, entered February 9th. Three months ago, after a slight cold, began to swell all over body. Severe pain in left chest. He had dyspnœa for the last five weeks. No headache or vertigo, but occasionally vomiting and twitching of his face. He had had severe pain on passing water, and was obliged to have it drawn by catheter. On entry, his abdomen was tense and hard, and he said that he had passed no water for two days. The penis was swollen, and the catheter obstructed about the membranous portion of the urethra. These local troubles, according to his own statement and the ship's log, antedate the present illness. He was markedly dropsical on entrance, but the swelling rapidly disappeared in a few days. He was said to have much dyspnœa on entrance, but this improved so rapidly that there was little to be seen of it when the visit was made the next morning. There were no ecchymoses, nor sponginess of the gums, although he alluded to some trivial hæmorrhage. The urine of the 10th was of specific gravity 1017, with a slight trace of albumen, pus, and some bladder epithelium. Nothing abnormal was detected in the thorax by auscultation. He had a hot-air bath. On the 20th the urine was of specific gravity 1020, with a slight trace of albumen, pus, blood, uric acid, large epithelium, and hyaline and granular casts. For a few days he had a mottled eruption, composed of rounded spots about one eighth of an inch in diameter, partially confluent, and preceded by pustules, said to have come on six weeks before. He was discharged on the 23d, well.

Olinto C., aged thirty-five, entered February 9th. Does not drink. Has had gonorrhœa and chancroids. Three months ago noticed general weakness, with some stiffness in knees and ankles. Seven weeks ago legs and ankles began to swell, and there was dyspnœa on exertion, but he did not give up work until eleven days ago. He noticed some palpitation a week ago, and cough four days ago. His throat had been sore for four months. On entering, he complains of dull pain in his chest, and also on the right side of the body. There is some œdema of feet and ankles and legs. The gums were slightly anæmic, but there was no marked sponginess. There were no hæmorrhagic spots or indications thereof. The cardiac area was increased, the apex beat felt just to the outside of the nipple. There was a slight roughening of the first sound at the apex, and a marked thrill. The patient gradually improved, but on March 1st it was noticed that he had no patella reflex, and he complained of stiffness and pain in the legs, and had some difficulty in using them. The muscles were well developed and hard, perhaps somewhat abnormally so, and reacted only feebly to a strong faradic current. The muscles above the thigh reacted well. On March 22d he was discharged, much relieved.

Moritz C., aged twenty-eight, born in Finland. Entered February 14th. Was always well until six weeks ago, when crossing the line; then felt chilly, and could not keep warm. His legs began to swell, and the swelling extended to his body and face. There was slight headache, but no vertigo. The appetite was fair and the bowels regular. There had been dyspnœa for four weeks, gradually increasing, and for several nights past it had been so severe as to prevent his sleeping. Some cough for three or four days. Temperature 101° F. Pulse 120. When first visited he was seen to be a short, powerfully-built man, of fair complexion, in a state of urgent dyspnœa, the countenance being somewhat dusky, and wet with perspiration, which was said to have come on rather recently, and, it was hoped, was a sign of approaching relief. The anasarca was general, but not extreme at any one point. There were no distinct hæmorrhages, but some purplish spots on his wrists and hands, and a few on the body. The teeth and gums showed nothing abnormal, except a barely perceptible swelling, which had not bled. Both chests were full of moist râles. There was nothing abnormal about the cardiac sounds. The urine was normal in color, of specific gravity 1027, containing one fourth of one per cent. of albumen, with a sediment of amorphous urates, and an occasional blood, pus, or epithelial cell. The dyspnœa became more and more urgent, the râles more abundant, the expectoration frothy and bloody, the cyanosis increased, and he died in the morning, two days after admission.

The treatment consisted in diffusible stimulants, ammonia, and alcohol. The orthopnœa would have made a hot-air bath difficult to administer, and the presence of abundant perspiration made it appear improbable that any further action on the skin would be of value.

The anæmic appearance of the patient, combined with the fact of the rapid relief and recovery of his comrade (Burns), whose condition had been similar, though less urgent, deterred me from venesection, which, I think, as the autopsy showed, would not have been efficacious. Nevertheless I think should such a case come again under my care I should bleed him.

The autopsy, made by Dr. Gannett, showed general anasarca, hypertrophy and dilatation of the heart, with relative insufficiency of the tricuspid valve. The heart muscle contained much finely granular, albuminous material, and considerable fat in the form of small drops. There was chronic adhesive pleurisy, with hydrothorax and œdema of the lungs, acute bronchitis, and acute bronchial pneumonia. The spleen was that of chronic passive congestion. The kidneys showed cloudy swelling, with interstitial nephritis. The epithelium of the convoluted tubes contained much finely granular albuminous matter, and a few small fat drops. The interstitial tissue was increased in thickness, showing in places a hyaline appearance, and in others a slight degree of round-cell infiltration.

Incisions made through some of the purple spots mentioned above disclosed no ecchymoses, and nothing like extravasations, new or old, were found, either in the internal organs, the soft tissues of the legs, or under the periosteum of the tibia.

The two men who did not go to the hospital are supposed to have shipped again, as they have not been heard of at the consul's office. William B. is also supposed to have shipped, and Olinto C., who was discharged relieved, was given a passage home.

It seems quite evident that there was little doubt in the minds of those who first saw these cases that they were scurvy, a disease usually susceptible, from its striking symptoms and the peculiar circumstances under which it arises, of easy diagnosis. The point, however, which will most strike the attention in accepting this diagnosis is the absence of the most usual and well-marked symptoms, namely, the hæmorrhages under the skin and from the mucous membranes, and also the spongy gums. In one case only which entered the hospital was there a barely perceptible swelling of the gums, and in only one or two the most trivial hæmorrhage. The men in the hospital gave no history, although questioned, of having had themselves sore mouths or hæmorrhages, or of having known of these conditions in their comrades who did not enter. The pain and swelling were, or had been, the chief symptoms in all that we saw, and in two that we did not see. Only one of the six men was called a case of scurvy on the log.

Army surgeons speak of cases in which the most characteristic symptoms are wanting while yet the cachexia exists, so that "general debility" on a report may mean scurvy. We can hardly, however, call our cases, which had been going on for many weeks, as Flint says such cases may be regarded as "incipient," though they may be "not fully developed."

No author whom I have consulted makes any statement of the conditions under which we may expect such departures from the ordinary type of scurvy, one set of symptoms being almost entirely absent while others are present in their full severity, sufficient to cause death in two cases out of six. We can hardly, in presence of a group of six cases, involving at least three nationalities (English, Italian, Finnish), speak of "individual" peculiarities, and these cases, therefore, lend an additional support to the doctrine that in the ætiology of ordinary scurvy there are involved several factors, of which the deprivation of fresh vegetables is only one, though perhaps the most important.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

SPECIAL MEETING.

ALBERT N. BLODGETT, M. D., SECRETARY.

APRIL 30, 1884. Meeting called to order at eight o'clock by DR. R. T. EDES, chairman.

The first paper was by DR. HENRY J. BARNES, upon

SEWAGE SYSTEMS AND THE EPURATION OF SEWAGE BY IRRIGATION AND AGRICULTURE.

The paper was received with applause by an audience composed of physicians and a large number of sanitarians and sanitary engineers, as well as a number of delegates from the Sanitary Boards of towns about Boston, the superintendent and physician of the Woman's Prison at Sherborn, representatives from Natick and various other places.

DR. GEORGE B. SHATTUCK, in opening the discussion of the subject, said that he only consented to do so in the hope that others better acquainted with it, and who had personally inspected the sewage farms at Gennevilliers, at Berlin, Dantzic, and in England, might be induced to give their views. As the Society was fortunate enough to enjoy the presence of past and present members of the State and City Boards of Health, as well as of several able and distinguished engineers, he felt sure justice would be done the subject, than which none more important awaits regulation in the older Eastern States, and he would confine himself to a brief statement of the general methods of the disposal of sewage as at present understood and practiced. These may be included under three heads: (1) immediate discharge into some neighboring body of water, stream, lake, or ocean; (2) chemical precipitation of solid constituents; (3) discharge upon land to be disposed of by downward filtration through the soil or by broad irrigation for purposes of agriculture and fertilization.

The method of chemical precipitation might, as Dr. Barnes's interesting paper plainly showed, be left out of consideration as unsolved. Of the other two methods the first was comparatively simple, satisfactory, and inexpensive, where there was in the immediate neighborhood a large body of deep water moved by tides or currents sufficiently active to carry off or oxygenize the sewage without its becoming a nuisance to other places in the process. Boston, the speaker thought, was so situated.

In discussing the disposal of sewage by the aid of the soil Dr. Shattuck said the systems of downward filtration for epuration, or of broad irrigation for agricultural purposes, ought to be carefully distinguished from each other, it being possible, as a rule, to use a larger and less variable amount of fluid in the former than in the latter method. The successful application of either of these systems must be governed by many variable factors, so that no general laws had been or probably would be arrived at. Each place must work out its own problem and its own sewage salvation. In discussing sewage-farming one must bear in mind the character of the soil, whether sand, clay, or loam; the character of the climate, whether moist or dry, hot or cold, or variable; the kind of crop for which there is a market, whether coarse grass or garden vegetables; and last, but not least, the composition of the sewage itself, the proportion of solid constituents to liquid as determined by rainfall or by *per capita* amount of water used or quantity of solids admitted to the sewers.

It should not be forgotten that the present sewage irrigation at Gennevilliers was voluntary with the farmers, who used it or not as they chose, and the calculation of 2000 hectares (about 5000 acres) with which to handle the whole of the 110,000,000 cubic metres of annual sewage of the city of Paris, the speaker thought, must be based rather upon the system of downward filtration than upon that of broad irrigation for agriculture.[1] Dr. Shattuck was not aware of any application of sewage-farming upon a large scale which had proved actually profitable. It would generally, he thought, prove a question of comparative cost.

Mr. E. W. Bowditch, sanitary engineer, stated that the assertion which was contained in the paper that the water supply of Chicago is contaminated with sewage from the city is not probably correct. A year ago there was no positive proof of the truth of this statement, although the time will come when this will be true unless the crib for the supply is carried farther out into the lake. In regard to the frequency of the cleansing of the cess-pools so frequently attached to dwellings in cities, an incident occurred a few days ago which illustrated the average degree of sanitary knowledge possessed by the average citizen. A gentleman in speaking of cess-pools stated that one great objection to their use consisted in the necessity for their periodical emptying and cleansing. During further conversation the fact was disclosed that the cess-pool on the premises occupied by the gentleman had not been emptied in eight years.

The accessible reports on the disposal of sewage by the aid of irrigation and agriculture do not agree, thus making it very difficult to arrive at any definite opinion upon the merits of any special plan. Probably, too, each particular locality and each individual system presents different conditions, and has its own particular drawbacks.

At Pullman, Ill., which has been considered the model of disposal of sewage by and of agriculture, it is said that this plan has been abandoned, and that the sewage is now poured into Lake Michigan.

As far as Massachusetts is concerned there can be but little question that the rigorous climate of our winters would seriously interfere with the filtration of sewage in the colder months, and there is lack of enthusiasm among the farmers to test the efficacy of the plan.

The sewage of the Mystic Valley corresponds exactly to what it is supposed to be. It is possible and quite probable that a series of filters would be useful in clarifying the foul water of this sewer, though it would not purify it. Some time ago a barrel of Mystic sewage was sent to New York to be used as a test for a process for purifying foul water. Upon return of the purified product it was found to be free from any offensive quality. At the same time a sample of water which receives the drainage of sixty tanneries was also forwarded, and this, although originally very much polluted, was returned free from any offense, and has remained sweet and clean for a period of many months.

The general question of sewerage is daily assuming a more prominent position among the economical topics of our towns and cities. Of 346 towns in the Commonwealth eighty-four have already introduced works for public water service. Of these eighty-four towns twenty-six have also sewerage systems, while the other fifty-eight have water brought to them, but no means of its removal. These towns will be obliged to adopt some means of purifying or disposing of sewage in order to obviate nuisance which must otherwise inevitably arise. It is not easy to see how towns more than ten miles from Boston could possibly unite on or derive benefit from a metropolitan sewer. The cost would be too high, and the towns could not possibly afford it. From experiments which have been made with the object of forming an opinion on this subject, and which have been quite extensive, it would seem that the most practical solution of the sewage problem might be found in some process of purification.

Dr. H. P. Walcott, of the Massachusetts State Board of Health, in response to a call from the chair, spoke as follows: The statements of previous speakers render any general discussion of the subject of irrigation unnecessary, and I shall, therefore, confine myself to the sewage farms of Berlin, having had very favorable opportunities for studying them. To me they represent the best experiment thus far made in sewage disposal by way of irrigation, far more complete than anything of the sort in England or France.

Two farms, Falkenberg on the northeast, and Osdorf at the south, are the localities at present made use of. The acreage has been steadily increasing, and now (1884) appears to be between nine and ten thousand acres, of course not all prepared, perhaps not tweny per cent.; Falkenberg so incomplete as to be in an unsatisfactory condition; Osdorf, in the finished parts, eminently satisfactory; no smells except localized ones about outlets of sewer; soil under-drained; effluent from subsoil drains, clear, free from smell or taste, as good as the average drinking water of Berlin. In the earlier days of the farm the principal crops, rye grass and cabbage, were readily sold at remunerative prices; the markets are, however, now overstocked in these articles, even though large quantities have been sold in markets comparatively distant from Berlin.

The sewage question in Berlin has, however, never depended upon financial considerations; irrigation (from the height of water level in the soil and very slight fall in many miles below Berlin of the river Spree) was a necessity, something to be had at any cost. Enormous as this cost has been the money is shown to have been well spent by the improved sanitary condition of the city, therefore any money return is so much gained. There is one arrangement at the Berlin fields open to serious criticism, the so-called winter basins, into which sewage is run during seasons of the year when crops are not in growth. These are many acres in extent, act simply as filters, receive sewage in very large quantities, which occasions an offensive deposit, to be plowed into the soil in the spring, the ground then planted with grain, and receives no more sewage except in case of drought. These basins are for a time quite offensive, and would not, I think, be tolerated in this country. Gennevilliers lacks one of the great elements of success at Berlin, the strict control by competent authority. At Gennevilliers the farmer takes the sewage or not as seems best to him. Upon one visit to Gennevilliers no sewage at all was being disposed of by irrigation; all was going to the river; this was naturally during damp, overcast weather.

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[1] At least it allowed about fifteen times as much sewage to the acre as was thought desirable for agricultural purposes by the commission appointed to consider the best disposition of the sewage of the city of Worcester.

No experiments of any value have been made in this country. Colonel Waring's system at Sherborn was very expensive in first outlay; does not furnish a satisfactory effluent. Broad irrigation at Insane Hospital at Worcester is a complete success, but under conditions which it would not be possible to imitate in many towns. It is to be hoped that the preparations for a system of irrigation for sewage of prison at Concord may be carried out, and give an opportunity for careful determination of questions as to evaporation, etc., which have never been studied in this country so far as irrigation fields are concerned.

Dr. C. F. Folsom said that there is no longer any doubt of the facts that sewage can be purified by irrigation, that the crops raised are suitable for food, and that sewage farms can be managed without creating a nuisance. This is all very expensive, however, and in no case has a sewage farm been carried on for any length of time, except on the scale of a few acres, in such a way as to satisfy the sanitary requirements of the case without the incurring of very considerable pecuniary loss. In Paris, Dantzic, and Berlin the loss is very considerable, but these cities are so situated that they must have sewage irrigation if they have sewerage, and the outlay on the sewers is reckoned with the deficit from the sewage farms as the cost of cleaning the cities and improving the public health. The great rise in the value of the land where sewage is used in irrigation near Paris is due to the fact that it is near an immense and rapidly growing city, and applies to land where sewage is not used as well as to the irrigated land. The soil, too, is of such a character that the farmers use wind-mills and ordinary irrigation for garden crops, and in some cases prefer it as being less offensive than the sewage.

There is no land in Eastern Massachusetts quite suited for sewage irrigation on a large scale, but near Worcester and Natick there is land which can be made available for that purpose just as soon as the authorities decide that the nuisance of the present methods of sewage disposal is great enough to justify the trouble and expense. If the sewage of Boston were used in irrigation there would be an annual loss to the city from that source alone of a sum somewhere between twenty thousand and fifty thousand dollars. The pecuniary value of the sewage of Boston can be estimated roughly by remembering that its strength is represented by the daily excrement of one person in three barrels of water, forming a fertilizer which no one would think worth much for daily use in his garden.

Alexis H. French, Esq., engineer for the town of Brookline, said: "In the present state of chemical and agricultural science an engineer would not be justified in departing very far from the practice that has heretofore been followed in the disposal of the sewage of the favorably situated cities and towns, in the simplest way possible, provided that this method did not menace the public health. Pending the discussion and experiments on the subject which, it is to be hoped, will be continued until some satisfactory solution will be obtained, the engineer has to face the question in the light of the existing information, and do the best for his clients that the circumstances will allow.

"In relation to the present systems of sewers it may be said in their favor that while it is more than probable that eventually some method of sewage disposal will be discovered which shall be unobjectionable in a sanitary point of view, if not in an economical one, these same systems will continue to collect the sewage, and will not, therefore, prove to be the vast financial loss which might seem to be the case from such a change in plan.

"One of the greatest obstacles to sewage irrigation in New England is the peculiar topography, this method of disposal, as I understand it, requiring comparatively level land, which, to take the drainage of our larger cities, must be several square miles in extent. It would, perhaps, be applicable to the smaller cities and towns, where the 'separate system of sewerage,' as it is called, is in use, and to those western cities which have near at hand large areas of prairie land favorably situated, both for receiving the sewage and for the subsoil drainage which this system necessitates."

Dr. John G. Blake said that when we succeed in obtaining a law which shall compel towns to take proper care of their sewer products, we shall have made a great advance in the solution of the question of irrigation and agriculture. There are certain weighty objections to be first overcome. It is well known that the population of Eastern Massachusetts is to a very large extent composed of the classes of artisans and mechanics, or manufacturers, and that agriculture as a commercial or economical pursuit is not cultivated to any considerable extent. This interposes a certain amount of indifference, and even opposition, to the introduction of irrigation and agriculture as hygienic measures.

There is reason to hope that within a short time the town of Natick, which is at present the gravest offender in the pollution of the Boston water supply, will be forced to purify its sewage products, and to render its waste water harmless before it is poured into the reservoir from which the citizens of Boston are now drinking.

In relation to the sewage problem in the Mystic Valley the condition of things there is not yet quite satisfactory. The water as it is now discharged is far from pure. The owner of a new filter, however, agrees to supply a series of filters which shall remove all suspended matter in the water, and we propose to dispose of the rest by irrigation. The city owns five acres of land which can be utilized for that purpose, and it is probable that the experiment will be tried, and, if found successful, it may be extended. Dr. Blake then moved that a special meeting be provided for the further consideration of the present subject, which was carried, and the Secretary was directed to arrange for such a meeting in the near future.

Adjourned at 10.15 p. m.

CONNECTICUT MEDICAL SOCIETY. NINETY-THIRD ANNUAL MEETING.

This Society, one of the oldest in the country, as only two or possibly three were organized before it, held a very successful and interesting Convention at New Haven May 28th and 29th.

NO CHANGE IN PLACES OF MEETING.

In accordance with an old custom arising from the two capitals which the State formerly had, the Society meets alternately at Hartford and New Haven. A strong effort was made this year to break over this custom, now settled by a by-law of the Society, and meet every third year at Bridgeport. An effort was also made by a large number to have but one place hereafter, as the State has now but one capital. There would be many advantages in having but one place, which would be the headquarters of the Society; but the change was not made in either direction, the Society by a very decisive vote maintained the validity of the old custom.

The active growth of the Fairfield County Medical Society and their increased interest, as well as the known hospitality of Bridgeport, were urgently pleaded, but were not strong enough to induce the change. The chief cause, however, why this experiment was not at least tried was the precedent offered to other cities in the State to ask the same favor.

THE FELLOWS OF THE STATE SOCIETY.

The Fellows, so-called, made up of the officers of the Society and delegates elected from each of the eight county societies which make up the State Society, meet Wednesday for business. No others vote, although the members can attend, and if they have ever been elected to act as Fellows have all the privileges except voting. Most of the counties send four Fellows; one sends three. There has been a strong desire to increase the number for some time, and base the number sent upon the membership of the county societies, which varies greatly, three having a hundred or more each, the others not over fifty on an average; but the Charter fixes the number. Under the idea that by legislation in revising the Charter of the Medical Department of Yale the Charter of the Society had been undesignedly repealed, an amendment to the By-laws was offered basing representation upon membership, and making all ex-presidents permanent Fellows, but these were this year referred to a Committee on the Revision of the Charter.

PRESIDENT'S ADDRESS.

The Fellows met in convention, Wednesday, May 28th, at three o'clock. All parts of the State were well represented.

The President, **Dr. E. B. Frye**, after appointing a committee on credentials, welcomed the Fellows, as in duty bound, and called their attention to the subjects to which he thought special attention should be paid, the legal *status* of the Society, whether or no its Charter had been repealed by the Act of 1879, suggesting a new act to put the question beyond doubt. The proposed amendments to the By-laws met, for the most part, his approval. He spoke of the great progress of late in sanitary science, and of the duties of the profession as guides of the people. He unqualifiedly indorsed the Code; both his conscience and judgment caused him to indorse a code of ethics, but it should be intelligently construed; the claims of humanity are to be respected. He advocated a higher standard in medical education, and the maintenance of a high standard in the affairs of the Society. He alluded very appropriately to the death of distinguished honorary members of the Society, Drs. J. Marion Sims and Willard Parker, and to the members, including one recently president, Dr. Pliny Jewett, of New Haven.

COMMITTEES.

After the report of the Committee on Credentials, which included a list of those qualified to vote, the usual committees were appointed. On Unfinished Business, Drs. C. J. Fox, F. E. Beckwith, J. F. Calef. On County Resolves, M. Storrs, L. B. Almy, F. N. Braman. On Business, T. B. St. John, H. G. Howe, R. S. Goodwin. On Honorary Members, W. H. Mather, J. La Pierre, G. Clay. Auditing Committee, J. W. C. Foster, J. Olmstead. To Nominate Essayists, W. C. Wile, F. S. Crossfield.

RELATIONS WITH YALE COLLEGE.

Prof. C. A. Lindsley then announced that a committee had been appointed by the Corporation of Yale College to confer with the Society in regard to the severance of the relations between the College and the Society. It was voted that a committee of three be appointed for that purpose, and the President selected Drs. F. I. Dickinson, M. C. White, and Orlando Brown.

This committee afterwards reported that it was mutually desired by both parties to cancel and annul the relations heretofore existing between them, and that the officers of the Society be authorized to execute all papers requisite to obtain this end, it being understood that such separation shall be without prejudice to all vested interest, contract, or endowment of the College, and that any prerogative heretofore possessed by the Connecticut Medical Society shall revert to the same. The report was accepted without debate, and by this act the relationship between the Medical School and the Society virtually severed. Before the existence of the College, medical degrees and licenses to practice were granted by the State Society, and for many years no one could legally practice medicine in Connecticut unless he were a member of the State Society. The rise of Thompsonianism led to a bitter struggle, and to the repeal in this State of all restrictions upon the practice of medicine by law, and no law regulating medical practice, except one excluding itinerant quacks or medical tramps, has ever since been passed.

The Medical Society and the Medical Department of Yale College were chartered conjointly, and degrees conferred by a board of examiners appointed by the Society and its President, together with the professors of the Medical School. The Society also, by a committee, nominated the professors when any vacancy occurred. By this action, when completed, the entire control of the School will pass into the hands of the Corporation of Yale College, and no farther jurisdiction be exercised by the Medical Society. As the action cannot, in the opinion of the Corporation, be completed without farther legislation, the usual committees were this year appointed.

After the passage of the resolution Mr. Kingsbury, of Waterbury, a member of the committee on the part of the Corporation, was invited to speak about the measure just passed.

He said that the enlarged plan of medical instruction involved so much additional expense as to be burdensome to the Corporation. The increase in the facilities and means of instruction had not been followed by an increase in the number of students. The union between the Society and School had ceased to be useful, and its cessation was desired by both. An endowment of the School was needed. He commended the School to the profession, and stated that its standard had never been better, nor its means for instruction. He commended the School to all students of medicine, and invited a close scrutiny of the institution and its methods by the assembled physicians, assured if they did make it they would advise all young men of their acquaintance who were students of medicine to attend.

The movement to separate was expected, and had been fully considered before the meeting of the Society. It is expected that there will be a closer union with the College; that in collateral branches better facilities will be afforded medical students. A determined effort to secure a proper endowment ought to succeed. There are enough in the State that could afford to do this, as President Porter said, in his after-dinner speech, in allusion to the small amounts that have been given to endow medical schools in comparison to the endowment of other departments.

THE LEGAL STATUS OF THE SOCIETY.

Professor Carmalt, as Secretary of the Committee on the Legal Status of the Society, reported that but one meeting had been held. An eminent legal firm, in Hartford, were employed to draw up a brief of the case, which was then submitted to Mr. Simeon E. Baldwin, of New Haven, for opinion. He stated that, in his judgment, the Act of 1879, revising the Charter of the Medical Department of Yale College, did not in any way affect the corporate existence of the Connecticut Medical Society. In this opinion the other lawyers referred to agreed. The report was accepted.

NOMINATING COMMITTEE.

A recess was then taken in order that the Fellows from each county should select a member to act on the Nominating Committee, which was reported as follows: M. Storrs, W. R. Bartlett, L. B. Almy, Seth Hill, C. J. Fox, L. J. Ketchum, F. D. Edgerton, C. F. Sumner.

UNFINISHED BUSINESS AND AMENDMENTS.

The first report called for was on Unfinished Business. The committee reported favorably on all except those amendments relating to an increase in the number of Fellows, which were unconstitutional. After some debate they were referred to a Committee on Revision of the Charter, to be appointed hereafter. On motion of **Dr. Chamberlain** they were considered separately. The first one, as verbally amended and passed, was to the effect that all remarks in the scientific discussion of any paper may be committed to writing by the person making them. The second that each County Society designate at the time of election the one that is to act as a member of the Nominating Committee, and also appoint a substitute. It was also voted that the Secretary be a permanent officer, and that he shall receive a salary of fifty dollars annually, commencing with 1884. A salary of twenty-five dollars was also voted to the Treasurer. Heretofore the Secretary has received no compensation, and the Treasurer only a nominal sum, designed to meet certain expenses. The treasury is now in such a condition that some provision can be made where it is justly due.

The proposed amendment that no voluntary paper shall be read that has not been read before the State Society, or indorsed by some County Society, elicited considerable debate, and was finally tabled.

COMMITTEE ON REVISION OF THE CHARTER.

It was then voted that a committee composed of one from each County Society should be appointed by the President to consider the revision of the Charter, to report to a special session of the Society to be called by its chairman before the close of the next Legislature. This committee should also coöperate with the Corporation in securing farther legislation, should any be needed, to sever the relations now existing between the Society and the medical institution of Yale College. The President appointed on this committee Drs. C. W. Chamberlain, M. C. White, F. N. Braman, G. L. Porter, C. J. Fox, F. D. Edgerton, R. S. Goodwin, F. L. Dickinson.

THE RETIRING SECRETARY.

Dr. Wile then presented the report of the committee appointed last year to draft resolutions of thanks to the retiring Secretary, who had filled the office for eight years. The report was accepted.

PUBLICATION OF TRANSACTIONS.

It was voted, on motion of **Prof. M. C. White**, that the Secretary proceed to publish the Transactions of the Society previous to 1830, together with such papers read before it as can be obtained. That one thousand copies be printed, and a copy sent to each member of the Society.

The Secretary stated the estimated expense to be about three hundred dollars, and about two hundred and fifty dollars had been raised for this special purpose. Hartford and New Haven counties had each raised one hundred dollars; other counties had promised their proper share. In Hartford Dr. G. W. Russel had given fifty of the hundred raised.

HONORARY MEMBERS.

The Committee on Honorary Members proposed the following names to be acted upon next year: Dr. William F. Hutchinson, of Providence, R. I., and Dr. Morris H. Henry, of New York. They also presented the following names for action this year: Dr. James E. Reeves, of Wheeling, West Virginia, Secretary of the State Board of Health of that State, and Prof. T. A. Emmet, of New York, who were elected honorary members.

EXPULSION OF DR. E. L. R. THOMPSON.

The Committee on Resolutions from county societies reported that the steps taken by the New Haven County Medical Society in the expulsion of Dr. E. L. R. Thompson, charged with procuring an abortion, were in accordance with the rules of the Society, and recommended that their action be sustained, which was voted unanimously.

TREASURER'S REPORT.

The report of the Treasurer, **Dr. E. P. Swasey**, was then read, showing the expenses larger than usual, due to the unusual item of legal advice. The receipts were also larger, leaving the treasury in good condition. This, he stated, was due to the increasing membership to some extent, and the larger proportion of paying members, but principally to the zeal and earnestness of the county clerks, who are the collectors of the taxes. He urged that those in office should be retained as long as they will consent to serve, and upon the clerks to retain their places, although laborious, as changes caused confusion and much extra labor. Of the tax of 1883 less than fifty dollars remains due. The report was referred to the auditors, and upon their report as correct, received and ordered on file.

As the reports of the Standing Committees on Examination and Nomination of Professors were not in readiness, they were ordered to be made to the Secretary as early as possible.

AMENDMENT TO BY-LAWS.

On motion of **DR. CHAMBERLAIN** the expediency of increasing the number of standing committees by appointing one on hygiene, one on surgery, etc., was referred as an amendment to the By-laws to the next convention.

ELECTION OF OFFICERS.

The Nominating Committee reported the following officers, who were duly elected: President, B. N. Comings, of New Britain; Vice-President, E. C. Kinney, of Norwich; Treasurer, E. P. Swasey; Secretary, S. B. St. John; Committee on Matters of Professional Interest, N. E. Worden, J. H. Grannis, E. A. Hill; Committee on Examination, F. D. Edgerton, H. W. Buell, Lewis Barnes; Committee to Nominate Professors at Yale Medical School, C. W. Chamberlain, G. L. Porter; Committee on Publication, I. W. Lyon; Committee of Arrangements, M. Storrs, W. M. Hudson, James Campbell; Dissertator, W. H. Holmes.

After the usual routine business the Convention adjourned to meet at the call of the chairman of the Committee on Revision of the Charter.

THURSDAY'S SESSION.

The Convention met promptly at nine A. M., with the President, Dr. Nye, in the chair, and Dr. St. John at the Secretary's desk.

HISTORY OF THE YEAR.

The first business in order was the **SECRETARY'S** report. He stated that the usual harmony and prosperity had marked the history of the year. The losses by death have been unusually small in number; but four. There has been one expulsion, and five have left the State. Forty-three new members have joined through the various counties, so that the Society now numbers 480. He gave an account of his work before the Legislative Committee with reference to the measure relating to the sale of patent medicines, and also of the memorial relating to the National Medical Library and Army Medical Museum, which had been sent to the members of the Senate and House. He had not commenced the publication of the early Transactions previous to 1830, as before this session all the county societies had not been heard from, all that had expressed a willingness to pay their share. One hundred dollars had been received from Hartford County, fifty dollars the gift of Dr. G. W. Russell. A like amount had been contributed by New Haven County. The expense would be about three hundred dollars, which would be fully met by a contribution of fifty cents from each member who had not already paid. That was the assessment in the counties thus far reported.

ADDRESS BY THE PRESIDENT.

The President's address, on The Claims of the Medical Profession to the Respect and Gratitude of the Community, is well described by its title. The sacrifices made by physicians for the public good, and their self-denying labors in investigating the causes and prevention of disease, their great work in securing proper treatment for the insane and the like, in advancing education and promoting reform, were clearly set forth, while the rewards from the public and the place given the physician in the conduct of affairs are far from commensurate with his work and its results.

The President-elect, **DR. B. N. COMINGS**, then took the chair. Reports of various committees were presented and properly referred. The delegates from other States were then presented, and made brief speeches: Dr. English, of New Jersey; Drs. Burdette and Richardson, of Massachusetts; Drs. Schwartz and Smith, of Rhode Island; Dr. Hammond, of New Hampshire, and Dr. Huntington, of Vermont.

MEDICINE FIFTY YEARS AGO.

A very interesting paper, full of personal reminiscences, was read by **DR. MATHEWSON** on Medicine Fifty Years Ago. The advent of the various instruments of precision were detailed in turn, and one account of the opposition they aroused, especially the whole department of gynæcology and its armamentarium. He described graphically the opposition to Tully because he denounced the lancet, and the distrust of the profession. Tributes were also paid to Nathan Smith and Benjamin Silliman. Yale then had the largest class of any medical school in New England, although Harvard graduated a few more.

THE TREATMENT OF STRANGULATED HERNIA

was very well treated by **DR. HARRIS**, and the results of seventy-five cases of all grades of conjunctivitis treated either by cleanliness alone or by the use of antiseptics, mainly boracic acid, given by Dr. Wilson.

PRESENTATION OF CASES.

The presentation and relation of interesting cases was then called for.

PROFESSOR CARMALT related a successful case of litholapaxy in a man forty-two years old. Ninety-seven grains of calculous matter were removed; the patient went home in four days, having had no fever. An attempt at wiring the patella for ununited simple fracture rebroken, or rather torn apart by accident, resulted unsuccessfully, the wire cut through the upper fragment in trying to pull it down. Necrosis followed, free drainage was established, and suppuration did not extend into the joint. He did not think well of the operation, and had collected statistics of thirty cases, failure resulting in fifty per cent.; death from pyæmia had been caused. He also exhibited two patients, one of extirpation of the tongue for cancer; the lingual arteries were first tied, so the operation was bloodless; tracheotomy had also been performed. The patient could talk well.

The second was subfenestral section of the femur to obviate ten inches shortening, from former hip-joint disease, but two inches were left, and with a shoe she could walk quite well.

A very lifelike drawing of a syphilitic eruption and ulcerating condylomata, drawn and colored by Dr. Leighton, was presented by Professor Beckwith, who related the history of the case; oleate of mercury locally, and mercury internally, effected a cure; he preferred mercury to the iodide of potash.

DISSERTATIONS, PAPERS, AND SPEECHES.

Professor Beckwith urged the claims of the Sims Memorial upon the Society, and reported what had been done in several cities of the State.

The dissertation upon the Germ Theory of disease was then read by Dr. Worden. An able presentation of all known upon the subject up to the latest utterances. It was exhaustive and thorough, and claimed the close attention of all until its close.

The early recognition of Potts' disease was urged by Dr. Packard, and the mischief caused by delay, often irremediable, clearly portrayed. He advocated fixation by a plaster-of-Paris support.

Dr. Beardsley gave a more detailed account of his method of treating all forms of malaria without quinine. His remedies were an aloetic or mercurial purgative, or preferably a combination of the two with capsicum, until bilious stools were produced; arsenic with serpentaria, anise, caraway, fennel, and a bitter tonic, gentian, or his favorite boneset tea *ad libitum;* salicin and rhubarb he also used, claiming good results where large doses of quinine had failed.

After miscellaneous business and reading other papers by title, the Society adjourned for dinner, where Mayor Lewis, President Porter, of Yale, Clarence Deming, Professor Bunce, Dr. Delevan, of New York, Dr. English, of New Jersey, and others, made pleasant and entertaining after-dinner speeches.

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AMERICAN NEUROLOGICAL ASSOCIATION.

TENTH ANNUAL MEETING. HELD IN NEW YORK JUNE 18, 19, AND 20, 1884.

First Day. Afternoon Session.

ANNUAL ADDRESSES.

The Vice-President, **Dr. William J. Morton**, of New York, occupied the chair, and having read a letter of regret from the President, Dr. Robert T. Edes, of Boston, who was unable to be present, made an address in his place, which was devoted to a retrospect of the work of the Society, and to a defense of specialism, particularly in the department of neurology. At the conclusion of it he introduced the President-elect, **Dr. Isaac Ott**, of Easton, Penn., who delivered the President's address, the subject of which was The Paths of the Various Fibres in the Spinal Cord. After reports had been made by the Council and by the Secretary and Treasurer, Dr. R. W. Amidon, the annual

ELECTION OF OFFICERS

took place, and resulted as follows: President, Dr. Burt G. Wilder, of Ithaca, N. Y.; Vice-President, Dr. Leonard Weber, of New York; Secretary and Treasurer, Dr. Graeme M. Hammond, of New York; Councilors, Drs. W. R. Birdsall and William J. Morton, of New York.

RARE SPECIMENS.

Professor Wilder then exhibited the following: —

Preparations illustrating (*a*) the existence and circumscription of the portæ (foramen Monroi) in the adult human brain; (*b*) the presence of the crista fornicis in fœtal and new-born human brains; (*c*) the covering of the cerebellum by the cerebrum in a young chimpanzee whose brain was hardened within the skull.

He also stated that he had collected two additional instances of absence of the callosum in the domestic cat, the specimens of which he had, unfortunately, neglected to bring with him.

Dr. Amidon then exhibited a human brain in which the corpus callosum was absent.

First Day. Evening Session.

ELECTION OF NEW MEMBERS.

The following new members were elected: Dr. Sarah J. McNutt, of New York; Dr. G. Belton Massey, of Philadelphia; and Dr. George W. Jacoby, of New York.

THE REPORT ON THE HAMMOND PRIZE ESSAY

on the Functions of the Optic Thalamus in Man was read by the **Secretary**, and in it it was stated that but one essay had been received, and that although it was possessed of remarkable merit, in general the committee had decided not to award the prize to it, for the reason that the portion of it relating to the special functions of the optic thalamus in the human subject was scanty and inconclusive.

The first paper of the evening was read by **Dr. Burt G. Wilder**, of Ithaca, on

MACROSCOPIC ENCEPHALIC NOMENCLATURE,

in which he advocated the introduction of a new system which substituted simpler names for many of the terms now in use; claiming that the monomial technical nomenclature which he proposed possessed the following advantages: (1) brevity; (2) flexibility; (3) adaptability; and (4) capacity for uniform abbreviation.

Dr. A. D. Rockwell read a paper entitled

A CASE OF TONIC SPASM OF THE DIAPHRAGM (?).

The patient was a lady thirty-five years of age, who had been the subject of severe paroxysms of distress for twelve years. In these she was awakened out of a sound sleep by a feeling of oppression about the lower end of the sternum and over the epigastrium, and extending also to a corresponding point in the back. She described it as resembling the application of a crushing weight, as if the front and back were being pulled together. The recumbent position was impossible, and so she moved about the room partially bent, or leaned forward against some support, with short and gasping inspirations, with pallid countenance, and with agony depicted in every feature, until the paroxysm subsided, or until the anguish became unendurable and necessitated the administration of an anæsthetic. The attacks lasted from twenty minutes to three quarters of an hour. Before the present year they seldom occurred more than once a year, and sometimes two or three years intervened between them. During the months of April and May past, however, they had been very frequent; usually occurring once every day and occasionally twice a day. When the attacks became thus frequent electricity was tried in all its forms, together with a varied internal treatment, but without result. Finally the actual cautery was applied to the spine, from the neck to the waist, and since this had been done (now about a month since) the patient had been entirely free from the paroxysms. Having referred to other possible hypotheses in regard to the cause of the trouble, such as biliary calculus, disorder of the heart, and malaria, Dr. Rockwell stated his conviction that the attacks were in all probability due to spasm of the diaphragm, notwithstanding the absence of certain objective symptoms, such as expansion and immobility of the lower half of the chest, projection of the epigastrium, and closure of the œsophagus, that he had found emphasized in the books.

The discussion of the case was participated in by a number of members, some of whom were unwilling to accept Dr. Rockwell's view of it, although no positive conclusion could be reached in regard to it.

Dr. Birdsall thought that it might perhaps be due either to hysteria or to hepatic colic.

(*To be concluded.*)

RHODE ISLAND MEDICAL SOCIETY.

The Seventy-third Annual Meeting was held in Lyceum Hall, Providence, June 19, 1884. The President, **Dr. Job Kenyon**, called the meeting to order shortly after ten o'clock A. M.

REPORTS OF SECRETARY AND TREASURER.

The **Secretary** read the Records of the Annual Meeting of 1883, and of the last Quarterly Meeting. The Annual Report respecting the membership of the Society was then read, which showed that four Fellows died during the past year, their average age being sixty-two years. There were nine additions, the present active membership being one hundred and eighty-seven.

Dr. Charles H. Leonard, Treasurer, presented his annual report. The income for the year, including the balance from the old account, was $983.02. Outgo, $764.14. Balance to new account, $218.88.

The Printing Fund increased during the year to $1533.43, to which the Society voted to transfer $200 from the unexpended sum in the treasury.

THE FISKE FUND.

Dr. C. W. Parsons, Secretary of the Trustees of the Fiske Fund, reported that a premium of $300 had been awarded to **Charles V. Chapin**, M. D., of Providence, for the best essay on the Origin and Progress of the Malarial Fever now Prevalent in New England. On the other subject proposed they make no award.

The Trustees propose the following subjects for 1885: —

(1.) Original Investigations in Household Hygiene.

(2.) The Present State of the Germ-Theory of Disease.

(3.) Physiological and Pathological Effects of the Use of Tobacco.

(4.) Migraine, its Nature and Treatment.

For the best dissertation on either subject worthy of a premium they offer a prize of $200.

REPORTS ON THE LIBRARY AND ON PUBLICATIONS.

Dr. T. Newell, Chairman, presented the Fifth Annual Report of the Committee on the Library, exhibiting the gratifying increase of 1086 volumes during the year. The library is open daily at 54 North Main Street from two to six P. M.

Dr. G. W. Porter read the Annual Report of the Committee on Publications. The Transactions for the year 1883 is considerably smaller than for several previous years, partly because there were fewer papers presented to the Society during the year, and partly because some of the readers declined to furnish their papers for publication.

ELECTION OF FELLOWS.

Dr. J. W. C. Ely read the Report of the Board of Censors, and as recommended by the Board the following physicians were elected Fellows: Henry S. Swan, of Bristol, Abraham Z. Falcon, of Central Falls, William A. Tremaine, Byron J. Lillibridge, Sanford S. Burton, and Benjamin R. Symonds, of Providence.

LEGISLATION. MEETINGS OF OTHER SOCIETIES.

Dr. Lloyd Morton, on behalf of the Committee on the Medical Examiners' Bill, reported that the bill adopted at the last Quarterly Meeting of the Society had been passed in a modified form by the General Assembly of Rhode Island. The act as passed takes effect on the first day of July, 1884.

Dr. J. H. Eldredge read a Report of the Thirty-Fifth Annual Meeting of the American Medical Association lately held in Washington.

Dr. Anita E. Tyng, of Philadelphia, sent a report of the same meeting, with special reference to the work of the Section on Obstetrics.

Drs. Ariel Ballou and **W. E. Anthony** also reported verbally.

Drs. F. B. Smith and **G. T. Swarts** presented reports of the Annual Meeting of the Connecticut Medical Society.

The President introduced **Dr. C. Howe**, of Taunton, as a delegate from the Massachusetts Medical Society. **Dr. Howe** responded pleasantly.

ELECTION OF OFFICERS.

Officers for 1884–85 were elected as follows: Oliver C. Wiggin, President; Horace G. Miller, First Vice-President; John W. Sawyer, Second Vice-President; George D. Hersey, Recording Secretary; Edward M. Harris, Corresponding Secretary; Charles H. Leonard, Treasurer. Censors: Ariel Ballou, J. H. Eldredge, J. W. C. Ely, G. P. Baker, S. S. Keene, Benjamin Greene, E. T. Caswell, Eugene Kingman. Committee on the Library: T. Newell, H. G. Miller, G. D. Hersey, O. C. Wiggin, G. W. Porter. Committee on Publications: G. W. Porter, R. F. Noyes, C. D. Wiggin. Dinner Committee: C. H. Leonard, W. E. Anthony. Auditing Committee: C. W. Fabyan. Dr. Lloyd Morton, of Pawtucket, was appointed Anniversary Chairman for the annual meeting of 1885. The President appointed as a Committee on Necrology, Drs. C. W. Parsons, E. T. Caswell, and Albert Potter. Providence was selected as the place of the quarterly meeting in September.

DECEASE OF DRS. BULLOCK AND PERRY.

Dr. W. E. Anthony, from a committee appointed at the last meeting, presented the following minute, which was accepted and ordered recorded: —

Whereas, In the decease of **Drs. Otis Bullock** and **Thomas W. Perry** this Society has lost two members who had long been connected with it:

Resolved, That we desire to place on record our appreciation of those traits of character by which they had attained a position of honor and usefulness in the Society and community. Dr. Bullock was for one year President of the Society, and for forty years was a member of the Board of Censors, and, as such, conscientiously fulfilled all the duties pertaining to the office with unfailing kindness and courtesy.

Dr. Perry was a frequent attendant on our meetings and often contributed the results of his large experience to the discussions.

Resolved, That these resolutions be entered on our record and a copy of the same be sent to the families of the deceased.

ANNUAL ADDRESS. DINNER.

At one P. M. the Annual Address was delivered by **George I. Chace**, LL. D., his subject being Theism, Viewed from the Physician's Stand-point.

At the close of the address the thanks of the Society were voted to Professor Chace for his thoughtful and timely discourse, and a copy requested for the archives of the Society.

The Annual Dinner was served at the Narragansett Hotel. **Dr. J. W. C. Ely** presided as Anniversary Chairman. After-dinner speeches were made by ex-President Kenyon, President-elect Wiggin, Professor Chace, Rev. Dr. Woodbury, Prof. Alonzo Williams, Dr. Ariel Ballou, and Dr. Charles E. Woodbury, Superintendent of Rhode Island Hospital.

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MASSACHUSETTS MEDICO-LEGAL SOCIETY.

W. H. TAYLOR, RECORDING SECRETARY.

The seventh annual meeting, at the rooms of the Boston Medical Library Association, June 10, 1884, was called to order at 12.05 P. M. by **President Presbrey**, twenty-one members being present. The records of the last meeting were read and approved. The President introduced Associate Member **Max F. Eller**, Esq., of New York, to the Society.

REPORTS.

Corresponding Secretary **Pinkham** made the report of the Executive Board, showing the work of Medical Examiners throughout the State as far as the account of it can be obtained. Medical Examiner **Tower**, the Treasurer, made his report, showing the financial condition of the Society.

ELECTION OF MEMBERS.

Medical Examiners Frank W. Pierce, of Marston's Mills, Julian A. Mead, of Watertown, and Justin G. Hayes, of Ipswich, were unanimously elected to active membership. Drs. Alfred Hosmer, of Watertown, and Y. G. Hurd, of Ipswich, were unanimously elected to active membership.

Voted, on motion of Medical Examiner **Pinkham**, that numbers of the last Transactions be sent to medical examiners not members of the Society who have contributed to statistics.

THE LAW OF MEDICAL EXAMINERS.

The committee to "consider the Law of Medical Examiners," etc., made a report, and offered some amendments to the present law.

Voted, on motion of Medical Examiner **Pinkham**, that the report be laid upon the table until the meeting of the Society in October.

Voted, on motion of Medical Examiner **Lynde**, that the proposed amendments to the law of medical examiners be printed and distributed to members of this Society before the October meeting.

PRINTING THE TRANSACTIONS.

Voted, upon motion of Medical Examiner **Draper**, that an edition of three hundred copies of the Transactions for the current year be printed.

Voted, upon motion of Medical Examiner Draper, that authority be given to the Standing Committee to publish in the appendix of the Transactions such medico-legal reports contributed by members of this Society and printed in the *Boston Medical and Surgical Journal* as the Committee may deem expedient.

ELECTION OF OFFICERS.

Proceeding to ballot, Medical Examiner S. D. Presbrey was elected President, Medical Examiner F. Winsor Vice-President, Medical Examiner J. G. Pinkham Corresponding Secretary, Medical Examiner W. H. Taylor Recording Secretary, Medical Examiner C. C. Tower Treasurer for the ensuing year. Medical Examiners Draper, Gleason, and Sullivan were appointed Standing Committee for the ensuing year.

READING OF PAPERS.

Max F. Eller, Esq., of New York, read a highly interesting and valuable paper on A Few Medico-Legal Features of Life Insurance.

Voted, on motion of Medical Examiner Draper, that the thanks of the Society be extended to Mr. Eller, and that his manuscript be requested for publication.

Papers were read by Medical Examiner F. W. Draper on A Case of Homicide by a Wound of the Vulva, with Specimen; by Medical Examiner S. D. Presbrey, entitled Notes of two Autopsies; and by Medical Examiner George Stedman on A Case of Drowning. The papers were all of great interest, and were received with applause by the Society.

Recent Literature.

The Laws of Health. By **Joseph C. Hutchison**, M. D., LL. D. New York: Clark & Maynard. 1884.

This is an elementary text-book upon physiology and hygiene, the object of which, as stated in its preface, is "to present, in clear and concise language, the knowledge of to-day concerning the laws of health and the effects of narcotics and stimulants as far as possible in a work so elementary. It is specially designed to meet the requirements of grammar schools, but is also adapted to those of a higher grade."

The physiological effects of the habitual and the occasional use of stimulants and narcotics are treated in connection with the chapters on Food and Drink, Digestion, Circulation, and the Nervous System.

Humanitarians, organized workers, legislators are untiring in their efforts to stay the progress of intemperance by various methods, some of which are well advised and others ill advised, but the more recent proposal of educators to remedy the evil by the early training of the child gives promise of better results.

The prevention of an evil by correct education in early life is a more encouraging process than its cure by any treatment, either mild or heroic, in later years, and the timely appearance of this text-book by Dr. Hutchison is well calculated to meet the demand for such elementary instruction as it contains.

Medical and Surgical Journal.

THURSDAY, JUNE 26, 1884.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
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THE TUBERCLE BACILLUS.

IT is natural that pathologists, impressed by the specific character of tuberculous disease and its ready inoculability, — with, moreover, facts before them proving the infectious properties of dried tuberculous sputum when inhaled by animals, — should early have come to the conclusion that tuberculosis is a communicable disease, having generic and pathogenetic affinities with the zymotic contagious diseases, being dependent like them for its origin and manifestations on a self-multiplying element foreign to the organism in which it exercises its irritant and lethal influence. But what might this causal element be? a chemical poison impregnating and oppressing the system, or a microbe, akin to the moulds, intruding itself into the higher life, and finding there a receptivity — pullulating, developing, and luxuriating at the expense of the organism which becomes its habitat? All the evidence of analogy is against the former supposition, and there is every analogy in favor of the latter, but experimental research has given demonstration of a more satisfactory kind.

Leaving one side the history of investigations undertaken to establish the bacterial origin of acute febrile diseases universally recognized as communicable, a history almost dating from Pasteur's Studies on Fermentation, and the brilliant discoveries of Devaine and Ferdinand Cohn, it is to Villemin that is due the credit of having first clearly indicated the contagious nature of tuberculosis, and its inclusion among parasitic diseases. Villemin's views were based on the results of inoculations of guinea-pigs and rabbits with minute quantities of tuberculous matter, and the communication and diffusion of tuberculosis thereby. The memoir of Villemin was published in 1865. Facts were even then accumulating to show the parasitic origin of all contagium, but the specific bacterium of no single infectious disease had been positively determined. Villemin boldly asserted the parasitic origin of tubercle, and showed how strikingly in harmony is this conception of the disease with the doctrine, formulated by Laennec, and then becoming popular, of the unity of phthisis.

Dating from the year 1877, several experimenters, notably Klebs, Schuller, Reinstadler, Toussaint, believed that they had discovered the parasite of tuberculosis, and practiced inoculations with the microbe to which they attributed the disease. Their inoculations were without effect, the bacteria which they had isolated being only common bacteria. The same may be said of the micrococcus and the corpuscles called zoöglœ which were found in the giant cells of tubercle by Rindfleisch, Aufrecht, Malassez, and others. The 24th of April, 1882, Dr. Robert Koch, of Berlin, demonstrated to the Medical Society of that city a new micro-organism of rod-like form, belonging to the genus bacillus, characteristic in its chemical and morphological properties and effects, which he claimed to be the true pathogenic and virulent agent of tuberculosis. Koch arrived at the discovery of this microbe by a peculiar process of staining which, as somewhat modified and improved by later workers, consists in coloring the morbid substance by aniline, then subjecting the preparation to the action of dilute nitric acid, which decolorizes all the figured elements except the bacillus. The section is finally colored anew in vesuvine, which stains all the other microbes blue, the tubercle bacilli alone retaining the brown color acquired from the aniline. Thus obtained the bacilli appear as very thin rods, whose length is about one fourth that of a blood corpuscle.

It is probable that no announcement ever made a profounder sensation in the medical world, or was received with more enthusiasm. Here was a field of investigation for the mycologists and the pathological histologists of which they were not slow to take possession. The first demonstration of the ætiological relation of the bacillus to tubercle is concomitance; if invariably and always the microbe is found to accompany the disease, the presumption is warranted that it is the cause, though it may be the effect. The first step, then, to prove a causal relation is to prove the constant presence of the specific parasite in tuberculous tissue, or in the products of tubercle. This, the easiest part of the demonstration, within the reach of even the amateur microscopist, has been quite thoroughly worked out.

In a prize essay recently read before the French Academy of Medicine the author, M. Herard, sums up as follows an answer to the question "Is the bacillus *constant?*" "The researches, to-day very numerous, of competent histologists in every land agree in this: The bacilli are found, with very few exceptions, in all the products of the excretions of a tuberculous organ, and notably in the sputa of phthisical patients. Constantly, or almost constantly, they are observed in the divers tuberculous lesions; yet while in certain cases the quantity of bacilli is considerable, and they are found in all the lesions, whatever the stage of evolution of the disease, in other cases the number is small, and they are seen in greatest abundance in the young granulations, and especially in the centre of the granulations in the giant cells. When the bacilli are wanting in the parts that have undergone caseous degeneration they are generally met with in abundance in the surrounding zone which contains the granulations recently developed. Sometimes the bacilli are only found in the walls of cavities or of ulcerated bronchi, and there they are very numerous." The bacilli then, according to M. Herard, exist in variable number according to the degree of evolution of the lesions; abundant in the earlier stages when the tuberculous development is active, they are less and less numerous as destruction and elimination take place, and the soil becomes, presumably, less fitted for their nurture and support. In later periods of the disease other microbes — those of putrefaction — seem to acquire predominance.

With regard to the few exceptional cases where the bacilli have not been found it is safe to say, according to M. Herard, that either the disease was past the stage of active development of the specific microbe or that the manipulations undertaken to show them were not sufficiently exact.

Granting constant concomitance, is it not possible that Koch's bacillus may accompany other lesions than those of tuberculosis? The voice of the experts thus far negatives this question. The bacillus is not found in any pulmonary affections except such as constitute phthisis, and its presence becomes a very valuable diagnostic sign. Some authorities, among whom we may mention Germain Sée, Dreschfeld, Celli, and Guarnerini, would hesitate to pronounce a diagnosis of phthisis in the absence of the specific bacillus from the expectoration. Sée claims to have diagnosticated phthisis by the bacillus in the sputum before the stethoscopic signs were sufficiently pronounced to warrant affirmation of the existence of the disease.[1] But concomitance alone proves nothing; the bacillus must be shown to be the cause and not the effect, nor even an unimportant accompaniment. Here two lines of evidence are open: production of the disease by inoculation with the microbe, and suppression of the disease by removal of the microbe. The former line of proof is alone available at present to experimental pathologists. It must be confessed that in this department of inquiry but little has as yet been done. Were it not for Koch's brilliant success in the culture of the bacillus, after Pasteur's method, a method, however, differing from that of Pasteur in that Koch, after many trials and failures, found that a solid medium (gelatinized blood) was every way more favorable for the perfect isolation and development of the microbe than the ordinary liquid media; were it not, moreover, for the positive results which he obtained from inoculations with the bacterial product of a long series of cultures, thus demonstrating the genesis of tubercle from a figured element alone, it could not yet be affirmed that the parasitic theory of tuberculosis stands on a substantial scientific basis. Those, moreover, who are not willing to accept Koch's experiments as conclusive, or who still believe that these experiments were in some yet unexplained way vitiated by error, will look for more proof before they are convinced. It is true that such conscientious experimenters as Baumgarten[2] have demonstrated that tubercle owes its virulence and its contagium to the presence of bacilli by showing that granular and caseous matter, phthisical sputa, etc., when inoculated in animals, does not engender tubercle if previously deprived of its bacteria. This is excellent confirmatory evidence, but we still await the more important corroborative testimony of mycologists who shall have followed Koch's method and obtained the same results.

> "Truth never can be confirmed enough,
> Though doubts did ever sleep."

Finally, in this whole matter of tuberculous ætiology, predisposition plays an important part. Not every man or animal can become tuberculous, and the soil must be adapted to the parasite or it cannot find a habitat and thrive. There must be a peculiar receptivity either inherited or acquired. This susceptibility of constitution and of tissue, then, constitutes the initial step in the genesis of tuberculosis, and it is against this predisposition that prophylactic medicine is mainly directed. The condition of organism most favorable to the inroads of the parasite is one of lowered vitality, with the pulmonary alveoli unprotected by epithelium, a condition likely to follow a severe catarrh. Here the bacilli find ready access to the lungs in the air of respiration, and, unless the vital resistance of the economy can be aroused to overcome them, do their work of destruction.

We do not attempt at present even to refer to the light which the parasitic theory of tubercle sheds on the unity of scrofulosis and tuberculosis and of the varied forms of phthisis.

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REPORT OF CASES TREATED IN WARD XIX. ROYAL INFIRMARY, EDINBURGH.

Nowadays the records of abdominal surgery are in general very cheerful reading. They have many of the elements of romance, and one rises from perusing them with a thrill of excitement quite as great as that which one experiences from reading an exciting tale of adventure. There is the deadly peril hanging imminent over the unfortunate victim, who is a prey to suffering and despair, the desperate venture, the hair-breadth escape, the alternation of hope and fear, the final victory over the dread disease, and the restoration to health of one doomed to die.

This makes a very bright page in the history of medicine, and the sense of exhilaration is surprisingly vivid when fresh from reading such a series as that contained in the Report of Cases Treated in Ward XIX. of the Royal Infirmary, Edinburgh, by Thomas Keith. The number is not large, only seventy-nine, but it represents the work of about three years in that institution, in this one direction. There seems to have been in this number an unusually large proportion of what would be considered desperate cases. There were ten cases of hysterectomy for fibrous tumors, and sixty-nine of ovariotomy. Only thirteen of the cases of ovariotomy were without adhesions, and but two of the cases of hysterectomy could be called simple. Yet the mortality was slight, five deaths in all; two from undoubted septicæmia, two from carbolic-acid poisoning, and one probably from exhaustion.

It is interesting to notice Keith's attitude towards pure Listerism, so-called. Of eighty-two cases of abdominal section (two cases of Battey's operation, and one for interstitial pregnancy being included), twenty-four were done under carbolic-acid spray, with four deaths, two under boro-glyceride spray with one death, and fifty-six without spray with but one death. He therefore says: "The performing of operations under carbolic spray has been abandoned as being of doubtful efficacy in preventing septicæmia, and as sometimes being in itself a source of danger in certain long operations, and in some conditions of the constitution."

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[1] Diagnostic des Phthisies Doutenses, etc., Paris, 1884.

[2] Centralblatt, 1883, No. 42.

We do not propose to discuss methods of operation. The questions of spray or no spray, ligature or cautery, extra or intraperitoneal treatment of the stump, drainage or no drainage, must be decided according to the individual experience of the operator. We are yet in the infancy of abdominal surgery, and have not yet proven all things, to know what we may hold fast.

But certain reflections involuntarily occur after reading such a report as the one before us. There is evidence of a strong conscientious desire to relieve suffering humanity, even at the risk of spoiling a good record. The most hopeless cases were given the chance, even though it was a last resort, and we are led to feel that almost no combination of circumstances, however unfavorable, warrant a refusal to operate.

Accuracy of diagnosis is of primary importance in abdominal surgery. When the incision is made, not for the purpose of exploring, but of carrying out quickly and thoroughly what has been determined upon before hand as the thing to be done, the surgeon has won half the battle.

From the report of Keith's cases it is easy to see that he deprecates meddlesome interference after operation. He trusts largely to the *vis medicatrix naturæ*, and does not with heroic measures combat symptoms which to us seem unfavorable, but which may after all be nature's method of averting some more grave issue.

It cannot be said that the operations described in this report were performed under the most favorable circumstances, and yet the results were exceedingly satisfactory. We will hope that the next report will be yet more encouraging.

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MEDICAL NOTES.

— Dr. Wilson, of Louisville, has used with success the inner membrane of a hen's egg for skin-grafting. One egg will supply an indefinite number of grafts.

— A paper in the *London Medical Times* (March 8th) condemns the wholesale removal of tonsils for chronic inflammation. The disease is peculiar to certain individuals, usually those of a strumous type. In many cases other lymphatic enlargements coexist. The cause of the fluctuation in size in the same person, and of the regrowth after removal, is to be looked for in the anatomy of the organ. It is made up entirely of lymphatic and adenoid tissue. The symptoms produced are the peculiar expression of the face, the noisy breathing at night, occasional deafness, and less frequently abdominal pain and capricious appetite. So long as deglutition and respiration are not interfered with the size of the tonsils is usually a matter of little importance. A strong tendency to atrophy as age advances exists. When the tendency to hypertrophy is still present it is almost certain to show itself after ablation. The general, not the local, condition should be aimed at as the object of treatment. In most cases it is found that cod-liver oil and iron will do as good work before as after operation. Except for the one cause of local obstruction there is no more reason for removing hypertrophied tonsils than any other enlarged lymphatic glands.

— "Jacob the Zouave," formerly a private in a French regiment of zouaves in Algeria has been making himself a prominent figure in Paris of late. He had acquired some facility as a mesmerist, and, returning to Paris, set up for himself as a healer is no less a quarter than the Champs Elysées, where patients of the highest ranks thronged his cabinet. To keep within the letter of the law he asked for no fees, but insisted on selling his portrait to every patient, the resulting income amounting to some fifty dollars a day. He has found it convenient to remove at frequent intervals from one part of the city to another, but his refined clientèle, as a class, if not as individuals, still attend him.

Correspondence.

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MATERIA MEDICA AT THE HARVARD MEDICAL SCHOOL. LETTER FROM PROF. R. T. EDES, M. D.

Boston, *June* 19, 1884.

Mr. Editor, — I am much pleased that the Journal appreciates at its true value the excellent and admirable collection of materia medica in the new Museum of the Harvard Medical School.

I regret, however, that you do not give credit to Dr. W. P. Bolles for the great amount of labor he has spent upon it, but also for the arrangement, upon which you justly comment approvingly, which is, so far as I know, his own in conception and carrying out.

I am, yours truly,
Robert T. Edes.

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LETTER FROM VALPARAISO.

Valparaiso, Chili, *May* 7, 1884.

Mr. Editor, — As a requisite for professional standing and right to practice in Chili a medical man, no matter from what University he brings a degree, is required by the government to pass an examination before the Faculty of the Medical Department of the University of Chili. The degrees which are recognized, and those of Harvard University are among the few from the United States which are accepted, entitle one to be considered a "licentiate," and therefore a practical examination is all that is required of one presenting such a diploma. This consists in the examination and diagnosis of two medical and two surgical cases before a board of five of the professors, the performance of a couple of operations on the cadaver, and, lastly, a public *viva voce* examination lasting from an hour and a half to two hours, with special reference to the cases seen. The questions, however, are by no means limited to the cases in hand, but extend over a wide range, touching on pathology, therapeutics, theory and practice, surgery, gynæcology, obstetrics, and prescription writing.

The hospital where patients were seen and examined is one devoted entirely to men. It was founded in 1542 by Pedro Valdivia, Pizarro's lieutenant, who in 1541 chose one of the most fertile and beautiful valleys of the country for the site of Santiago. The hospital is built in squares, which have broad balconies running all around the inside, so that patients during convalescence have no lack of out-door life, which can be enjoyed almost the whole year round. In its sanitary arrangements, the quality of food, the nursing of patients, the use of temperature charts, and keeping of records there is much advance yet to be made; but the general arrangement of the institution is good, and well suited for the clinical instruction given. In one way this is advantageously conducted, and that is that students are assigned cases, and have to study them and give their results before the class and instructor, at the bedside. In one ward I saw two cases of an affection but rare in the United States, namely, abscess of the liver. It is quite prevalent here, as one frequently hears of the aspiration of such cases. As a rule it appears as a sequel to dysentery, which also prevails, and is supposed to be due often to the eating of a preparation of pork, with about an equal quantity of red pepper. When this active irritant is followed by the favorite popular spirit aguardiente, fire water, it is thought sufficient explanation of attacks of sporadic dysentery. In fact, popular tradition warns the people to refrain from piling Pelion on Ossa in this way. Some day I hope to be able to report some cases of this disease.

The one word which is said to characterize these South American people is "mañana," to-morrow. In attempting to be received here one is made painfully aware of this procrastination. Much patience is needed, and one may count himself fortunate if he has a day assigned him within six weeks of his first making application. Some claim that the theory of protection is here extended to shield native medical talent. This I do not believe, but rather recognize the merit of a system which seeks to prevent ignorance from clothing itself in a title, and bringing discredit on the profession and injury to the public. Certainly there was no evident intention of excluding one whose education had been obtained abroad. The examination, of course, is in Spanish. It was calculated to test one's theoretical and practical knowledge, but while rigid was perfectly square and straightforward.

During the oral examination I was struck by hearing quite a hum, among the students present, when, speaking of rapid dilatation for organic stricture, I spoke of administering ether. Here ether is practically unknown, the only anæsthetic used or spoken of being chloroform. My morning's experience at the Charity Hospital of this city, where I was present and assisted in a couple of operations, may not be without interest. One was a young woman with caries of a metatarsal and cuneiform bone, to whom I administered chloroform. The patient had previously been operated upon and taken the anæsthetic nicely. This time all went well for a few minutes, — aspect, breathing, and pulse good, — when suddenly respiration ceased. With artificial respiration the patient shortly cried, and began to breathe. The removal of the carious bone being desired, the chloroform was again applied, as previously, on Esmarch's wire and gauze apparatus, though cautiously. The pulse was good, aspect and breathing natural, but being administered very slowly the patient did not readily succumb to its influence. As soon as the conjunctival reflex ceased I reported being ready for the operation, but immediately the respiration again ceased. The patient was placed on the side of the table, head hanging down, tongue withdrawn, and artificial respiration performed for some minutes without effect. The battery was then procured and applied, and we had the satisfaction of witnessing the return of the rhythmical abdominal and thoracic movements. The operation was continued without further anæsthetic, one fourth of a grain of morphia being injected subcutaneously.

From the woman's ward we proceeded to the soldiers' quarters on the hill to witness a resection of the tibia. This case, too, had been operated on before, and with chloroform, when a section of bone four inches long had been removed. A couple of sinuses had remained open, and now the probe touched loose necrosed bone. The patient was apparently taking the chloroform well, and was soon limp. Remembering the morning's events, one of the attending surgeons advised the withdrawal of the anæsthetic. It was done, but at that moment a peculiar pallor came over the patient's face, and all respiratory movements ceased. The operator had been watching the pulse, and just moved to the foot of the bed. I stepped forward, and, taking the wrist, could not assure myself of any pulse. The head was immediately lowered, tongue withdrawn, abdomen and chest slapped with a wet towel, ammonia injected subcutaneously, artificial respiration continued for twenty minutes, and the battery used to stimulate the phrenic nerve, but without avail. There was no pulse or cardiac impulse at any time after noting the sudden change in the patient's condition, and respiration could not be restored. In the first case, both times, the respiratory movements ceased without any warning, while the cardiac contractions continued. In this case artificial respiration, performed according to Sylvester's method, and stimulation of the phrenic nerve restored breathing; whereas in the second case, again without any warning, the aspect betokened syncope, and both cardiac and respiratory contractions ceased together, and in this nothing availed to save life.

At the Boston City Hospital an almost daily experience with ether for twelve months showed that it had dangers, but fortunately they gave warning of their approach, and could be guarded against, beginning stertorous breathing or lividity warning one to desist, and never did I see any unfortunate result. Since settling here I have probably seen fifteen or twenty operations with chloroform, and in two of those have witnessed sudden collapse, which proved fatal in one.

The United States man-of-war Shenandoah anchored in our harbor a few days ago, and the daily papers reported her having yellow fever on board, but as her boats can be seen going to the landing the rumor must have been false. John Trumbull, M. D.

P. S. May 8th. At an autopsy of the case reported no abnormality about the heart or its valves was detected; and examining the woman the area of cardiac dullness and heart sounds were found normal.

Miscellany.

A CASE OF EXTRA-UTERINE GESTATION. DELIVERY OF A LIVING CHILD PER VAGINAM. REMOVAL OF PLACENTA. RECOVERY.

THE following unusual case was recently reported to the Obstetrical Society of London by Dr. Mathieson, of Ontario.[1] In spite of the success of the operation in this particular instance, the general opinion of the Society was strongly against the vaginal operation, compared with abdominal section in such cases: —

The patient was aged thirty, the mother of five children. In November, 1880, menstruation (which had been regular, though scanty for two months) ceased, and abdominal pain began. In December, 1880, a lump was noticed low down in the left inguinal region. She was first seen by the author in March, 1881, when she had a tumor rising to the level of the navel, filling the left vaginal region and extending two inches to the right of the middle line. The uterus could not be mapped out. The sound passed three and a half inches, slightly to the right side and in front of the tumor. There was occasional pain in the tumor, tenderness, and a feeling "like jelly moving" which made her feel sick; painful micturition, irregularity of bowels. The tumor continued to enlarge, fœtal movements became stronger, and the pain more severe. On April 12th she had an attack of pain and nausea, with pulse 146, temperature 103.6° F., cold extremities and cold sweat; relieved by morphia. A similar attack occurred on April 23d, another on May 2d, and another about May 18th. On June 2d a somewhat similar attack was accompanied by pretty regular labor-like pains, independently of fœtal movements, and accompanied by a red discharge. The tumor continued to grow, and the most rapidly growing part was always the most painful. On June 13th occurred another attack like the last, but the pains were bearing down, though no bulging during them could be felt per vaginam. On June 28th she had a very severe attack of pain during micturition, followed by attacks of syncope. The roof of the vagina was filled with a doughy mass, solid on deeper pressure. Operation per vaginam was at once decided on, and performed without chloroform at the patient's request, by cutting with a knife and tearing with the finger nail. The face of the child was found presenting, and was delivered by forceps easily. It was stillborn, but soon revived. The placenta was at the posterior and left side of the cavity, its lower border some two inches from the vaginal roof. It was easily peeled off, a sponge soaked in perchloride of iron following it up. There was very little bleeding. The clots were removed from the cavity, its walls were touched with perchloride, and the operation ended. Much exhaustion followed the operation. The child weighed eight pounds seven and a half ounces, and appeared mature. The placenta was three-lobed, but was destroyed before a careful examination could be made. The after-treatment consisted in washing out the cavity antiseptically. The opening healed in three months. Severe pain in the side lasted for nearly two years after the operation. She was seen in August, 1883, in excellent health, had no pain except after great fatigue; had menstruated normally for six months. The child was healthy, the largest, and a great deal the heaviest, of the family.

THE COURSE OF THE FEVER IN ACUTE CROUPOUS PNEUMONIA.

SILVESTRINI[2] dwells upon the somewhat neglected irregularity of the fever in acute pneumonia. The temperature, he thinks, practically does not, as a rule, adapt itself to the classical three periods of the disease.

There are cases of pneumonia which run their course in three days, others in much more; and the temperature follows in its behavior the various phases of the morbid process. The temperature-curve is irregular even in cases of frank pneumonia following a typical course; if the temperature be taken every two hours, oscillations are noticed which escape observation if the thermometer be only used twice a day. The author records cases in which objective examination and consideration of the thermic curve showed that rise of temperature always coincided with the appearance of a new pneumonic nucleus, and diminution or cessation of fever with the appearance of the signs of hepatization. At this moment, when the exudation coagulates, a compression is produced between alveolus and alveolus, and arrest of the blood and lymphatic circulation, and hence absorption of the pyrogenic products of inflammation is prevented. Fever only accompanies the period of exudation, during which the absorption of the pyrogenic products is facilitated; every elevation of temperature corresponds to a new invasion of the process, the pneumonia being considered as the union of so many pneumonic processes, which succeed one another with greater or less rapidity in different cases; and this succession of accesses goes *pari passu* with the oscillations of the thermic curve. The duration of the morbid process is short, the succession of anatomo-pathological periods rapid; but the nature of the process is to diffuse itself in other territories, where the same phenomena are developed, capable of producing the same manifestations. If the invasion take place quickly, there will be almost continuous fever; if slowly and interruptedly, the fever will have a more or less regularly intermittent type. If the pneumonia invade one tract only of the lung, and be arrested there, it will give rise to symptoms only lasting one day or two; if the process invade gradually all parts of a lung, there will be fever of long duration. The diffusion of the morbid process is by the bronchi, and not by lymphatic absorption or contiguity. If the diffusion took place by contiguity, those cases in which the process invades irregularly various zones of the lung could not be explained.

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BIPOLAR VERSION IN PLACENTA PRÆVIA.

THE *Medical Times and Gazette* (May 24th) quotes with approval as being in agreement with the practice of some of the best English accoucheurs an article in a recent number of the *Zeitschrift für Geburtshülfe und Gynæcologie*, by Dr. C. Behm, of Berlin. It is based on cases observed in the clinic of Professor Gusserow. The author's experience of placenta prævia consists of fifty-three cases, of which the first thirteen were treated by plugging, rupture of the membranes, and version by the old "internal" method. They comprised five cases, in which the placenta was completely prævia; five partial or "lateral" (to use Dr. Behm's word), and three marginal. Of the thirteen, four mothers died, that is 30.8 per cent., and of the nine who survived, four suffered from febrile illness during the lying-in. The children were fourteen in number, and ten of them died during or soon after birth, a mortality of 71.4 per cent. These percentages Dr. Behm compares with the statistical statements of other writers, and finds that they represent about an average mortality. The principle of treatment adopted by Dr. Behm, in his latter forty cases, was that of bimanual version, after the method of Braxton Hicks, as early as possible, one foot being brought down through the os, and the labor then left to be gradually completed by the natural efforts, the pressure of the breech on the cervix being trusted to restrain hæmorrhage. The result was, that he lost not a single mother out of the forty. The infantile mortality was 77.5 per cent. Hofmeier, out of thirty-seven cases, treated in a similar way, only lost one mother, but of the children sixty-three per cent. In Dr. Behm's series of forty cases, he performed early bipolar version thirty times. In seven the membranes ruptured early, so that version had to be longer delayed, and three were cases of head presentation, in which delivery was left to Nature. The advantages of this plan of treatment, Dr. Behm points out, are these: (1.) The necessary intervention is effected early, as soon as the os will admit two fingers, before the mother has lost much blood, or become exhausted. (2.) The breech, drawn down upon the os by slight pressure, forms a perfect tampon. (3.) As delivery is effected slowly, shock is avoided. As to the technique of the operation, Dr. Behm remarks that two fingers should be introduced through the os. If the cervix will not admit two fingers, it should be dilated with water bags. If the presentation of the placenta be complete, it will be found that it separates most easily on the side nearest to its edge; if the edge cannot be reached, it is best to perforate the placenta. After the breech has been brought into the os uteri, expulsion is best left to Nature. The accoucheur's motto in these cases should be, "haste with patience" (*Eile mit Weile*), haste in turning, patience in extraction.

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[1] Medical Times, May 31st.

[2] Revista Clinica, November, 1883. London Medical Record, February 15, 1884.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 14, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Measles.
New York	1,340,114	621	269	22.72	14.24	8.00	6.08	3.36
Philadelphia	927,995	—	—	—	—	—	—	—
Brooklyn	644,526	192	62	15.08	21.32	5.21	2.60	.52
Chicago	632,100	214	112	30.55	9.40	3.76	6.11	3.20
Boston	423,800	159	53	10.08	16.78	3.15	1.89	—
Baltimore	408,520	131	60	21.28	12.16	9.88	1.52	3.04
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	87	42	15.47	11.90	4.76	3.57	—
New Orleans	234,000	178	84	34.16	8.96	16.80	1.12	2.81
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	64	31	20.28	6.24	—	12.48	3.12
Milwaukee	142,400	47	25	17.04	21.28	6.39	6.39	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	27	11	11.10	11.10	3.70	—	—
Nashville	54,400	21	8	9.52	14.28	—	—	—
Charleston	52,286	40	11	15.00	17.50	5.00	—	—
Lowell	71,447	19	4	5.26	31.56	—	—	—
Worcester	69,442	18	7	11.11	11.11	—	5.55	—
Fall River	62,674	13	7	15.38	15.38	7.69	—	—
Cambridge	60,995	12	4	—	16.66	—	—	—
Lawrence	45,516	7	1	—	14.28	—	—	—
Lynn	44,895	9	0	11.11	22.22	—	—	—
Springfield	38,090	7	1	—	14.28	—	—	—
Somerville	31,350	9	5	22.22	—	—	—	—
Holyoke	30,515	7	4	—	14.28	—	—	—
New Bedford	30,144	1	0	100.00	—	100.00	—	—
Salem	29,503	13	3	7.69	7.69	—	7.69	—
Chelsea	24,347	6	3	16.66	—	—	—	—
Taunton	22,693	[illegible]	1	16.66	33.33	—	16.66	—
Gloucester	21,400	10	2	—	30.00	—	—	—
Haverhill	20,905	9	1	11.11	11.11	—	11.11	—
Newton	19,421	4	0	25.00	25.00	—	25.00	—
Brockton	18,323	3	1	33.33	33.33	—	33.33	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	6	1	—	16.66	—	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Massachusetts towns	321,580	51	10	11.76	17.64	1.96	1.96	—

Deaths reported 1991 (no reports from Philadelphia, St. Louis, Buffalo, District of Columbia, and Providence): under five years of age, 823; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 403, consumption 282, lung diseases 189, diarrhœal diseases 129, diphtheria and croup 85, measles 51, scarlet fever 35, typhoid fever 25, whooping-cough 20, malarial fevers 19, cerebro-spinal meningitis 12, small-pox nine, puerperal fever nine, erysipelas seven, typhus fever two. From *scarlet fever*, Chicago 11, New York 10, Boston five, Baltimore and Milwaukee two each, Brooklyn, Cincinnati, Pittsburg, Woburn, and Chelsea one each. From *typhoid fever*, New York, seven, Chicago four, Baltimore three, Cincinnati, New Orleans, Spencer, and Charleston two each, Brooklyn, Pittsburg, and Lynn one each. From *whooping-cough*, New York five, Brooklyn, Baltimore and New Orleans three each, Chicago, Boston, and Somerville two each. From *malarial fevers*, New Orleans six, Brooklyn four, New York three, Chicago and Charleston two each, Baltimore and Cincinnati one each. From *cerebro-spinal meningitis*, New York three, Chicago two, Cincinnati, New Orleans, Nashville, Lowell, Worcester, Fall River, and Chicopee one each. From *small-pox*, New Orleans seven, Pittsburg and Nashville one each. From *puerperal fever*, New York, Brooklyn, Chicago, and Cincinnati two each, Boston one. From *erysipelas*, New York, Brooklyn, and New Haven two each, New Orleans one. From *typhus fever*, New York and Chicago one each.

One case of small-pox was reported in Cincinnati; scarlet fever 37, diphtheria 20, typhoid fever seven, and measles three in Boston; scarlet fever 24 and diphtheria seven in Milwaukee.

In 99 cities and towns in Massachusetts, with an estimated population of 1,343,037 (estimated population of the State 1,955,104), the total death-rate for the week was 14.40 against 16.31 and 16.50 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending May 31st, the death-rate was 20. Deaths reported 3354: acute diseases of the respiratory organs (London) 261, measles 150, whooping-cough 133, scarlet fever 65, diarrhœa 44, small-pox (London 36, Liverpool three, Sheffield, Sunderland, and Cardiff one each) 42, fever 39, diphtheria 27. The death-rates ranged from 11.3 in Derby to 29.3 in Wolverhampton; Birkenhead 17.2; Nottingham 17.3; London 19.2; Birmingham 20.6; Leeds 20.6; Sunderland 22; Liverpool 22.4; Manchester 23; Leicester 23.6; Sheffield 24.1. In Edinburgh 23.1; Glasgow 24; Dublin 22.3.

For the week ending May 31st, in the Swiss towns, there were 29 deaths from consumption, lung diseases 20, typhoid fever 18, diarrhœal diseases 12, diphtheria and croup four, whooping-cough two, erysipelas two. The death-rates were, at Geneva 19.4; Zurich 17.7; Basle 13.2; Berne 25.6.

The meteorological record for the week ending June 14th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
June, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 8	29.900	76	89	64	71	48	80	66	SW	S	SW	11	12	12	C	C	C	—	—
Mon., 9	29.785	72	84	64	85	62	93	80	SW	SW	W	12	13	7	C	C	C	—	—
Tues., 10	29.974	54	67	52	96	93	90	93	NE	NE	NE	21	16	14	R	O	O	—	—
Wed., 11	30.122	51	55	50	100	98	98	99	E	NE	NE	15	15	5	R	O	O	—	—
Thurs., 12	30.011	56	65	49	100	100	99	100	E	E	N	3	4	8	T	R	R	—	—
Fri., 13	30.272	58	66	57	87	62	77	75	NE	SE	E	14	12	4	T	F	F	—	—
Sat., 14	30.533	52	59	50	96	59	77	77	E	E	S	16	12	2	O	C	C	—	—
Mean, the Week.	30.085	60	69	55				83										20 55	0.33

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM JUNE 14, 1884, TO JUNE 20, 1884.

Happersett, J. C. G., major and surgeon. Granted leave of absence for four months. Paragraph 5, S. O. 141, A. G. O., June 18, 1884.

CHANGES IN DEPARTMENT OF TEXAS.

Porter, J. Y., captain and assistant surgeon. From Fort Ringgold, Texas, to Fort Brown, Texas, as post surgeon.

Maddox, T. J. C., first lieutenant and assistant surgeon. From Fort Clark, Texas, to Fort Ringgold, Texas, as post surgeon.

Black, C. S., first lieutenant and assistant surgeon. From Fort Concho, Texas, to Fort Clark, Texas.

S. O. 73, headquarters Department of Texas, June 9, 1884.

LIST OF OFFICIAL CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JUNE 21, 1884.

Knight, J. S., surgeon, ordered before Retiring Board.

Herndon, C. G., passed assistant surgeon, detached from the Albatross, ordered to attend officers of Navy and Marine Corps in Washington.

Flint, J. M., surgeon, detached from Smithsonian Institute, ordered to Fish Commission steamer Albatross.

Leach, P., assistant surgeon, ordered for examination preliminary to promotion.

Gardener, J. E., passed assistant surgeon, detached from U. S. S. Lancaster, ordered to U. S. S. Powhatan.

Boyd, J. C., passed assistant surgeon, detached from U. S. S. Lancaster, ordered to U. S. S. Powhatan.

Books and Pamphlets Received. — Clinical Demonstrations on Ophthalmic Subjects. By J. R. Wolfe, F. R. C. S. E., etc. With Illustrations. London: J. & A. Churchill. 1884.

Mittheilungen aus der Chirurgischen Klinik zu Kiel. Herausgegeben von Dr. Friedrich Esmarch. II. Vorschläge zur Beseitigung der Drainage für alle frischen Wunden. Von Dr. G. Neuber. Kiel. 1884.

III. Die Methode des Unterrichts an der Chirurgischen Klinik der Universität Kiel.

On Paroxysmal Fever, not Malarial. By J. H. Musser, M. D. (Reprint.) Philadelphia.

Sixth Annual Announcement of the Fort Wayne College of Medicine. Session 1884–85.

Minutes of the State Medical Society of Arkansas at its Ninth Annual Session.

Hay Fever: its Ætiology and Treatment. A Lecture delivered at the London Hospital Medical College. By Morell Mackenzie, M. D. (Reprint from British Medical Journal.) London. 1884.

A Paper on Extirpation of the Entire Tongue for Cancerous Affections. Read by Basil Norris, M. D., Surgeon U. S. A., before the American Surgical Association. Washington, D. C. 1884.

The General Practitioner's Guide to Diseases and Injuries of the Eye and Eyelids. By Louis H. Tosswill, B. A., M. B., etc., etc. London: J. & A. Churchill. 1884.

The Urine in Disease (Chart). Arranged by Louis Lewis, M. D., M. R. C. S. England. Supplement to The Medical World. Philadelphia.

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Original Articles.

EXTENSION IN THE TREATMENT OF DISEASED VERTEBRÆ.[1]

BY BUCKMINSTER BROWN, M. D.

Questions have been sometimes asked me in regard to the origin and first employment of extension in the treatment of caries of the spine.

The first case of spinal caries in the treatment of which I have a record of the use of horizontal extension and counter-extension occurred in January, 1864.

At the period referred to the teaching of the highest authorities and of the text-books was that any attempt at extension was unjustifiable, and that the use of any means to prevent pressure together of the bodies of the diseased vertebræ or to separate them, however slightly, rendered a cure impossible. Sir Benjamin Brodie goes so far as to say that in cases where the disease has existed a long time the patient should be "supported by cushions and pillows so that the position in which he is placed may have no tendency to restore the spine to its original figure." He continues: "In the management of these cases it is important that we should always bear in mind that without undue interference on the part of the surgeon the carious or ulcerated surface of the vertebra above will come in contact with that of the vertebra below, and that it is to the union which takes place between them under these circumstances, at first by soft substance and afterwards by bony anchylosis, that we are to look for the patient's recovery. In artificially straightening or elongating the incurvated spine we necessarily disturb this curative process, and therefore all attempts to do so, whether by machinery or by laying the patient in the supine posture on a horizontal board, are to be scrupulously avoided."[2]

Mr. Samuel Cooper, in his First Lines of Surgery, coincides with Sir Benjamin Brodie, and quotes him in corroboration of his own views.

Sir Astley Cooper says "That the mode in which the disease becomes cured is by the upper portions of the vertebræ falling on the lower, and in this way anchylosing. This must be your object in the treatment of this disease." . . . "As to avoiding deformity, that is out of the question; in all these cases deformity is inevitable; whatever you do this cannot be prevented."[3]

"The incurvation forwards," says Lawrence, "is necessary to fill up the deficiency produced by ulcerative absorption."[4]

I was first led to deviate from the instruction of these high authorities in regard to treatment by the occurrence of the case I have mentioned. The patient was a girl seventeen years of age. The disease was in the dorsal vertebræ, and was attended by excruciating pain night and day.

My notes of the case are: "Four vertebræ projecting. Excessive incurvation in lumbar region, to such a degree as almost to throw the body from its balance backward. Constant pain; debility; emaciation. Protuberance and incurvation constantly increasing."

Perfect rest, — immobilization, in fact, — counter-irritants, combined with other measures which have usually brought relief, were of no avail. The pain continued without mitigation.

Thus disappointed it occurred to me that in hip disease, a disease of similar structures to those of the spine, it is the general experience that relief to pain is often, almost uniformly, obtained by extension or by separation, so far as the anatomy of the parts admit, or, at any rate, by preventing pressure on the diseased tissues. From analogy why should not stretching of the muscles and ligaments connected with the carious or inflamed vertebral joints in like manner, by lessening internal pressure, relieve suffering?

In conformity with this theory I applied a padded leather belt around the pelvis. This belt had straps on each side extending from over the iliac bones towards the foot of the bed, terminating in loops. Through each of these loops was passed a cord to which a weight was attached, one on each side. The bedstead being tilted towards the head the upper portion of the body served for counter-extension. Since that time I have sometimes, for this purpose, made use of a padded belt around the chest, below the arms, and attached to the head-board. Soon after the application of the weights the pain was relieved. The directions given were that they should only be used during the day. The relief was so great that the patient requested that the extension should be continued night and day.

In treating these cases it has, for many years, been my plan to have a small pillow or pad placed under the projecting or diseased portion of the spine. This pad serves as a fulcrum. The upper portions of the body above the curvature and the lower portions below act as levers[5] by which the diseased surfaces are prevented from coming in contact, or at least pressure of these surfaces is removed, and the spine is more or less straightened. This fulcrum I had been in the habit of using previously to the case here referred to, and both of these measures have been employed in every case to which they appeared applicable since the date I have mentioned. In the case above described the cure was perfect. My memorandum of this case on July 9th says: "Patient has continued to improve. Has had no pain in back since use of weights. Projection and incurvation have gradually lessened. Has gained flesh rapidly. Is in good spirits. Applied, today, spinal body apparatus." From this date she began to sit up and walk.

The patient went out to service, and was afterwards married.

The second case in which I employed this method came under my care in May of the same year (1864). The patient was a girl four years of age. Three dorsal vertebræ were diseased. "Treatment: weights to the hips; counter-extension by means of a strap around the chest, and attached to the head of the bedstead." My next memorandum is dated August 6th. "Spinal protuberance lessened. General health greatly improved."

In this case the result was complete restoration to health.

In 1873 I received a visit from this patient after an interval of nine years. She was in perfect health, had no deformity except slightly rounded shoulders, and this was the only vestige that remained of the disease from which she had suffered.

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[1] Under this term, as here used, lateral curvature and kindred affections are not included.

[2] Diseases of the Joints, page 266.

[3] Chelius' System of Surgery, vol. i., page 314.

[4] Supra citation.

[5] Of power proportioned to the thickness of the pad, which should never be very thick.

In cases of disease of the cervical vertebræ the success which has attended extension continued night and day for months has been remarkable both in the complete removal of the curvature and also in the relief and comfort afforded to the patient. In the treatment of caries in this region the straps by which extension is made are an important item. They should be of soft leather, well padded, and carefully fitted to the occiput, and so shaped to the chin as to avoid the liability of slipping back against the throat. Of late I have used head gear similar to that employed by Dr. Sayre in connection with his suspension tripod, and have found it answer well. Where the disease is in the neck or in the cervico-dorsal region the bed should be perfectly level or sloped gently towards the foot.

A recent case, treated during the spring and summer of 1883, was a striking example of the efficacy of continued extension in cervical caries.

The patient was a boy four years old. He was injured in May, 1882, by a sheep butting his head and neck. He was taken up insensible. Unmistakable evidence of disease was not manifested until the succeeding winter. The child when first brought to me, in March, 1883, was never free from suffering. His countenance bore the marks of great distress. His head was thrown backward, the occiput resting upon the upper dorsal vertebræ. So deep was the sulcus thus formed, and so forcibly was the head drawn back, that it was impossible, without the use of unjustifiable force, to insert the finger for the purpose of testing the sensitiveness of the bones. The action of the vesical sphincter was impaired.

The head gear and weight were at once applied with the effect of relief from pain. The neck was gradually elongated, and the head brought to its natural position. The child became playful and happy. From a state of utter misery he was changed to one of enjoyment; laughing and amused through the day, and sleeping well at night. He had a bench placed across his bed, on which were his toys, etc.

I had a pulley attached to one end of one of Dr. E. H. Bradford's steel bed-frames. This frame I have found a great convenience in such cases. On it the child could be moved about, and in summer placed upon the piazza or beneath the shade of trees, and the extension be still continued.

In October, 1883, the patient was discharged from treatment in perfect health, with restored activity, and with a normally straight neck.

During these months the weight had been suspended to his head almost without intermission. In a letter received from his mother in September, she says: "The little boy is doing splendid. So far as I can see his neck and back are as perfect as any one's." Another letter, received February 18, 1884, gives information of the boy's uninterrupted good health.

This is in brief the history of the introduction of the present treatment of spinal disease by extension. By it I know that much has been and much can be accomplished. It certainly appeared to be carving out a new path when these changes were first introduced in the approved methods of treatment. The course of treatment by complete rest and extension which was adopted in the cases above cited is not applicable to every instance of vertebral disease. The judgment of the practitioner must be relied upon in the selection of those cases to which it is appropriate. But I would here testify from experience that the large majority of patients suffering from caries of the spine have a far more favorable chance for complete restoration if such a course is pursued during a certain period of the disease than by any other method. And still more forcibly would I say that cervical disease treated in the way above indicated will be attended by a success as regards comfort and symmetry which cannot be attained by a course which relies upon the use of instruments in the upright position.

I do not intend it shall be inferred from what I have said that the cases related in the previous pages were the first in which extension had been used in the treatment of diseased spine. Samuel Hare, of London, in 1849, and E. W. Tuson in 1841, employed extension in the treatment of spinal disease. R. W. Bampfield in 1845 advocates this measure in excurvation of the spine, under which head he appears to class simple excurvation and also curvature from disease.

But, on the other hand, this writer says: "Instruments for stretching and supporting the vertebral column should not be employed during scrofulous or simple inflammation or caries, or vertebral destruction by absorption; neither should they be resorted to during the regeneration of bone."[1]

During the twenty years more or less which had elapsed from the period of these publications to 1864, the date of the first case related in this paper, the English authorities taught, as we have seen, apparently on theoretical grounds, a course opposed to extension. In America it had not I think been practiced until employed by me in 1864. Horizontal extension was then resorted to primarily for the relief of pain, and I considered it an original suggestion, so applied. The prevention, removal, or diminution of deformity was then secondary, although they have since become equally important, results.

R. Volkman, in a monograph published in 1868, speaks of the beneficial effects to be derived from extension in the recumbent position in caries of the spine, and I am gratified that his experience likewise coincides with mine, especially in regard to the relief from pain frequently afforded by this method.[2]

Reference has been made to the usefulness of a narrow pillow or pad beneath the prominent vertebræ. In this connection I will mention that in hip disease a similar pillow under the pelvis operates likewise as a fulcrum, the trunk being the extending power above and the leg with weight attached to it below, thus tending to prevent contraction at the groin.

The constitutional remedies suitable to these and similar cases have not here been dwelt upon. Attention to this point should on no account be neglected. Every case at some period requires the aid which can be derived from appropriate remedies judiciously administered. Flying blisters, very small, will often lessen the tenderness of the bones and of the surrounding parts, and relieve the costal, gastric, and abdominal pains which almost uniformly attend the earlier stages of the disease. Iron and cod-liver oil will frequently be of service. Stimulants, small quantities of wine or brandy, are required in certain conditions of the system and afford help which can be derived from no other remedy.

The syrup of the lacto-phosphate of lime is a convenient means by which an essential constituent in the formation of bone can be introduced into the economy in a manner easily assimilated. The discovery of this preparation several years since by M. Dusart has contributed an auxiliary which, theoretically at least, should be of important service in our treatment of diseased bone.

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[1] Essay on Curvatures and Diseases of the Spine, London, 1845, page [illegible];

[2] Gelenk entzundung und Gewichts extension. 1868.

The preparations of lime in some of the various forms in which they are presented to us I had previously employed, but with no gratifying results. Not infrequently the remedy passed through the system unchanged. The lactic-acid solution is readily acted upon by the absorbents, is withal an agreeable medicine, and supplies an element which is required, and the use of this remedy in practice has appeared to be attended with decided benefit.

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SIX GENERIC DRUG MODIFICATIONS.[1]

BY HENRY M. FIELD, M. D.

As respects idiosyncrasy in the action of the *alkaline bromides*, a closer analogy obtains with what we observe in the drug just discussed than might be expected when we consider difference both of physiological influence and of therapeutical uses. We can devote but one remark to this subject, however. Professor Duhring distinguishes eight varieties of skin disease as characteristic, in different individuals, of bromide saturation, namely, three varieties of acne, a brownish discoloration of the skin, a simple papular eruption, maculo-papules, bullæ, and rupia. To these Dr. Seguin adds a ninth, which he carefully describes, — a semi-malignant looking ulceration upon the lower part of the leg. Of course these results are mostly confined to the practice of neurologists who use maximum doses, as in epilepsy, cerebral tumor, etc.

I might speak of the propensity of chloral hydrate to "fly to the eyes," as it has been called, — and, indeed, shall have a word on this subject a little later, — and this, after moderate and brief use, producing severe conjunctivitis, etc., and, in exceptionally severe cases, photophobia and œdema of surrounding parts; a phenomenon which is now and then observed in less degree from the continued use of the bromides. Carbolic acid appears to be well nigh controlled by individualism, and to such extent that many writers have questioned whether so powerfully toxic an agent should be used at all, at least to the extent of the production of a perceptible physiological impression.

Here it seems pertinent to introduce the following note: It is generally assumed that idiosyncrasy is a fact both of heredity and transmission, and this is doubtless true; that with various modifications in degree of development, as, for example, an especial prominence at times of weakness or ill-health, it exists as a permanency at least throughout the life of the individual. I have, however, a case at present under observation which shows the actual genesis of an idiosyncrasy *de novo*. My patient is a female of strongly marked neurotic character, made such, indeed, both by inheritance and education. With strong mind and weak nerves, she affords a prominent illustration of that unhappy type in which there appears to be a more or less constant conflict between what has been called the abdominal and the cerebral brain. Four years ago it became necessary to advise the procuring of sleep by a nightly enema of chloral hydrate, in a moderate dose. This was continued for fully eighteen months without material increase in quantity of the hypnotic. It was then stopped, partly because of the appearance of a mild form of conjunctivitis, and accompanying symptoms. After fully two years' suspension, it recently seemed wise again to resort to this measure, and, accordingly, twenty to thirty grains was ordered by enema on retiring. The therapeutic effect was all that could be desired, but at the end of ten days a summons found the patient in a state of great distress. There were conjunctivitis and photophobia, the eyes were nearly closed by surrounding swelling, the face, suffused, red, hot, presented such a degree of œdema that the husband demanded an examination of the urine before he was satisfied that some disease of the kidneys had not set in. Arrest of the chloral for a few days, and then occasional attempts to return to it, established the fact that the case was idiosyncrasic and due to the remedy employed.

I have spoken of carbolic acid as well-nigh controlled by individualism. Busch regards it as "one of those drugs which indeed act well in medicinal doses, but to which certain persons, for reasons as yet unknown to us, are so sensitive that quantities harmless to innumerable other persons act poisonously upon them;" and Köster has the alarming suggestion that the occasion of the report of so few deaths under antiseptic treatment is to be referred to the uncertainty of the symptomatology of carbolic-acid poisoning, in different constitutions, and hence the casualty "is concealed under the names shock, collapse, and similar terms." The dangers of carbolic-acid spray are noted in another division of this paper. Deaths from the use of this material, whether as applied to the surface or introduced into the cavities of the body, under conditions which we have no right to say were not cautious and skilled, have taught us that a remedy so capricious is not to be used, except under circumstances of the strictest limitation.

Death from chloroform in competent practice is largely to be referred to idiosyncrasy; "we waste our labor when we search for proof of heart disease or some flaw in the apparatus or some want of care in the administration." Again, says Hutchinson, "It is probable that there are persons in whom, owing to peculiarity of nerve-organization and not in the least to anything we can recognize as ill-health, the inhalation of chloroform will always cause a depression of the heart's action.

A rather startling experience of my own with sulphuric ether the past winter has interest in this connection. The subject was a patient and friend of twelve years' acquaintance, was of middle age, robust health, good habits, had no disease of heart or kidneys. The ether was pure and given in confidence for the extraction of a small tumor of the fore-arm. Hardly had anæsthesia been reached when a sudden and an apparently paralyzing action was exerted upon the respiratory centre, with the production of symptoms which seemed to demand the immediate suspension of the anæsthetic and involved an incomplete performance of the operation intended.

But once again: We do not need to invade the mysteries of the interior of the body in the search for illustrations of our subject; we have but to observe the varied phenomena of medication applied to its surface. The application of the tincture of iodine to the skin should produce only an erythema, but there are subjects with whom it causes vesication and an extensive œdema. Now and then, indeed, it seems impossible to cause any impression, however often it may be applied. But remote and profound constitutional effects may follow from what was directed for topical external influence alone. Thus Buckell reports that "in the case of a lady, who had the tincture of iodine very lightly painted upon a tumor between the scapulæ, there appeared pain and a sense of oppression in the epigastric region and also trembling, weakness, profuse sweating, dribbling of urine, and inability to stand erect. The use of stimulants and application of warmth over the stomach caused these symptoms to disappear in a few days." Here there was wide departure from what should be looked for had even the iodine been administered internally and in toxic dose.

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[1] Continued from vol. cx., page 606.

I was called within the year to see a female patient who had believed herself for two days to be suffering from an attack of the measles; but when to an extensive eruption, which showed no disposition to disappear, there were added a degree of blindness, confusion of thought, headache, etc., alarm was taken and the physician called. Almost the first condition noted, after the first general survey, was wide and fixed dilatation of the pupils. Inquiry elicited the fact that the patient had been wearing for several days past a four by six inch perforated belladonna plaster to the small of the back, nor did the subject by any means present the usual type of exceptional susceptibility to belladonna.

But it is not alone in the skin as respects medicines applied to the skin; the phenomena of individualism may be encountered within even narrower limits. An inert ointment made of fresh fat, applied with no extreme degree of friction, will develop inflammation of the cutaneous surface with some subjects, whereas the local phenomena attending the application of a mild oleate of mercury are so varied that it is safe to predict nothing with certainty.

So much for idiopathic idiosyncrasy, which, after all, could probably in every instance be shown to be anatomical as well, as truly as in the instance already cited, could we apply the requisite knowledge in our study of the question. It is anatomical, or rather physiological, idiosyncrasy which explains certain of the more familiar eccentricities in the behavior of iodide of potassium; the usual rapid, exodic elimination does not obtain; the salt is brought back by the salivary glands, and in the nasal and bronchial mucus, to be reabsorbed or again swallowed, and thus a kind of *vicious circle* is soon set up with attendant coryza, foul breath, foul taste, etc. Had we a more intimate knowledge of that wonderful congeries of ganglia and connecting nerve filaments, the solar plexus and its associated systems, — wisely called by the ancients *cerebrum abdominale*, — we might often avert or control what is now unexpected, disastrous, or inexplicable in the operation of our more powerful remedies.

With this we must leave what for lack of a better name we call idiopathic idiosyncrasy; there is also what Mialhe has happily designated a *chemical idiosyncrasy*, due to "difference in composition of the animal fluids." The very opposite behavior of subnitrate of bismuth was for a long time a problem with therapeutists. Usually producing the local sedation for which it was given, it would occasionally be speedily followed by violent irritation and even inflammation of stomach and intestines. The theory that such action was due to admixture of arsenic did not abide results of investigation; but it was not until attention was directed to the varying reaction of the gastric mucus that the mystery received explanation. An excessive quantity of acid present in the stomach is capable of causing the conversion of the "intrinsically harmless basic salt into the corrosive neutral body; or, in consequence of the action of water upon the latter, into the poisonous acid salt."[1] These are active poisons, capable, as Orfila showed in his experiments upon animals, of producing intense gastro-enteritis.

The operation of calomel presents great variety. It has not been always safe, in my experience, to order so small a dose as one twelfth grain repeated every two hours; this minute quantity, so taken that the aggregate hardly exceeded one half grain, has more than once caused symptoms that simulated cholera morbus, — and this in the case of a vigorous man. Here we must suppose there is fault in the proportion of intestinal alkali and common salt. It has been observed that in patients "who have been long kept upon a low diet calomel has almost no effect, because in consequence of the excessive use of food in a liquid form the greater part of the chloride of sodium has been already washed out of the body." On the other hand, Mialhe asserts that persons who have long lived on a salty diet, as sailors, are "peculiarly sensitive to the action of calomel, and may present exceedingly intense local irritative effects in the intestines as well as a number of other unpleasant effects of mercury." Further, Radziejewski has shown that the long-continued use of calomel may be followed by unpleasant consequences; the drug having accumulated in the cæcum, and having been then brought in contact with chloride of sodium or ammonium, is converted into corrosive sublimate, and corrosion or ulceration follows.[2]

The occasional dyeing of the skin, the peculiar slaty-gray color, which may attend the continued ingestion of silver nitrate, affords a familiar illustration of chemical idiosyncrasy: perhaps there is no other instance where the measure or conditions of its determination have been established with any approach to certainty. Many authors state the time beyond which it is not safe to go, but within the limits of which the metal can be used continuously with reasonable assurance of safety; and it is claimed that thirty grammes, ℥vijss, is the smallest quantity of silver which has been known to produce argyria.

The patient, into whose scrotum I rubbed the oleate of mercury for swelled testicle, presented melancholy evidence of chemical idiosyncrasy for many days thereafter. I did not know that the part had been previously painted with iodine; but the mercury was not slow in discovering the fact, and a very aggressive red iodide of mercury was formed, — as it appeared, penetrating deep into the tissues, — which accomplished about the most effective and protracted counter-irritation that I ever witnessed.

Secondly. It is convenient to group together certain conditions of drug-modification under the section *Cos-*

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[1] Lewin.

[2] That should not be imputed to chemical idiosyncrasy which, in time and place, owes its origin, far from any contact with the patient, to the previous chemical change of the calomel through carelessness of physician or apothecary. It is well to follow the rule that the physician's calomel should be carried in a tightly stoppered vial and not mixed with any other substance. Calomel may pass into the corrosive chloride in presence of the alkaline earths; this should be remembered in combining with magnesia, as is sometimes done. Analyses of calomel pastilles, having sugar for their basis, discovered a considerable quantity of sublimate. Probably the sugar was "raw," still it is safer to avoid sugar altogether in preparing calomel powders unless the latter are to be taken forthwith.

mic Conditions, and, still for convenience, in this class to consider the more personal influence of habit. Whatever pertains to latitude, season, temperature, race, etc., must be glanced at in this department. Such general relation is abundantly recognized in the rude medical practice of our forefathers, whose intricate and often mystic ceremonies, both in the collection and the prescribing of their remedies, were quite possibly, in a given case, based alike upon the age of the plant, of the moon, and of the patient. Gubler insists that "cosmic conditions" should be considered in the ordering of so common a remedy as cod-liver oil; which may readily be taken in the cold of winter by the same subject who is wholly unable to continue it through hot weather on account of the disturbance which a fatty substance then occasions, both in the stomach and bowels. Lisfranc says that, of barium chloride, much larger doses are borne in warm climates than in colder regions. The great majority of lead-poisoning cases occur in the summer months, possibly because the metal is largely eliminated by the kidneys, and the functional activity of these organs, in respect of the skin, is then considerably in abeyance.

Again, ethnic conditions present a curious study for the physician. Here, clinical observation has already done somewhat for us; and, in respect of the more familiar remedies, we may know what modification of dose to make, what modification of effect to expect, when we are dealing with a pronounced type, for example, a subject of the Negro or Mongolian race. But while so much in this direction remains undetermined or obscure, we may be pardoned if we look this way for light upon certain questions which, otherwise viewed, seem hopelessly involved. The *Coca erythroxylon* in its effects upon the Indian of South America, as narrated by Von Tschudi and other travelers, would appear to be the very type of a dynaphor. Under its moderate influence the body continues in a state of contented and healthful activity, although the hour for sleep has long since passed and the hour for eating has been more than once pretermitted.[1] Here would seem to be the grand corroborant for the man worn by our modern life conditions, who, out of all his food and sleep, cannot get force enough to carry him through his daily duties with any proper amount of comfort and energy.

But the result of the trial is largely a failure, though it must be acknowledged that, rarely, we get a response which encourages us to persevere with the remedy; and the disappointed practitioner turns upon the South American traveler with the charge of extravagant statement or absolute untruth. That Von Tschudi's statements are extravagant it may be allowed, but they are not thus disposed of. The historical fact remains that when the coca leaf was "first introduced into Europe its marvelous effects encountered a great incredulity; they were attributed to the power of a demon, and coca had the honor of being condemned, successively, by the Jesuit fathers, by the Council of Lima, and by his Catholic Majesty." Doubtless we seldom or never receive the drug in form calculated to display its full effects;[2] but the question is pertinent whether there may not be involved in the earlier observations a very prominent consideration of race, both as respects the aborigine and the volatile, excitable nations of Southern Europe.

Again, we are tempted to ask whether the passage of the years — of the centuries — may have introduced some material modification into the action of remedies which are now regarded as practically valueless, but which our forefathers invested with superior qualifications. Where lies the responsibility for the extraordinary change we note? Is it in the plant, or in man, or in both? Could it have been our saffron — the familiar, largely discarded saffron of the present year of grace — which so eminent a therapeutical authority as Murray extols as equivalent to "opium and wine in combination"? Must it all be ascribed to mingled superstition and ignorance, or to simple long-established prepossession, when the school of Salernum puts its often-quoted aphorism in emphatic interrogative form, How can the man die who grows sage in his garden? ("Cur moriatur homo cui crescitur salvia in horto?") Can this *salutary* sage be nothing more than the *Salvia officinalis* of to-day, more valued in culinary than in medical art?

The modifications occasioned by *habit* are so great that it is not too much to say of the man who, from long habituation as to alcohol, to opium, finds himself literally bound to continue in his accustomed indulgence, — it is not too much to say of him that he is a *changed man;* so changed in certain physical conditions, and it may well be in moral nature also, that it is well-nigh hopeless that he should be comprehended. The friend who, from interest, duty, affection, should extend the helping hand cannot understand him, does not and cannot occupy common ground with him. Hence the helplessness and mischief of much that passes for temperance reform. There would seem to be an essential element in all these cases, as Lewin has pointed out, a craving for the forbidden drug, as one will crave common salt, after long abstinence from it; "just as this, an essential constituent of the body, must be supplied, so has the drug from its habitual use become an integral element for certain organs, and its omission is resented in the same way as would be that of any other elementary constituent of the body." But in an important sense *not* "*in the same way:*" the man who is starved for his food is a wretched sufferer, doubtless; the habitué who is starved for his opium endures a wretchedness which, fortunately, common human experience knows nothing of.

Again, a drug habit will modify the action of other toxics; thus alcohol acts badly with one accustomed to chloral hydrate, and *vice versa.*

A very singular experience is occasionally presented by both the votary of tea and of tobacco, which must probably be referred to the conjoined influence of habit and idiosyncrasy, a fact well-nigh unparalleled in what we observe of the action of other neurotics, although arsenic, in continued medicinal use, may illustrate remotely the same principle. Says Professor Hutchinson: "A man who has drunk tea all his life, and largely, may rather suddenly find that it is almost poisonous to him." So also tobacco with an individual who has used it, it may be, "without any excess, and who has been for a long time thoroughly habituated to it," may all at once begin to act as a poison without causing any distaste or any conspicuous derangement. These subjects are often quite unaware of what it is that is hurting them. They lose appetite and become nervous, and among the most conspicuous symptoms is a very marked failure of sight." There is reason for belief, by the way, that this tobacco amaurosis is most likely to appear in such as originally presented an especially marked idiosyncrasy against tobacco, and in whom the struggle was especially severe and long before the system could be brought to receive it without protest.

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[1] Indeed, I think I have observed in my own person, in an experience of a daily dose of coca taken for several weeks, an hour before dinner, that, in addition to the sustaining effect which attends its action, the desire for food, the sense of hunger, otherwise existent, is removed for some time.

[2] The drug house of C. F. Rogers, Newton, has recently procured a specimen of coca leaf and prepared a fluid extract, the latter of which is more satisfactory to me than any pharmaceutical preparation of the drug I have yet come across. But I am satisfied, that to get the full effect, the dose should be larger than it is generally stated.

(*To be concluded.*)

Reports of Societies.

AMERICAN NEUROLOGICAL ASSOCIATION.

TENTH ANNUAL MEETING, HELD AT NEW YORK JUNE 18, 19, AND 20, 1884.

Second Day. Afternoon Session.

ENCEPHALIC NOMENCLATURE.

The discussion of Professor Wilder's paper on Macroscopic Encephalic Nomenclature being in order, **Dr. Wilder** debated the three principal arguments which he said had been urged against the adoption of the nomenclature which he proposed. These were (1) that some of the terms now in use were indicative; (2) that some were commemorative; and (3) that most of them were familiar. He then read three resolutions, two of which committed the Association to at least a partial adoption of the new nomenclature, which he said would be brought up for discussion at the proper time. Remarks were made by **Drs. Dana, Birdsall**, and **Wilder**, and, on motion of **Dr. Wm. A. Hammond**, the resolutions read by the latter were made the special order for miscellaneous business at the next session.

Dr. J. Leonard Corning, of New York, was elected an active member of the Association.

Dr. Graeme M. Hammond, of New York, read a paper entitled

CAN LOCOMOTOR ATAXIA BE CURED?

From time to time, he said, reports of cases cured had been presented to the profession, many of them by men of the highest reputation, and the question therefore arose, Are these true cases of ataxia, or is there some other morbid condition of the spinal cord, which, when present, gives rise to symptoms similar in every respect to those resulting from sclerosis of the posterior columns? He then read the histories of a number of cases which he had collected, after which he passed them in review somewhat as follows: The first case mentioned (which he had presented as cured at the last meeting of the Association, and now again brought before it in person) was certainly a complete cure, and with a single exception (a case reported by Dr. Schultz, of Heidelberg) was the only one in which the tendon reflex had been restored. In the third case there was a complete cure except that the tendon reflex had never been reëstablished. If this was not one of those exceptional cases in which there never was any tendon reflex, this was conclusive proof that some morbid pathological condition still existed in the spinal cord; whether sclerosis, congestion, or something else, no one could tell. In Schultz's case sclerosis existed in both the lumbar and dorsal regions, and yet the patella tendon reflex was present in both legs. It was necessary to conclude, therefore, that the deep reflexes were not always, if ever, transmitted, as was commonly supposed, through the posterior columns, but sometimes passed through the posterior horns of gray matter. A case reported by Desnos, with autopsy, showed that all the symptoms were due to congestion, and it would seem that the symptoms in Schultz's case were attributable to the same cause. A case of Dr. Henry Lyman's, reported in the *Chicago Medical Journal and Examiner*, which was greatly improved by dry cupping and the use of Junod's boot, was undoubtedly relieved by the dissipation of the congestion in the cord. His conclusions were as follows: —

(1.) The absence of the patella tendon reflex in locomotor ataxia is not always caused by sclerosis of the posterior columns.

(2.) Sclerosis of the posterior columns may exist without being accompanied by the ordinary prominent symptoms of ataxia.

(3.) Congestion of the posterior half of the spinal cord may give rise to most, if not all, of the symptoms of locomotor ataxia.

(4.) It is impossible during life to make a differential diagnosis between posterior spinal sclerosis and posterior spinal congestion.

(5.) Posterior spinal congestion is curable.

(6.) There is no evidence to show that sclerosis, once existing in the spinal cord, has ever been removed.

(7.) Those cases of so-called locomotor ataxia which have been cured are simply cases of spinal congestion, more profound in the posterior half at the cord.

Dr. Wm. A Hammond related a remarkable case of cure of apparent locomotor ataxia, with most extreme lancinating pains and loss of tendon reflex, which was entirely cured within a month. As there was a suspicion of syphilis, anti-syphilitic treatment was at first adopted; but this not affording any relief, nitrate of silver was substituted for it, with codeia at night to secure sleep. He did not know how to explain this case except on the hypothesis of congestion.

Dr. S. G. Webber said that he had reported two or three cases in which tendon reflex was restored in patients who had had all the symptoms of locomotor ataxia. He also mentioned one case of supposed ataxia, reported by Déjerine, in which the autopsy showed that the real pathological condition was multiple neuritis. He was disposed to doubt whether hyperæmia of the columns of the cord could continue for weeks and months without giving rise to organic changes, and thought that such a condition was, at all events, not yet proven. The discussion was also participated in by Drs. Rockwell, Corning, Massey, Mills, Bannister, Birdsall, and Bartholow, and the latter stated that he believed that the process of sclerosis in locomotor ataxia could be arrested by chloride of gold, although it had no effect in restoring parts that had already been lost.

Dr. S. G. Webber, of Boston, read a paper on

MULTIPLE NEURITIS.

Having referred to the cases that had been reported by various authors and the bibliography of the subject, he said that up to this time he had found the records of six cases without autopsies and twelve cases with autopsies. He then proceeded to give the detailed histories of four cases which had been under his own care, two of which proved fatal. In one of these the patient was nearly moribund when admitted to the hospital, and died within two days, and the other lived for seventeen days after admission. Specimens from the latter exhibiting degeneration of nerve tissue were shown under the microscope. During the autumn and winter of 1883 and 1884, no less then eighteen cases of multiple neuritis entered the Boston City Hospital, fourteen of which came under his own observation. He also saw one case in private practice, and a second case in which the diagnosis was somewhat doubtful between this disease and infantile paralysis. Of the nineteen undoubted cases ten were males and nine females. There were three deaths in all. Disturbance of sensation was one of the most constant and prominent symptoms, and the pain, differing greatly in severity in different cases, was variously described as aching, boring, shooting, and burning. There was also, as a rule, marked hyperæsthesia of the skin and tenderness of the muscles as well as over the nerve-trunks. Motion was early disturbed. At first there was stiffness, and afterwards paralysis, more or less complete. The limbs became contracted, semi-flexed, and sometimes the contractions were extreme. The electrical reactions of the muscles and nerves showed the changes due to their respective degeneration. The various tendon reflexes were generally absent, while the cutaneous reflexes were less disturbed. The temperature and pulse were rather elevated in the earlier stages of the disease, and in the two fatal cases throughout the period when they were under observation. There was atrophy of the muscles, and in some patients great general wasting of tissue. In others there was œdema of the limbs and even of the face, and some had excessive sweating, which made the cases simulate rheumatism. The disease began in the legs, and was sometimes confined to them.

Now that the peculiar symptoms of multiple neuritis had been clearly marked out, the diagnosis was not difficult in well-marked cases, but in light cases might be difficult. Dr. Webber then pointed out the differential diagnosis between it and anterior poliomyelitis, progressive muscular atrophy, lead paralysis, rheumatic fever, and spinal meningitis. Having mentioned that Scheube had found neuritis in every case of the disease known in Japan as kakke, which he believed to be due to a specific poison, and that recently Dr. J. B. de Lacorda had claimed to have discovered the bacillus of beri-beri, he went on to say that the pathological process in multiple neuritis was generally believed to be an inflammation of the nerves, although Erb had suggested that the phenomena noted might be dependent on central disturbances. He then described the degenerative changes in the nerves, and also referred to the pathological conditions found by Gombault in rabbits, in which he produced neuritis artificially. His conclusion was that, considering the changes found about the annular constrictions, it was reasonable to consider the disease a neuritis, not dependent upon changes in the spinal cord. In most cases the patients recovered more or less completely, but recovery was very slow in severe cases.

He was not sure, he said, that any treatment shortened the attack. Salicylic acid seemed to cut short the pain in some instances, and when it returned it was not quite so severe. It was necessary to give morphia to relieve pain. A four or five per cent. solution of carbolic acid applied on cloths to the painful limbs was of decided advantage. Lister's seemed to be of advantage in two or three instances, especially in a case where the hyperæsthesia was very persistent. He thought it well to try to avoid or diminish the extent of the contractions by gentle extension or position of the limbs, a sand-bag to rest the feet against, etc., as the contractions were difficult to overcome. To do so required a persevering use of massage, extension, and electricity.

Dr. Rockwell said that in a case of neuritis that he had had, the repeated application of the actual cautery to sensitive points all over the body afforded very marked relief; but he could not say whether it had any ultimate effect upon the course of the disease, as the patient passed from out of his observation.

Dr. R. W. Amidon, of New York, presented the brain taken from a patient suffering from Word-Deafness and Blindness, without Paralysis, and Dr. Roberts Bartholow, of Philadelphia, read a note on

SOME USES OF THE CHLORIDE OF GOLD AND SODIUM IN NERVOUS AFFECTIONS.

He preferred the double chloride of gold, on account of its much greater diffusibility than the simple chloride, and used it in doses of one twentieth of a grain two or three times a day. It was an alterant, or, as this class of agents were now more properly called, a promoter of tissue metamorphosis. It was also a good tonic, and increased the number of red blood globules; but its chief effect was upon connective tissue. Hence, in pathological conditions in which the connective tissue was involved, it was likely to be of service. In sclerosis of the posterior columns of the spinal cord he did not claim that the patient could be restored to the *status in quo*, but his experience with it had been such as to convince him that by means of it the disease could often be arrested. Its effect in fibroid kidney was sometimes remarkable. He had also found it of benefit in asthma, laryngismus stridulus, and other forms of spasm, in sexual debility, and in hypochondriasis.

Third Day. Afternoon Session.

COMMITTEE ON ENCEPHALIC NOMENCLATURE.

The following resolution, prepared by Dr. Wilder, was adopted: "*Resolved*, that there be appointed by the chair a committee of five on macroscopic encephalic nomenclature, with instructions to report at the next meeting a list of such terms as in their judgment may be properly recommended for use;" and the President appointed the committee as follows: E. C. Spitzka, Chairman; Burt G. Wilder, T. A. McBride, W. A. Birdsall, and L. C. Gray. On motion of Dr. Bartholow, the other two resolutions of Dr. Wilder were referred to this committee.

The President, Dr. Isaac Ott, of Easton, Penn., read a paper on

THE RELATIONS BETWEEN INJURIES OF THE SPINAL CORD AND THE EXCRETION OF CARBONIC ANHYDRIDE.

By means of Arsonval's calorimeter and Voit's respiration-apparatus, he had made a series of experiments upon the lower animals, and had arrived at the conclusion that injuries of the cord produce, as a rule, an increase of the excretion of carbonic anhydride. It did not seem to make any difference whether the gray or white matter, or both together, were injured; the increase ensued just the same. Although the calorimeter was kept at 100° F., in only two cases out of seven did he see any increase of temperature. In all the others it fell below normal.

After some discussion of this paper, Dr. G. L. Walton, of Boston, read a paper entitled

A CONTRIBUTION TO THE STUDY OF HYSTERIA BEARING ON THE QUESTION OF OÖPHORECTOMY.

We should limit the question of oöphorectomy, he said, to those cases in which the hysteria is secondary to abdominal trouble, and carefully exclude those in which the menstrual irregularities and ovarian tenderness are secondary to the hysteria. The most plausible explanation of hysterical hemianæsthesia (common after ovarian irritation) is that of spasmodic contraction of the cortical blood-vessels of the brain, suspending the function of the cortical nerve cells through lack of nutritive fluid. This theory explains best, for example, the rapid onset and disappearance of the symptoms; for we know that a thought is sufficient stimulus, and one instant sufficient time to cause the most extreme changes in the calibre of blood-vessels, as is instanced in the blush on the one hand and the pallor of fear on the other. That such sudden changes take place in the brain as well as the integument is shown by the phenomenon of fainting, in which the cerebral functions are entirely suspended, presumably through lack of blood. The transfer of anæsthesia from side to side with succeeding oscillations is suggestive of the ebb and flow of a fluid. That vaso-motor irregularities are common in hysterical patients in other parts of the body as well as the brain is evidenced by the frequency of chills, flushes, and ischæmia, sudden swelling of the joints, etc. Weight is thrown in favor of this theory by the case published in a paper by the author on Oöphorectomy in Hysteria, in the *Boston Medical and Surgical Journal* of June 5, 1884. In this case right-sided hemianæsthesia coincided with left-sided angiospasmodic migraine and left-sided intermittent retinal ischæmia (the blood-vessels of the right eye being normal). The only explanation to be offered was that spasm of blood-vessels by implicating the membranes caused the pain, by extending into the cortex the hemianæsthesia of the opposite side, and by extending to the eye evidenced itself in the abnormal contractility of the retinal vessels of the same side. The starting-point in this case was pelvic disease, probably by irritation of the sympathetic nerves supplying the ovarian region. In favoring this theory, he said, we are dealing with a tangible phenomenon of which we have constant examples, and cannot be accused of a flight of imagination. Dr. Walton has failed to produce "transfer" in hysteria secondary to pelvic disturbance, but has observed it frequently in cases of constitutional hysteria. This is probably because the unilateral spasm is kept up in the one case by the organic trouble, while in the other the sympathetic irritability is alike on both sides of the brain, so that while the vessels are contracting on one side they are dilating on the other. In conclusion, the case of Miss A. (of which the principal points of interest were given in the paper already referred to) was reported in detail. It was operated on by Dr. Barss; the removal of both ovaries being followed by marked improvement in hysterical convulsions and hemianæsthesia of thirteen years' standing.

A lengthy discussion followed the paper, which was participated in by Drs. Spitzka, Mills, Putnam, Rockwell, and (by invitation) Mary Putnam Jacobi. In closing the discussion Dr. Walton said that hardly any one could be more conservative than himself in regard to the operation, except some one who was opposed to it under any circumstances whatever, since it was only in cases in which the hysterical symptoms were obviously secondary to pelvic disease that he would recommend it. One cause why the relief had not been greater in his case was, he thought, that the Fallopian tubes were allowed to remain. Tait had repeatedly found that menstruation was very apt to continue unless the tubes, as well as the ovaries, were removed, although this was not the case here. Still, but a comparatively short time had as yet elapsed since the operation, and he trusted that the improvement would gradually become more marked. He agreed with those who believed that hysteria was almost always of central origin, and that it was only in a comparatively few cases that it was dependent on uterine or ovarian conditions.

Dr. J. J. Putnam read a paper upon

THE MEDICO-LEGAL SIGNIFICANCE OF TYPICAL SO-CALLED HYSTERICAL SYMPTOMS OCCURRING IN MEN AFTER RAILWAY AND OTHER INJURIES.

When a claim is made for damages after concussion-accidents which leave no objective sign of disease, the first point to be settled is with regard to the claimant's trustworthiness.

The discovery of typical symptoms of hemianæsthesia, affecting the skin and special senses (field of vision, color-sense, etc.), should go far towards establishing veracity, because these symptoms are not such as the patient could simulate without careful preliminary study, while, if taken together, they form a distinct picture of hysteria. The reader had reason to think that these symptoms are by no means rare, and reported one well-marked case.

The question then arises whether the diagnosis of hysteria should be put forward by the plaintiff or not. The reader thought it often advisable to do this, in order that the medical aspects of the case should be discussed on their true merits.

Hysteria is sometimes a trifling, but sometimes a very serious, disease, and it is well that lawyers and juries should realize that fact.

Dr. Dana said that he fully recognized the difficulties to which Dr. Putnam had alluded. A great deal of confusion had been thrown on the matter by Erichsen, and he thought that it would be of great benefit if some authoritative statement could be made of the relative value of Erichsen's and Page's opposing views. There was one point to which Dr. Putnam had not referred. Hysteria was, no doubt, a serious disease, but the question arose in every case such as he had described whether the symptoms were really due to the accident, or were excited by the hope of reward. He had not found the existence of hemianæsthesia in males, as Dr. Putnam had. In conclusion, he mentioned one objective symptom which he thought might be of some value, and that was electric resistance, as tested by the galvanometer.

Dr. Putnam said that he believed that this whole subject ought to be reopened from a different point of view than that from which it was now regarded. The slightness of the injury did not seem to be of much consequence. In his own case the injury had been slight, and yet from the very first day the patient had been seriously affected. No thought of obtaining damages, he believed, could have had any effect in originating the hysterical trouble in this instance. He advised that sensibility should be tested in all respects for hemianæsthesia, the special senses as well as the skin. Having referred to the question of atrophy in this connection, he said that he agreed with Dr. Dana that electrical resistance was an important point.

DOUBLE HEMIPLEGIA.

Dr. Sarah J. McNutt, of New York, read the report of a case (with specimen) of double hemiplegia in a child, in which there was extensive atrophy of the cerebral cortex, the disease being pronounced by Dr. William H. Welch to be sclerosis of the greater part of the motor tract, with degeneration of the pyramidal tracts.

Third Day. Evening Session.

Dr. W. A. Birdsall, of New York, read a paper on

OPHTHALMOPLEGIA EXTERNA PROGRESSIVA,

in which he reported two cases of slowly progressive paresis of all the external muscles of both eyes, producing ptosis and nearly complete immobility of the eyeballs, with complete preservation of the functions of the internal ocular muscles, accommodation being normal, and reaction of the iris to light and accommodation movements also normal. There was no heredity and no suspicion of syphilis. Slow improvement occurred in one case under large doses of iodide of potassium, and in the other under the use of the same drug and faradization of the eyes. Dr. Birdsall believed the affection to be one of the nuclei of the sixth, fourth, and parts of the third nerves, which supply the external ocular muscles, these parts representing an associated system. Degeneration within this system of associated muscles, nerve tracts and centres, similar to the degeneration of progressive muscular atrophy and of labio-glosso-pharyngeal paralysis, as suggested by Hutchinson in similar cases, appeared to be the most consistent theory of the pathology.

LOCOMOTOR ATAXIA AND SYPHILIS.

Some statistics in reference to the relative frequency of locomotor ataxia in syphilitics, which were sent by Dr. E. C. Seguin (who was confined to the house by illness), were read by **Dr. Birdsall**. There were seventy-two cases in all, and of these twenty-two, or 30 per cent., had had chancre, and sixteen, or 22.2 per cent., chancre followed by secondary symptoms. In fourteen cases, or 19.8 per cent., there had been neither chancre nor secondary symptoms, and in twenty, or 28 per cent., there was no mention made of syphilis. Statistics and remarks upon them were also offered by Drs. Birdsall, Spitzka, Rockwell, Putnam, and Webber.

Dr. C. L. Dana, of New York, read a paper entitled

FOLIE DU DOUTE AND MYSOPHOBIA.

He referred to the history of *folie du doute*, or the "doubting madness," in which the patient was harassed with a constant desire to question, speculate, and refine over details. His mind was never settled, but was in a condition of "pruritus." It was a psychopathic symptom, which indicated that the patient was a monomaniac, and truly insane, or only hypochondriacal, or profoundly neurasthenic and hysterical. Mysophobia, or fear of contagion, was a symptom indicating probably a similar condition. *Folie du doute* had been divided by Ball into several varieties, such as the suspicious, the calculating, the timid, and, finally, the tactile, and mysophobia had been classed as the tactile form of *folie du doute*. This classification was, perhaps, open to criticism, but Dr. Dana was inclined to think it was correct. He then related in detail two cases: one a typical one of *folie du doute*, as described by Fabret, Ball, and others, and the second a case of mysophobia, as first described by Hammond.

Dr. Spitzka said that the class of patients described by Dr. Dana, although of perfectly sound mind in all other respects, were suffering from *bona fide* insanity. In males the principal cause was masturbation.

OTHER PAPERS.

Dr. G. Belton Massey, of Philadelphia, read a paper entitled A Case of Sudden Loss of Vision following Anæsthesia of the Fifth Nerve, with Remarks on the Modifying Effect of Anæsthesia on the Galvano-Reactions of the Special Senses.

Among the other papers presented were one by Dr. George W. Jacoby, of New York, on Cerebro-Spinal Saturnism, and a communication from Dr. John J. Mann, of Newport, R. I., accompanied with seven photographs taken for the purpose of showing the impossibility of mistaking the auditory for the trigeminal region in the medulla oblongata of reptiles. A memorial of the late Dr. George M. Beard was also presented by Dr. Dana, who, with Dr. C. K. Mills, of Philadelphia, was last year appointed on a committee for that purpose.

During the meeting Dr. Danillo, of St. Petersburg, and Dr. Auguste Forel, Professor of Psychiatry in the University of Zurich, Switzerland, were elected associate members of the Association.

ANNUAL MEETING OF THE CENSORS OF THE MASSACHUSETTS MEDICAL SOCIETY.

ALBERT N. BLODGETT, M. D., CLERK.

The annual meeting of the Censors of the Massachusetts Medical Society was held at 19 Boylston Place, June 10, 1884. There was a fair representation of the District Societies by delegates. **Dr. C. Howe**, of Bristol North Society, was elected chairman. The records of the last annual meeting were read and approved.

THE METHOD AND STANDARD OF EXAMINATION OF CANDIDATES BY THE SEVERAL BOARDS OF CENSORS.

The clerk announced that the committee which had served the Society for the past two years had prepared a final report, which had been forwarded to the meeting, as the chairman of the committee had been unavoidably detained from the meeting. The clerk was requested to read the report, which was as follows: —

The committee appointed at the Conference of Censors, held June 11, 1883, "for the purpose of watching the results of their action during the past year," respectfully submits the following report: —

In April a circular, a copy of which is herewith submitted, was mailed to the secretary of each District Society. Answers have been received from fourteen districts, namely: Barnstable, Berkshire, Bristol North, Bristol South, Essex North, Essex South, Hampden, Hampshire, Middlesex East, Middlesex North, Middlesex South, Norfolk, Plymouth, and Suffolk. No response has come from Franklin, Worcester, Worcester North.

The answers are appended to this report, together with copies of the questions used in written examinations in several districts.

It appears that written examinations are used wholly or in part in nine of the districts heard from, namely: Barnstable, Bristol North, Essex South, Hampden, Middlesex East, Middlesex North, Middlesex South, Plymouth, Suffolk, and Worcester North. The examinations are wholly oral in five districts, namely, Berkshire, Bristol South, Essex North, Hampshire, and Norfolk. It will be remembered that the By-laws of the Society require that a part of the examination shall be in writing. For the committee,

J. T. G. NICHOLS, *Chairman.*

(Circular.)

MASSACHUSETTS MEDICAL SOCIETY.

DR. ——

Secretary —— ——, *District Society.*

The committee appointed at the conference of Censors, held June 11, 1883, respectfully asks an early answer to this question: What, if any, changes have been made by your Board of Censors during the past year in the method of examining candidates for admission to the Society? Will you forward a copy of questions used in written examinations, if such have been held?

The committee urges your Board to send delegates to the next conference of Censors, reminding you that, as its name implies, it is a meeting for discussion only.

J. T. G. NICHOLS, Middlesex South.
GEORGE C. MCCLEAN, Hampden.
BENJ. H. HARTWELL, Worcester North.
Committee.

(Replies.)

BARNSTABLE DISTRICT.

YARMOUTH PORT, MASS., *May* 1, 1884.

DR. NICHOLS:

Dear Sir, — In reply to your circular I would say that our Board of Censors (Barnstable District) have made no change in their method of examining candidates for admission to the Society, for if a man can pass the Censors in *this* District I think he could in *any*. Each examiner asks as many questions as he chooses, one half of which are in writing. Every branch is touched upon, and a man has to be well posted in order to pass the Board of Censors for Barnstable District.

Very respectfully yours, S. F. HASKINS, M. D.,
Secretary Barnstable District Medical Society.

YARMOUTH PORT, MASS., *May* 9, 1884.

DEAR DOCTOR, — I have n't a copy of any questions used by the Censors in their examinations, as we have written them at the time of making the examination, and never have preserved them.

We always give the candidate about twelve written questions and as many oral ones as we may please.

Very truly yours, S. F. HASKINS.

DR. J. T. G. NICHOLS, Cambridge.

BERKSHIRE DISTRICT.

PITTSFIELD, MASS., *April* 27, 1884.

DR. J. T. G. NICHOLS:

Dear Sir, — In reply to your letter of last week I would say that no changes have been made in the method of examining candidates for admission to the Society.

The examination by the Berkshire Board of Censors has always been an oral one. I will present your letter to the Society at its annual meeting on Wednesday.

Yours very truly, HENRY COLT, JR.,
Secretary Berkshire District Medical Society.

BRISTOL NORTH DISTRICT.

TAUNTON, *May* 20, 1884.

DEAR DOCTOR, — I hope you will pardon the delay in answering your note. Absence from home prevented its earlier recognition.

There has been no change made by the Board of Censors in their method of examining candidates. The examinations are both written and oral. I forward, at your request, a copy of the written questions used at the last meeting of the Board of Censors.

Yours very truly, E. F. GALLIGAN,
Secretary.

TO DR. J. T. G. NICHOLS, Cambridge, Mass

Materia Medica and Therapeutics.

(1.) Properties, preparations, doses, and uses of *aconite.* (2.) Of digitalis. (3.) Of salicin.

General and Medical Chemistry.

(1.) Neutral salts and how formed. (2.) How to detect sugar in the urine.

Theory and Practice.

Case of true croup. Case of spasmodic croup. Pathology of each. Differential diagnosis, prognosis, and treatment of each.

Midwifery.

Describe a case of normal labor. Case of puerperal fever, or septicæmia; pathology, symptoms, diagnosis, prognosis, and treatment.

Prescription.

Write a prescription in Latin for a cough mixture containing sulphate of morphine and syrup of squills.

Anatomy and Physiology.

Name the bones of the head. Name the muscles of the arm. What forms the circle of Willis? What is the function of bile? What action does saliva have on starch? Give the specific gravity and reaction of gastric juice, and what does it digest?

Surgery.

Fracture of femur at its upper third. Different kinds. Differential diagnosis. What splints and apparatus to be used in each form of fracture.

BRISTOL SOUTH DISTRICT.

NEW BEDFORD, *May* 20, 1884.

DR. J. T. G. NICHOLS:

Dear Sir, — We have made no changes in our method of examining candidates for admission to the Society. Our examinations have been entirely oral.

Very truly yours,
A. MARTIN PIERCE,
Secretary Bristol South District Medical Society.

ESSEX NORTH DISTRICT.

NEWBURYPORT, *April* 29, 1884.

DEAR SIR, — There has been no change in the method of examination of candidates for admission to the Society by the Board of Censors of the Essex North District Medical Society. We do not have written examinations.

Yours respectfully, GEORGE W. SNOW,
Secretary.

ESSEX SOUTH DISTRICT.

11 FRANKLIN STREET, LYNN, *May* 4, 1884.

DR. J. T. G. NICHOLS, Chairman of Committee, etc.:

Dear Sir, — No special change has been made by the Censors of the Essex South District in the method of examining candidates for admission to the Society, and no forms of the questions used in the written examination are accessible.

I shall be glad to lay your letter before the Board of Censors of this District, and have no doubt that delegates will be sent to the next conference of Censors.

Please excuse my delay in answering, and believe me,

Very sincerely yours, C. C. SHELDON.

HAMPDEN DISTRICT.

SPRINGFIELD, MASS., *May* 7, 1884.

DEAR DOCTOR, — Your circular was duly received. Please find herewith a copy of the examination held last October, which is a fair sample of the work of our Censors' Board. The marking was on a scale of 100, and fifty per cent required to pass. The answers of each candidate were read by the secretary to the Censors, question by question, and each Censor marked each upon its merits, at the end finding the general average, which was handed to the secretary, who alone knew whose answers were being marked. These averages, added and divided by the number of Censors, gave the final result, which passed the candidate if it reached fifty per cent.

I am thus explicit because a charge was made at the Censors' convention last year by one of our own Board that the Censors of Hampden had been guilty of "injustice" in their examinations. The gentleman making this charge was newly elected a Censor, and had never acted as such, or looked at the records; but a personal friend of his and a fellow-member in a local medical club had unfortunately first failed to pass our Board, and hence his feeling, so strongly expressed.

At a subsequent meeting the questions upon which "injustice" was done were read to this Censor, one by one, and he failed to object to a single question as improper or too difficult; and since that time he has worked in perfect harmony with the Board, and assisted in the preparation of the paper I inclose, which will compare favorably with that printed from our district last year.

The candidate referred to above said he felt at the time that he did not do himself justice, and showed his excellent good sense by applying again, and was admitted. Our critical Censor is appointed delegate to your convention this year, and doubtless you will hear from him there. The general opinion in this district seems to uphold the effort for high standard, and I think you may count on us to aid in any measure proposed toward this end. Very truly yours,

George C. McClean,
Secretary Hampden District.

Dr. J. T. G. Nichols, Chairman Committee Censors.

Anatomy.

(1.) Over what areas would you percuss the lungs, heart, liver, spleen, stomach? (2.) What organs suffer most in dilatation of the heart? (3.) In what direction would you cut the internal ring in inguinal hernia? The crural ring in femoral hernia? Why?

Physiology and Chemistry.

(4.) Give tests for albumen and glucose. (5.) Describe the arrangement of gray and white substances of the spinal cord, their functions, and mention some of the results of paraplegia; of hemiplegia. (6.) Describe the digestive process, and how affected by acids and alkalies.

Materia Medica and Therapeutics.

(7.) Give the symptoms and treatment of poisoning by opium. (8.) Mention, and give the dose, of three principal mineral cathartics. Of three vegetable cathartics. (9.) Give the uses of ipecac, and write prescription containing it.

Theory and Practice.

(10.) What are a few of the more common sequelæ of scarlatina? (11.) Give briefly the clinical history, diagnosis, and treatment of peritonitis. (12.) What would be the appearance of the liver in a man who had died of cirrhosis of that organ?

Surgery.

(13.) Strangulated oblique inguinal hernia: Describe the symptoms and treatment. (14.) Traumatic gangrene: State in what sort of cases it is likely to happen, and describe the treatment. (15.) Tracheotomy: When and how would you perform it?

Obstetrics.

(16.) Give the mechanical conditions and the changes which take place in a normal labor. (17.) What are the causes of ante- and post-partum hæmorrhage, and the treatment of each? (18.) When and how would you diagnose a face anterior? What causes this anterior position? Treatment?

Please number the answers, and be as brief and concise as possible.

HAMPSHIRE DISTRICT.

Northampton, Mass., *April* 29, 1884.

Dr. J. T. G. Nichols:

Dear Sir, — Your letter of no date in reference to Censors is at hand. There has been no change in the method of examining candidates. We have no written examinations. Practically the responsibilities of the Censors here prove to be light, and I am not aware of any special interest in the subject.

Yours truly, Charles W. Cooper,
Secretary Hampshire District Society.

MIDDLESEX EAST DISTRICT.

Reading, *May* 15, 1884.

Dr. Nichols:

Dear Sir, — In reply to your circular of inquiry I will say: Our Board of Censors has made no change in its method of examining candidates for Fellowship. Our Board will send delegates to the next conference of Censors. I herewith inclose a list of questions used at our last examinations, yesterday.

Yours respectfully, Geo. E. Putney,
Secretary Middlesex East District.

(1.) What is probably the most effective emetic, given hypodermically? (2.) Describe, briefly, nux vomica and give its physiological action. (3.) Give treatment of pneumonia. (4.) Pathology of acute rheumatism. (5.) What is hæmatocele? (6.) How many teeth in temporary set? How many teeth in permanent set? (7.) Name the branches of the aorta. (8.) A bullet wound through the palm. Its complications, dangers, and treatment. (9.) Dislocated hip, with fracture of femur at upper third. Treatment. (10.) When may it be necessary to make an artificial anus? Describe the operation. (11.) Sterno-cleido-mastoid muscle. Origin and insertion. (12.) Describe the signs of pregnancy. (13.) What do you think of carbolized vaginal injection after parturition? (14.) Describe two tests for arsen. acid. What is the best antidote for as. acid? (15.) What is the difference between carbonic acid and carbonic oxide? (16.) What is the composition of atmospheric air?

MIDDLESEX NORTH DISTRICT.

Lowell, Mass., *May* 22, 1884.

Dr. Nichols:

Dear Sir, — At the regular meeting of the Censors of the Middlesex North held on the 30th ult., Dr. T. Pierpont Shaw was chosen a delegate to attend the annual meeting of Censors for the State.

No changes have been made during the year as to methods of examination. I send herewith questions as you request.

We always have written and oral examinations.

Yours truly, Geo. C. Osgood,
Secretary Middlesex North.

Anatomy.

Name and describe (1.) The bones of the fore-arm. (2.) The bones of the ankle-joint. (3.) The anterior humeral muscles. (4.) The vessels which directly enter into or issue from the heart. Describe (5.) The knee-joint. (6.) The femoral artery. (7.) The relative position and structure of the liver. (8.) The peritonæum. (9.) The origin and distribution of the facial nerve. (10.) The contents of the left lumbar region.

Pathological Anatomy.

Describe (1.) The liver in cirrhosis. (2.) The kidney in chronic parenchymatous nephritis. (3.) Round ulcer of stomach. (4.) Possible lesions of typhoid fever. (5.) An embolus and its possible causes and effects.

Physiology.

(1.) Describe the process of deglutition. (2.) Composition and digestive action of (1) gastric juice, (2) bile. (3.) Describe the action of the diaphragm. (4.) Name the principal secretions. (5.) The constituents of blood and their relative proportion. (6.) What is the function of a motor nerve? of a sensory nerve? Give illustration of each kind. (7.) Describe the innervation of the heart. (8.) Source and method of production of animal heat. (9.) What are the lymphatics? Explain their function. (10.) What changes take place in the ciculation of the fœtus at birth?

Chemistry.

(1.) What substances are *always* found in normal urine? (2.) Give two differenttests for albumen in urine, and state what precautions are necessary in each. (3.) Given a specimen of urine containing albumen, what further information is needful as a guide to diagnosis? (4.) How test for sugar in urine? (5.) Sources and symptoms of arsenic poisoning. (6.) What substances are incompatible with iodide of potassium? (7.) What circumstances favor the solution of lead in water? (8.) Write the chemical formula for corrosive sublimate and for calomel.

Surgery.

(1.) How reduce a dislocation of the shoulder? (2.) Treatment of erysipelas. (3.) Treatment of mammary abscess. (4.) Describe the proper method of passing a catheter into the male bladder, what difficulties may be met, and how to overcome them. (5.) Describe tracheotomy. (6.) Causes and treatment of tetanus. (7.) Treatment of fracture of rib. (8.) Describe hæmorrhoids and their treatment.

Materia Medica and Therapeutics.

(1.) Name two useful preparations and state therapeutic action and doses of opium, iron, digitalis, mercury, ipecac. (2.) Name three cathartics and dose of each. (3.) Name the principal diuretics, their sources, and their common preparations. (4.) Into what classes may expectorants be divided? Mention one of each class and state its appropriate use. (5.) Write a prescription for acute pneumonia, and state in what stage of the disease it would be applicable for use. (6.) Name the leading hypnotics, and state the indications and the contra-indications for the use of each. (7.) Antidotes for opium, phosphorus, arsenic, and method of their administration. (8.) Write a prescription for a child of one year with gastro-enteritis. (9.) In what form and dose should opium and belladonna be used subcutaneously. (10.) The physiological action of alcohol.

Theory and Practice.

(1.) Symptoms and differential diagnosis of acute lobar pneumonia. (2.) Causes of chronic interstitial nephritis. (3.) Causes and treatment of typhoid fever and all its ordinary complications. (4.) In what diseases does jaundice appear, and what is its significance? (5.) What are the different forms of nephritis, and what is their relative prognosis? (6.) Treatment of scarlatina and of its sequelæ. (7.) In what ways may death occur from diphtheria? (8.) What are the physical signs of mitral insufficiency? of acute pleurisy? (9.) Symptoms and treatment of peritonitis. (10.) Symptoms and treatment of chorea.

Obstetrics.

(1.) Signs of pregnancy at the end of fourth month. (2.) Describe the mechanism of a normal labor, and state what assistance should be given, and when and how. (3.) Treatment of placenta prævia. (4.) When and why use ergot in labor? (5.) Management of a face presentation (6.) Management of a hand presentation. (7.) Treatment of post-partum hæmorrhage. (8.) Causes and treatment of the albuminuria of pregnancy.

Hygiene.

(1.) How many cubic feet of air space should be provided for each adult in his sleeping room? (2.) What diseases may be taken through the medium of the drinking water? (3.) What special precautions should be taken against the spread of typhoid fever, of small-pox, and of scarlet-fever? (4.) What is the meaning of endemic as applied to disease? (5.) What diseases become at times epidemic in New England?

MIDDLESEX SOUTH DISTRICT.

LIST OF QUESTIONS FOR THE APRIL EXAMINATION.

(1.) Describe the pectoralis major muscle. (2.) How is Scarpa's triangle bounded? What are its contents and their relation to each other? (3.) What is the average amount of urine excreted in twenty-four hours? (4.) What are the functions of the red corpuscles of the blood? (5.) Explain the difference between fatty degeneration and fatty infiltration. (6.) What lesion of the heart is found accompanying interstitial nephritis? (7.) Differential diagnoses of gout and rheumatism. (8.) Asthma: varieties, diagnosis, treatment. (9.) Widow, forty, generally well, has had malaise for several days, suddenly attacked with chilliness, but no distinct rigor; pain in head, limbs, and back; face flushed, skin hot and dry. Pulse 118; respiration 22; temperature 104° F. Tonsils red, swollen, and showing small white spots here and there. Diagnosis? Reasons? (10.) A single woman, twenty-one, generally well; an attack of pain in the abdomen coming on suddenly, most severe in left lumbar and iliac regions; remittent at first; in an hour became constant and very severe, with cold extremities and vomiting, continued about three hours and ceased suddenly; no fever. Diagnosis? (11.) Opium, from what derived, most important preparations and doses. (12.) Same of belladonna. (13.) Physiological action and therapeutic uses of digitalis, in small, large, and poisonous doses, and antidotes. (14.) Same of chloral. (15.) Inflammation, acute and chronic. Local signs, constitutional signs, treatment. (16.) Fracture of femur. (17.) Symptoms and treatment of a case of placenta prævia. (18.) Define an element. (19.) From what substance is metallic mercury obtained? (20.) A case of diphtheria occurs in a family where there are other children, what would you do to prevent the disease from spreading before and after the termination of the case?

NORFOLK DISTRICT.

Roxbury, Boston, Mass., *May* 9, 1884.

Dr. J. T. G. Nichols, Chairman of Committee, etc.:

Dear Sir, — Your circular received. After communicating with the chairman of this District Board of Censors I would reply —

There have been no material changes made in the method of examining candidates. Each examiner is assigned certain subjects, upon which he always examines. The examination is oral, not written.

Respectfully,

George D. Townshend,
Secretary Norfolk District Medical Society

P. S. Will notify you of the appointment of delegates to the Censors' conference when the new Board of Censors for this district makes said appointments.

Please inform me the date of the meeting of the conference, and oblige G. D. T.

PLYMOUTH DISTRICT.

Brockton, *May* 2, 1884.

Dear Doctor, — In regard to examinations of candidates for membership to the Massachusetts Medical Society in this *district* (*Plymouth*) during the past year the method was the same as that of the previous few years. The questions in all branches have been practical, but perhaps not always touching upon things commonly met with, nevertheless touching upon such things or subjects as it is necessary to know. I have not a list of questions used in the examinations, as we never have been accustomed to copy them into the record of the doings of the Society. The examinations have all been written ones, and if there were more candidates than one at the same time they had the same questions, but were placed in separate rooms.

I am sorry that I could not give you a copy of questions.

Yours respectfully, J. E. Bacon,
Secretary for Plymouth District.

SUFFOLK DISTRICT.

19 Exeter Street, Boston, *April* 27, 1884.

Dr. J. T. G. Nichols:

Dear Sir, — There have been no changes in the method of examining candidates for admission to the Society during the past year.

I inclose copies of questions used in examinations.

Yours very truly, H. C. Haven,
Secretary Suffolk Censors.

P. S. I presume you only wish papers of last year; I can furnish others if desired.

Massachusetts Medical Society. Censors' Examination, September 27, 1883.

(1.) The relations of the vessels, muscles, and tendons in the palm of the hand. (2.) Differential diagnosis between fracture and dislocation of the hip-joint, and between hip-joint disease and malignant tumor of the upper part of the femur. (3.) What is the function of the liver? What is reflex action? What changes take place in the blood in the pulmonary circulation? (4.) What is apoplexy? What and where are the characteristic lesions of typhoid fever? What is erysipelas? (5.) Write a prescription, with directions and dose of each, for (*a*) a cathartic; (*b*) a tonic; (*c*) a sedative; (*d*) a stimulant; (*e*) a diaphoretic; (*f*) a derivative; (*g*) an emmenagogue. (6.) Give the dose of (*a*) arsenic; (*b*) mercury; (*c*) iodine; (*d*) iron; (*e*) lead; (*f*) bismuth; specifying the most desirable forms of each, with directions for administration. (7.) Differential diagnosis between parenchymatous and interstitial nephritis. (8.) Describe a case of cerebro-spinal meningitis. (9.) In the female pelvis which is the smallest diameter at the basin? At the outlet? (10.) When would you give ergot?

[Two hours allowed for the written examination.]

Massachusetts Medical Society. Censors' Examination, February 21, 1884.

(1.) Contents of the abdomen; their relations to the peritonæum and to each other. (2.) Hernia: varieties; causes; appearance; treatment. (3.) Normal constituents of the urine. Functions of the bile and pancreatic fluid. (4.) Causes of valvular disease of the heart. Pathological appearances in typhoid fever. (5.) Describe physiological action of ether; of chloroform; of nitrous oxide; the dangers attending each, and their treatment. (6.) State the symptoms induced by mercury; by lead; by phosphorus; with treatment. (7.) Describe a case of typhoid fever, with the treatment of any complications which you may think of arising in the course of the disease. (8.) The diagnosis and treatment of diphtheria. (9.) How early and by what signs can pregnancy in a primipara be detected with certainty? (10.) Which are the two longest diameters of the fœtal head?

[Examination limited to two hours.]

WORCESTER NORTH DISTRICT.

Fitchburg, Mass., *June* 9, 1884.

Dr. Nichols:

Dear Sir, — The examination of candidates for the past year has been by written questions and answers. I send all those that I have happened to preserve.

Give origin and attachment of psoas magnus muscle; also sartorius muscle. What changes take place in the air as it is inhaled and exhaled from the lungs, and what changes take place in the blood by respiration? Give formula for nitric acid. What is the only fluid metal? Give the chemical composition of castile soap. Give chemical name and formula for plaster of Paris. Give signs and duration of pregnancy. Describe a natural labor. What are the ordinary dangers of labor? When, if ever, would you give ergot? When would you use the forceps? Give difference between unavoidable and accidental hæmorrhage, and treatment of each. Give the symptoms of compression of the brain; also concussion of the brain. Treatment of each. The difference between phimosis and paraphimosis, and treatment of each. How would you treat a fracture of the olecranon? How reduce a dislocation of the humerus? Name points in the differential diagnosis of croupous and catarrhal pneumonia, and give pathology and treatment.

I overlooked your circular till this late date, but it will be better late than never. Yours truly,

Charles H. Rice, M. D.

The report of the committee was accepted, and the committee was discharged.

Dr. H. F. Borden, of Plymouth District, said that the report showed conclusively that there exists a deplorable lack of uniformity in examinations by Censors, and that there is absolutely no rule at present by which the character or quality of the examinations in the various districts of the State may be established or regulated. In Suffolk the method adopted consists of a separate oral and written examination, and the candidate is qualified in accordance with the results of these examinations on a scale of 100. In Norfolk District, not five miles away, on the contrary, the examination is *entirely oral.* There is urgent need of some action by which there may be some degree of uniformity in the administration of this important and responsible office. Dr. Borden suggested that a certain definite number of written questions be recommended, and that candidates be subjected to the same number of written questions in all parts of the State.

Dr. Ernst, of Norfolk District, proposed that a skeleton or scheme of examination be arranged and sent to each District Board of Censors at stated intervals, which should be the uniform standard for the written examination of all candidates in the State until the issue of a succeeding outline or scheme; and that, in addition to this, the Censors of each district should satisfy themselves by an oral examination of such character as they might think best, as to the further acquirements of the candidate, and that both the oral and the written examination should be considered in the final action of the Censors. In this way the Censors of each district would feel that the examination was not more rigorous in one part of the State than in another, and would also better understand the working of neighboring societies than is possible under the present system, which is an entire lack of any system.

Dr. Hartwell, of Worcester North, presented a motion recommending an amendment to Section I. of the existing By-laws, so that lines 20–21 shall read "*and by a further examination* ('a part of' omitted) *which shall be in writing, that he has an,*" etc.

Dr. Howe, of Bristol North, considers the oral examination a very important adjunct to the written examination, and thinks it should always be associated with it. Candidates usually present diplomas from recognized medical colleges, and can no doubt easily satisfy an ordinary written examination; but the By-law requires the Censors to convince themselves of the moral character of the candidate, of his age, term of study, and system of intended practice. It would not be easy to gain all this information in a wrtitten examination, and practically it could not be done.

Dr. Borden suggested that the names of candidates for admission to the Society be presented to the Board of Censors at one meeting, and that the candidates be presented for examination at the next following meeting of the Board. By this method the Censors could easily satisfy themselves of the character of a candidate, which is a specific part of their duty, and the candidate would be presented for a further examination in writing at the next meeting of the Censors.

Dr. Howe remarked that another matter also deserved attention at the hands of the Censors. It is this: A man may go from one part of the State to another, and may be admitted to the District Society within which he then shall reside without examination. What action ought the Censors to take concerning a man long in honorable practice, who, coming from another State, shall make his residence within one of the districts of this Commonwealth?

On motion of **Dr. Ernst** it was voted that a committee of three be appointed to take this matter into consideration, and to recommend to the Board of Councilors of the State Society some action which should secure a uniform method, and, as far as practicable, a uniform standard of examination by the several Boards of Censors in the State, thereby avoiding a misinterpretation or maladministration of the By-law in relation to the admission of candidates for membership to the Society.

Drs. Albert N. Blodgett, of Suffolk, G. W. Clement, of Norfolk, and H. F. Borden, of Plymouth, were chosen as a committee for this purpose, and instructed to report at the next annual meeting.

There being no further business, the meeting then adjourned, to meet on the date of the annual meeting of the State Society in 1885.

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MEETING OF THE MAINE MEDICAL ASSOCIATION, JUNE 10, 11, AND 12, 1884.

CHARACTER OF THE MEETING.

The meeting of the Maine Medical Association, which was held in Portland on the 10th, 11th, and 12th of June, was characterized by a large attendance, scientific activity, and notable harmony. Rarely, if ever, have more or better papers been read, livelier discussions held, or kinder feeling displayed; and with these elements the occasion could not fail to be successful and leave a pleasant memory for every one who was fortunate enough to be present.

In the reports, essays, and discussions, practice, pathology, surgery, and obstetrics, all received due attention, and there was a gratifying absence of the overload of papers on narrow specialties, against which a wailing protest has gone up all over the country in the past two or three years. We would not be understood as lacking in appreciation of the work of specialists; but it is not altogether edifying to an assemblage of general practitioners to have half their time consumed by the reading of articles written in language which they do not comprehend, and about diseases which they never presume to treat. The sentiment and temper of the profession are easily ascertained if one will notice the expression of patient endurance on the faces of the audience during the presentation of one of these topics which is aimed way over their heads, and the sudden change to animated interest when somebody gives his views on a disease which every physician has to see many cases of every year. They care little and understand nothing about the first subject; but on the second they find their opportunity; all can and many do take part in the ensuing talk; the impact of one view against another evokes sparks even from dull-looking material, and a general impression of profit from the debate is the result. Thus it was in this meeting of the Maine Society; some peculiar cases were described and shown, some frequently observed conditions rehearsed, and some scientific problems discussed; but through all the general practitioner felt that he was having a fair chance, and that the object which should mainly be kept in view in such assemblages was observed. Space does not permit a full account of all the proceedings, but an idea of their scope may be obtained from a brief recital.

CASES OF COMPLICATED LABOR.

Dr. S. P. Warren, of Portland, reported two cases, one of acute pulmonary œdema in labor with death from heart-clot; the other of labor complicated by a number of uterine fibro-myomata — subserous, submucous, and intramural.

ALBUMINURIA AND ACUTE RETINITIS IN PREGNANCY.

Dr. Sarah Ellen Palmer, of Portland, reported a case of pregnancy in which the patient suddenly became blind at the seventh month. Albumen was found in great quantity in the urine, and examination of the eyes disclosed severe and rapidly progressing retinitis. Labor was induced, and the patient recovered with very fair vision.

Dr. James A. Spalding, of Portland, saw the case often in consultation, and gave an account of his observations. He was able to find but little literature bearing on this precise condition. Cases of albuminuria and partial blindness in gestation are common enough; but in the reported cases the condition of the interior of the eyes is not mentioned. Both the accoucheur and the oculist strongly insisted upon the necessity of an ophthalmoscopic examination in all cases of pregnancy.

Dr. Alfred Mitchell, of Brunswick, read an interesting and instructive paper on the Treatment of the Perineum in Labor.

PHOSPHORUS NECROSIS OF JAW-BONE.

Dr. S. H. Weeks, of Portland, reported a case of monocular diplopia, one of Tait's operation, and one of phosphorus necrosis of the lower jaw-bone. In the last case half the inferior maxillary was removed, and the patient was shown with but slight deformity and a fair prospect of being able to wear artificial teeth in the place of those which are lost.

MULTIPLE FRACTURE.

Dr. J. A. Donovan, of Lewiston, exhibited a little lad whom he had treated for fracture of the parietal, comminuted fracture of one femur, compound fracture of the other, from which it was necessary to remove a large piece of the lower portion of the diaphysis. The boy walks with a decided limp, but gets around easily and well. Dr. Donovan also reported a case of tumor of the kidney, and a case of death from meningeal inflammation of the brain, originating in chronic non-suppurative inflammation of the tympanum.

Dr. H. E. Hill, of Saco, gave the history of six ovariotomies, with five recoveries, though most of the cases were complicated.

Dr. S. Laughton, of Bangor, read a paper on the Relation of Micro-organisms to Disease.

Dr. I. T. Dana, of Portland, introduced the subject of obscure cases of typhoid fever in some extemporaneous remarks.

Dr. C. W. Bray, of Portland, reported a case of apoplexy in a girl of fifteen years, with the post-mortem appearances.

ETHERIZATION.

Dr. F. H. Gerrish, of Portland, presented a method of recording cases, which so greatly simplifies the process as to tempt one to try it, and he likewise gave the result of some quite extensive observations on etherization, directed mainly to the prevention of vomiting. Full doses of bromide of sodium for twenty-four hours before the anæsthetization seemed to protect measurably against stomach disturbance, though this medication apparently prolonged the time of administration of the ether.

THE PRESIDENT'S INAUGURAL ADDRESS.

The President, **Dr. Oren A. Horr**, of Lewiston, in his inaugural address, reviewed the first decade of the Society's life, and made numerous valuable suggestions concerning the duties which the Association owed to the community and the profession. The one which excited most attention was that relating to the Medical School of Maine, and a committee of three was appointed to confer with the trustees and overseers of Bowdoin College, of which the School is the Medical Department, and devise means for the removal of the institution from Brunswick to Portland at the earliest possible date. For many years it has been the conviction of the profession that the School ought to be in the medical centre of the State; and now that the Maine General Hospital is to be enlarged and the ground is already broken for the erection of a fine operating amphitheatre, all that seems to stand in the way of the change of location that is desired is the lack of a suitable building for the School. The Alumni Association has already awakened an interest in the subject, and may doubtless be depended on to favor the project in a very substantial manner; and it is not improbable that, within five years, the institution will be in a new home, in close relation to hospitals which can furnish opportunities that have hitherto been wanting. At Brunswick there is a perfect glut of clinical material, but there is no hospital, and the School can never do its best work without hospital advantages.

THE ANNUAL ORATION.

Dr. A. L. Hersey, of Oxford, delivered the annual oration. He touched upon a number of topics, one of the most impressive of which was the matter of medical education. Usually orators and writers are eager to denounce the schools for not advancing the standard; but Dr. Hersey, unlike most other speakers excepting professors, laid the blame upon the individual members of the profession. He said that as long as physicians permitted poorly qualified men to enter their offices as students, and complain of the schools for not granting diplomas to these stupid fellows, so long will the standard be low. But if physicians would refuse to encourage all who have not a thoroughly good preliminary education, then the schools could and would take advance ground, and the profession would make immediate and steady progress. If every preceptor would take a high stand like this, what a change would appear in most of the medical schools all over the land!

SHALL THE AMERICAN MEDICAL ASSOCIATION BE INVITED TO PORTLAND?

On the last day of the meeting a subject was broached which excited extraordinary interest. A delegate to the National Society, in his report of the proceedings last month in Washington, said that a number of the members had voluntarily expressed a lively desire to have the American Medical Association meet in Portland. As the Maine delegates had no authority to extend an invitation, New Orleans was selected as the next place of meeting; but they brought the matter to the attention of the Maine Association, with a suggestion that, at the Louisiana Convention, this State Society should offer its hospitality to the national organization. Probably the thought was new to most of our members. With characteristic Down East modesty, the profession in Portland had not presumed to think that it could offer attractions to the greatest medical body in the New World. But, being introduced, the proposition received a cordial welcome; and, as it was too late in the meeting to discuss properly so important a theme, a committee was appointed to confer with the President and Chairman of the Board of Censors relative to the whole affair, with power to add to its number, and to act for the Association in any way which seemed expedient. Perhaps the scheme may be found impracticable, perhaps it may be easily feasible. At all events, it will be thoroughly examined, and the medical public shall be seasonably informed of the conclusion. The committee consists of Drs. Weeks and Gerrish, of Portland, Laughton, of Bangor, A. J Fuller, of Bath, and A. Garcelon, of Lewiston.

NECROLOGY.

Four members, all well advanced in years, have died during the year: Drs. John T. Gilman and J. S. Goodwin, of Portland, Wm. Swasey, of Limerick, and C. W. Whitmore, of Gardiner.

Between twenty and thirty candidates were admitted at this meeting.

OFFICERS ELECT.

The officers for the coming year are as follows: President, Thomas A. Foster, of Portland; First Vice-President, Sumner Laughton, of Bangor; Second Vice-President, Abial Libby, of Richmond; Corresponding Secretary, S. W. Johnson, of Belfast; Recording Secretary, Charles D. Smith, of Portland; Treasurer, Augustus S. Thayer, of Portland; Board of Censors, George H. Cummings, of Portland, B. F. Sturgis, of Auburn, E. Adams, of Litchfield, H. E. Hill, of Saco, A. L. Hersey, of Oxford; Publication Committee, the Recording Secretary *ex officio*, Charles O. Hunt, of Portland, C. A. Packard, of Bath, C. G. Adams, of Portland, J. O. Webster, of Augusta; Business Committee, Irving E. Kimball and C. D. Smith, of Portland; Orator, Stephen H. Weeks, of Portland.

The next meeting will be held in Portland on the econd Tuesday in June, 1885.

CHICAGO MEDICAL SOCIETY.

REGULAR MEETING, JUNE 16, 1884.

THE first paper was ably presented by **DR. WM. E. QUINE**, of which the following synopsis is appended: —

SIGNIFICANCE OF JAUNDICE IN DIAGNOSIS.

After alluding to jaundice of obstructive and non-obstructive origin, and to the various theories that have been advanced in explanation of the latter, the writer succinctly pointed out that the attendant symptoms were mostly due to the presence of colorless bile acids, — the bile pigment being harmless. Cerebral disturbance due to hepatic derangement and associated with cholæmia was not caused by the presence of normal bile, but by a different though unexplained species of toxæmia.

Although slight jaundice is often overlooked, and in some instances cannot be distinguished from cachexiæ except by the discovery of bile acids in the urine, the diagnosis usually relates to the discovery of the cause and not to the mere recognition of the effect The following seventeen points complete a summary of the paper: —

(1.) Jaundice occurring suddenly, in apparent health, and painlessly, is usually of emotional origin, and transitory.

(2.) When it depends on disease or injury of the brain, acute atrophy of the liver, snake poison, or an infectious fever, it is always associated with mental disturbance.

(3.) If it be attended with fever, and well marked, it is secondary to inflammation of biliary passages, pneumonia, toxæmia, or infective inflammation of the portal vein.

(4.) If it occur suddenly, and is preceded by paroxysmal pain and vomiting, it is caused, nine times out of ten, by biliary calculi.

(5.) If it is preceded by typical symptoms of gastroduodenitis it is obviously of catarrhal origin.

(6.) Impassable obstruction of the common duct is shown by great intensity of jaundice, clay-colored stools, and in recent cases by distention of the gall-bladder.

(7.) Jaundice caused by sudden obstruction of the biliary passages is always associated with paroxysmal pain and nausea; but there is no means of ascertaining the nature of the obstructing body except its discovery in the stools.

(8.) In the rare cases of sudden obstructions by cancerous, hydatid, and aneurismal tumors, there is almost always a history of impaired health, enlargement and deformity of the liver, ascites, etc., which, aided by the revelations of physical exploration, will lead to correct differentiation.

(9.) Sudden return of normal coloring to fæces confirms the diagnosis of obstruction.

(10.) Occlusion of the cystic duct may be attended with as much pain, nausea, and distention of the gall-bladder as occlusion of the common duct; but there is no jaundice. In occlusion of the hepatic duct the same symptoms are present, including jaundice, and excluding distention of the gall-bladder. It is often impossible to distinguish between occlusion of the hepatic, and the common duct. The former is rare because the duct increases in size from above downward.

(11.) If jaundice persist after the symptoms of biliary colic or catarrhal inflammation have, a month since, disappeared; or if jaundice have disappeared after a biliary colic, to return slowly and painlessly, it may be assumed that stricture of the duct has resulted from inflammatory thickening, adhesion of walls, or cicatrization of an ulcer.

(12.) A history of repeated attacks points to the probability of gall-stones.

(13.) If jaundice come on slowly, without antecedent colic or catarrh, and without attendant evidence of impaired health or portal obstruction, it is probably caused either by pressure upon the duct, or by the growth of a tumor within its walls. The pressing body, when large enough, may be readily appreciated, as in the case of pregnancy, ovarian tumor, aneurism, distended colon, etc.; but when it is small, or constituted by enlargement of lymphatics in the fissure of the liver, it is apt to escape detection.

(14.) Slight but persistent jaundice may be due to incomplete occlusion of the common duct, or to complete occlusion of a branch of the hepatic, but usually it is found associated with either valvular disease of the heart, some disease of the lungs which obstructs circulation, or cirrhosis of the liver.

(15.) If ascites be associated with it the disease is either cirrhosis or cancer of the liver. If the liver be abnormally small the disease is cirrhosis; if it be large the disease is either hypertrophic cirrhosis or cancer. Differentiation between the two is seldom attended with difficulty.

(16.) Absence of jaundice does not imply absence of hepatic disease, since the liver may be destroyed by disease or extirpated by operation without jaundice ensuing.

(17.) It is not a prominent symptom of hepatitis if catarrhal inflammation of biliary passages be rigidly excluded. It is not characteristic of hepatic abscess where, at most, mere muddiness of the complexion is usually seen. These affections are rare in temperate latitudes, and when encountered are generally found to be secondary to direct injury of the liver, or to infective inflammation of the portal vein. It is not a symptom of waxy or fatty liver or of hydatids excepting as an extraordinary complication.

DISCUSSION.

Dr. G. C. Paoli. There is no doubt but what in serious maladies of the liver there may be present only slight symptoms of jaundice sometimes. In scirrhus of this organ the tint of pigment in the conjunctiva and elsewhere may amount to but little; there may be no "bilious" excretions in the bowels, and icterus may be almost unperceived, and the diagnosis early made is apt to be overlooked.

Dr. S. H. Stevenson inquired more particularly of the writer if he stated that cholesterine is toxic, or that obstruction of the gall-duct, or either of these conditions, produces cerebral disturbances.

Dr. J. J. M. Angear. If clay colored stools and the odor comes from the large intestine, and the small intestine has nothing to do to produce these conditions, or the bile either, then he could not understand why the liver excreted bile. To give mercury produces dark-colored offensive stools, because why? because it affects the large intestine or the liver. Physiology says bile destroys the red corpuscles of the blood. If the coloring matter of the bile is nothing more than the coloring matter of the blood, then why not take the position that some poison enters the blood, and that the color of the conjunctiva and mucous membrane has nothing to do with the liver.

Dr. A. R. Jackson expressed his admiration of the paper, that it should be emulated, as it was not "sophomore" in style, and that it was full of good points, and devoid of superfluous verbiage.

Dr. J. H. Etheridge inquired of the author if in mental emotion people did not at times become greatly jaundiced? Also, is it not a fact that pigmentary substances contain more than one kind of coloring matter? In those who are injured where icterus appears, is it due to reaction to the vascular or nervous condition? or merely to shock?

Dr. C. T. Fenn thought that in people who died from hepatitis the surface might become jaundiced in appearance.

Dr. Quine closed, but did not pretend to attempt answering all the questions, nor could he refer the speakers to any authority whereby they could be answered. He stated, however, that it has not been proven that bile is toxic, or that it produces cerebral disturbances, for the blood and secretions may be saturated for years with it and no cerebral disturbance ensue, and in obstruction of the common duct no symptoms of cerebral disturbance may be developed. Regarding the prevalence of jaundice in scirrhus of the liver this is erroneous. He did not know that jaundice occurred after death.

The second paper, by **Dr. G. F. Hawley**,

THE EFFECT OF NOISES UPON CERTAIN FORMS OF DEAFNESS,

was attentively heard. A synopsis follows: —

More than two hundred years ago Dr. Thomas Willis, of Amsterdam, described a certain form of deafness in which hearing was improved by noise, which enabled persons to distinguish tones and sentences which at other times would be unheard. This symptom, bearing the name paracussis Willisiana, has been accepted by most aurists, but no satisfactory explanation as to its cause has been advanced.

While Politzer, Von Troltsch, and others consider that it depends upon some change in the position of the ossicles or membrana tympani, many like Kramer take different views, and believe that it is due to a stimulating of the auditory nerve, thus forcing it to a more healthy action. Experience favors the theory that the middle ear is the seat of this symptom; that some change is brought about by the constant noise which restores the hearing for the time being. What this change is, is still open to discussion. It may be of interest to relate the following case, which came under the care of the reader while house surgeon at the Golden Square Hospital, London. Mrs. H., aged thirty, had for the last five years suffered with marked deafness in both ears. Common conversation was heard with difficulty, except when any loud noise was present. At that time the hearing was apparently greatly improved. A watch could be heard on the left side only upon contact, and on the right at a distance of about two inches. The tuning-fork showed no trouble of the acoustic nerve, but clearly indicated some disturbance of the middle ear. The drum-head was normal as to tension, color, etc., while perfect movability existed in the malleo-incuidal joint. Nothing indicated anchylosis of any of the ossicles. The appearance of the throat was healthy, and the Eustachian tubes both patent. This is a good example of this form of deafness, in which the symptom of hearing better in a noise manifests itself. Roosa, however, mentions two cases where the drum-head was more or less destroyed, and still noises improved the hearing. The ossicles in both cases were intact.

Politzer in his work on Aural Surgery states that this improvement is seen only in middle-ear affections of an adhesive or sclerotic character, and regards it as a most unfavorable symptom for satisfactory prognosis. Roosa, on the contrary, states that it is found in many forms of ear affections, and does not necessarily forbid one from expecting favorable results from treatment. In his article on The Effects of Noises upon Diseased and Healthy Ears, he says: "I have known two cases where this symptom occurred in patients who regained their hearing perfectly." While the symptom frequently accompanies incurable diseases of the middle ear, the writer believes it is a very frequent symptom in sub-acute cases where both ears are affected. Of course it would not be observed in disease of one ear only. Whatever may be the cause of this symptom, we are justified, the writer thinks, in believing that certain pathological changes are then present in the middle ear which will be found at no other time. If this be true, in what does the change exist? Willis considered the change brought about by the action of strong wave tones upon a relaxed membrana tympani to be the cause of this symptom. As long as the drum-head is in a relaxed condition it refuses to respond fully to wave impression. It is no longer a perfect sound conductor until its tension is restored. Noises, by forcing air against the membrane, press it inward, restore its tension, and hearing is improved until the pressure is removed when deafness returns as bad as ever. If this improvement was found only in such cases as he describes we might accept his theory as correct, but unfortunately, as already stated by the writer, it is present with no change whatsoever in the drum-head. Therefore in such cases at least this improvement in hearing is due to some other cause. We have in the middle ear two other elastic membranes, one of which takes as important a part in conveying wave impressions as the membrana tympani, any change by disease or injury would be fully as disastrous to normal hearing, that is, by this the writer means the membrane of the foramen ovale. When we consider the extraordinary fine shades of vibrations transmitted by this membrane to the fluids of the labyrinth, are we not justified in expecting that any loss of accuracy and precision on the part of the transmitting apparatus at this point will cause a corresponding loss of hearing power?

According to Riemann, the excursions of the stapes in the fainter tones are so small as to escape detection, even with the highest power of the microscope. Therefore a corresponding sensitiveness on the part of the membrane must necessarily be present in order to appreciate and transmit these vibrations. Thus we see that any change in the membrana ovalis, which tends to hinder the passage of the vibrations to the fluids in the inner ear, must cause diminution in hearing. If, then, the membrane from any cause becomes relaxed and loses the power of responding to vibrations, it acts no longer as a sound conductor, but as a damper to any wave impressions. This is demonstrated in the case of relaxed drum-heads where inflation improves the hearing. Not only must this elastic plate (so called by Politzer) be capable of responding fully to any wave impulse, but it must also bear a certain relation to the foot of the stapes, that is, a due amount of pressure must be applied by the stirrup and a sufficient resistance be offered in every ear that possesses perfect hearing. If this is lost deafness is the result. Chronic suppurative inflammation of the middle ear with destruction of drum-head, incus, and malleus is a proof of the correctness of this statement. Hearing is here frequently improved by a false drum-head, which presses the loose stapes against the membrane of the foramen ovale, thereby restoring the relative positions of the parts. In a relaxed membrane the pressure of the stapes is wanting, due to an absence of resistance in the diseased membrane itself. Until we find some means of restoring this needed resistance, deafness remains. Thus through the loss of elasticity in this membrane we lose two important factors for perfect hearing: First, this membrane like the membrana tympani while relaxed refuses to act as a conductor of sound by not responding to vibrations given it; and, second, the proper relation between it and the stapes is destroyed the necessary pressure and resistance being absent.

We find in the case of an atrophied drum-head that hearing is frequently improved by inflating the middle ear, which restores the tension to this membrane by forcing it outwards. One might suppose that such inflation would likewise restore lost hearing if due to a relaxed membrane at the oval window. Unfortunately the same act which might restore to this membrane its proper tension forces it inwards as well, and thus separates the stapes from it. Though the membrane may be in a proper condition for receiving and transmitting wave sounds, the stapes, from the absence of any pressure applied by it to this membrane, will be unable to perform its duty; there will be more or less obstruction to the passage of sound at this point. Whatever, then, restores the hearing in these cases must not only renew the tension of the membrane, but maintain as well the relative position of health between it and the stapes. This, in the writer's opinion, can only be accomplished by some influence brought to bear upon the membrane and stapes from outside the middle ear. If, now, we consider the effect of wave impulses upon the membranes and ossicles we can probably understand how a loud and continuous noise (as the writer thought) might improve the hearing where the deafness is due to such pathological changes as herein described. The air set in motion by this noise strikes upon and pushes the drum-head and ossicles inwards. This crowds the air in the middle ear against the membrana ovale, which, if relaxed, is made tense by this pressure. At the same time the relative position between it and the stapes, as to pressure, etc., is also restored, and hearing, for the time, is therefore improved. This noise, which would confuse one with normal hearing, is absorbed, so to speak, in removing the cause of deafness. In case of perforated drum-head the vibrating air acts directly upon the diseased membrane and stapes.

Von Troltsch mentions a case where a magistrate so afflicted improved his hearing by pressing a bit of stick against the drum-head. Allen also, in his work on Aural Surgery, states, while speaking of this symptom, that the hearing power was increased in a patient who presented herself with marked destruction of the drum-head by pressing cotton against the ossicles. Another is also noted where a large perforation existed. Here, before and after the healing of the perforation, hearing was improved by pressure.

Though these three cases do not in themselves place this theory beyond dispute, they may make it worthy of consideration. It may encourage us to further investigations, which, perchance, may result in establishing beyond a doubt the cause of improved hearing in certain forms of deafness by noise.

The paper was discussed by **Dr. S. J. Jones**, who stated: This subject interests pathologists considerably; different causes will produce the condition described, and it is therefore not always dependent upon the same cause. A noise that will thus affect an abnormal ear may have none whatever on the normal ear, and cotton pressed over the stapes may also increase the hearing power of an abnormal ear. A tuning-fork placed between the teeth is also better heard in these particular cases of affected ear. The same also regarding the transmission of delicate sounds, — when the hand of a patient is placed upon a piano it will excite to action hearing in an abnormal ear of this kind.

MEDIAN LITHOTOMY FOR CYSTITIS AND HYPERÆSTHETIC URETHRA.

The following is a condensation of **Dr. W. L. Axford**'s verbal report of a case, pertaining to genito-urinary surgery, occurring in a man aged sixty-six, of inherited gouty diathesis. Occupation, gardener. For the past eighteen months patient has been a great sufferer from attacks of nephralgia, which were relieved by one fourth of a grain of morphia subcutaneously for a long time. In time, however, the action of the drug, even in much larger doses, failed to relieve him; suppositories of belladonna and all anodynes also failed. Recently he had another attack continuing three days. He voided his urine frequently, perhaps every five minutes. The bladder remained full continuously, and he had also severe chronic cystitis. Catheterization produced intense agony. This was of such an excruciating character, owing to unusual hyperæsthæsia of the urethra, that, as a last resort, the median operation of lithotomy was performed to relieve him, which purpose it accomplished admirably. A drainage tube inserted was repeatedly obstructed with mucous and phosphatic deposits. The urine was very ammoniacal and fœtid, he also had enlarged prostate. He died in a few days, and autopsy revealed cirrhotic gouty kidneys and liver. He would perform this operation again in a similar case.

Dr. C. T. Parkes discussed the above case, and stated his belief that the operation was justified; he had performed it to relieve cases of cystitis himself, and briefly cited two instances when he had relieved each of them for six months.

The last speaker then presented a verbal report of a case of

PAPILLOMATOUS MULTILOCULAR CYSTS OF BOTH OVARIES,

and exhibited the specimen, his remarks, of which we append the principal points, are as follows: —

The specimen consisted of papillomatous multilocular cysts of both ovaries. The cysts had ruptured and discharged their contents into the peritoneal sac. The history of enlargement embraced a period of only six months. The patient stated she never had an illness previous to the commencement of the abdominal enlargement. She emaciated rapidly and to great extent; patient measured forty-four inches in circumference at height of umbilicus. The greatest difficulty in the case was the differentiation between ascites and ovarian cyst. There was no œdema, nor had there ever been, of the lower extremities. Percussion gave dullness in all directions, lying, standing, or sitting, the only point of resonance being in the epigastrium; here fluctuation was very distinct in all directions on the slightest touch. Pelvic examination revealed that fluctuation was not to be felt in the pelvis. Also determined the presence of a small growth about the size of the closed fist on right side. The uterus was displaced forwards close to the pubes; cul-de-sac of Douglas filled with foreign body. Diagnosis: Ovarian tumor, ruptured sac, and contents emptying into peritoneal sac.

Operation. Forty-four pints of fluid were evacuated from the abdomen and tumors; fluid of dark amber color. No large amount of lymph precipitated in it after standing. Both ovaries were found diseased, there being present on the right side a ruptured papillomatous tumor, which still contained some fluid that could be pressed out at the site of the papillary growth. The right one had not ruptured, but was bound down deeply in the pelvis by adhesions. The true pelvis was filled by the tumors and their adhesions. With great difficulty the tumors were enucleated and removed. During the first four days after the operation her temperature had not reached 100° F., the patient being strong and cheerful. Bleeding was quite free immediately after the separation of the adhesions, but soon ceased altogether under pressure with dry sponges. A drainage tube was left in the lower end of the incision down to the bottom of the pelvis, anticipating free discharge from such an extensive raw surface, which was very free through it for two days. Six days after the operation the temperature is normal, and whilst there is danger yet there is not much doubt of her ultimate recovery.

Discussed by Drs. A. R. Jackson, C. T. Fenn, and R. Tilley.

At a late hour the Society adjourned. L. H. M.

Recent Literature.

Clinical Chemistry. An Account of the Analysis of Blood, Urine, Morbid Products, etc. By **Charles Henry Ralfe**, M. A., M. D., Fellow of the Royal College of Physicians, London, etc. Illustrated with Sixteen Engravings. Philadelphia: Henry C. Lea's Son & Co.

This work, the author tells us, has been written to furnish students and practitioners with a concise account of the best methods of examining chemically abnormal blood, urine, morbid products, etc., at the bedside or in the hospital laboratory. In the first two chapters the nature of the processes going on in the body under normal conditions and the properties of the chief organic and inorganic constituents of the body are briefly considered. Then follow chapters on Blood, Morbid Conditions of Urine, Morbid Conditions of the Digestive Secretions, and Morbid Products.

We are surprised to find so many misspelled words and incorrect formulæ in a book of this kind. The most noticeable examples of the former are "Pettenkotler," Draggendorf," "Woolaston," "ptoamines." Some words are repeatedly misspelled. Most of the incorrect formulæ are undoubtedly errors of the printer; some are, apparently, not; as, for instance, the formulæ for the normal and acid sodium carbonates, which are repeatedly given incorrectly. The author apparently wrote his book hastily, and revised the text, if at all, very carelessly.

We find some statements in the book with which we do not agree. For example, we do not consider the volumetric estimation of chlorine, by means of mercuric nitrate, simpler and more reliable than the estimation by means of silver nitrate. His directions for the preliminary examination of the tissues for morphia and strychnia in cases of suspected poisoning cannot be recommended. Some of the illustrations are very inferior.

This book can, we think, be made a very useful one. It needs, however, very careful revision. The chapters on Blood and Urine, which are really the most important practically, and which occupy, as is proper, a relatively large portion of the book, should be made more complete. The value of the book would thereby be increased.

Medical and Surgical Journal.

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THE WESTWARD COURSE OF CHOLERA.

THERE is no longer any possibility of concealing the character of the disease which has manifested itself at several different points in France, and it is evident that true Asiatic cholera has found a foot-hold on the western shores of the Mediterranean at places with which the rest of Europe and this continent are in active commercial communication. Though such a sequence to the epidemic which ravaged Egypt last year was long ago anticipated, its actual occurrence is none the less startling; and whilst there is no occasion for panic or ill considered and exaggerated action, especially in this country, a careless sense of security would be quite as ill timed.

The disease seems to have been brought to Toulon by a government vessel, the Sarthe, whose commander is reported to have committed suicide from mental distress at his relation to such a disaster, and the first case occurred there, apparently, about a month since. The government resorted to a policy of concealment at first of the fact that there was sickness at the naval yards, and subsequently of its nature, and even now that cases are reported at Marseilles and at Paris there is more than a suspicion that its full extent is not made public. Such a policy, whether in regard to cholera or yellow fever, is a mistaken and usually disastrous one, and should find as little favor with civilized commercial people as the old-fashioned quarantine or attempts to control the course of such plagues by burning fires in the streets and sprinkling them with disinfectants.

As we write the latest advices announce eight or ten deaths daily in Toulon in the navy yards and in the town, with sixty-two patients in the naval hospitals.

No clean bills of health are issued to vessels leaving Marseilles; Gibraltar refuses entrance to French ships; overland passengers from France are subjected to five days quarantine at Rome; and Spanish authorities threaten a quarantine of from ten to fifteen days against all English shipping unless England adopts what they would consider satisfactory precautions against the introduction of the disease, which it is not probable England will do.

All this illustrates at once a general conviction of the seriousness of the situation, and the little progress made since the International Congress of Vienna, in 1874, by the different European countries toward a rational and uniform policy of controlling the spread of epidemics. The general principles announced by that Congress formed a decided advance upon the irrational mediæval practices to which some of the participating countries still clung and still cling, but it was clearly recognized by the majority of the delegates that any genuine progress toward uniform practice must be based upon a prolonged conjoint investigation of the laws governing these epidemics and of the various conditions to be met. Such an investigation it has been impossible hitherto to secure. We all remember the little favor shown the attempt by our own government, in 1881, to promote, through a congress at Washington, an international system of notification of disease.

It is probable that these questions will come up at the approaching Medical Congress at Copenhagen, or at the Health Congress at the Hague in August, and it is to be hoped that some practical results may be reached. A German commission, of which Professor Pettenkofer and Dr. Robert Koch are members, have now under consideration the proper measures to be adopted in that country against cholera, and their report is expected with impatience.

Unquestionably the first, the most important, and the most feasible precaution in any country or in any particular city is to require cleanliness in public and in private places, to guard against an infection of water supplies, to encourage individuals to live wholesomely. A thorough system of inspection should be organized, and at sea-port towns suspicious vessels must be fumigated, those actually sick secluded, and other passengers — should circumstances or public feeling demand it — may be subjected to a limited quarantine of from five to seven days. The period of incubation of cholera, however, — as of other infectious diseases, — is a variable one, and England is right in declaring it to be easier and more profitable under the exigencies of modern commerce to remove the soil than to exclude the seed.

Between the end of May and the end of September there is ample time for cholera to cross the Atlantic. Common prudence demands that the authorities in all our large cities, and particularly those on our Atlantic sea-board, should be strenuous in their exertions to abolish all nuisances and sources of filth. Such labor is sure to be rewarded in the diminution of sickness from other causes than cholera, and will in no event be lost.

◆

STRETCHING THE INTERCOSTAL NERVES.

THE intercostal nerves have again been stretched for neuralgia, and successfully, at least so far as the operation and its immediate effects were concerned, as we learn from Dr. L. v. Lesser.[1] The patient was a woman of sixty-one, and the neuralgia, of seven years' standing, occupied both sides of the chest from the fourth to the tenth rib, and both breasts. In spite of the fact that both mammillary glands were greatly atrophied, a few drops of milky fluid could be pressed out of them, and it is especially noteworthy that this secretion increased during the exacerbations of pain, which recurred with great violence every night. The operation was decided on as a purely symptomatic measure, notwithstanding the fact that the neuralgia was believed to be due to pressure — possibly of distended rachidian veins — upon the nerve-roots. Seven intercostal nerves were laid bare and forcibly stretched, one after another, all of them upon the right side.

The wound (a single long cut through the skin) healed by first intention, and without material accident, considering the age of the patient. The patient left the hospital without having had any return of the neuralgia beyond a few slight pains, and remained equally free for two months, when she died.

The writer makes some important suggestions with regard to the details of the operation. The nerve, he says, should be sought for not just beneath the rib, as is usually stated, but *behind* and beneath it, in a triangular space bounded by the rib, the intercostal fascia, lying between the two sets of intercostal muscles, and the internal layer of muscle, which is attached some distance up on the posterior surface of the rib.

Failure to remember this fact that the nerve (and vessels) is to be sought for rather behind the rib than on a level with it would lead the operator, he thinks, into the danger of penetrating the pleura, which was in this case avoided.

◆

A COMMISSION TO CONSIDER THE RELIEF OF RIVER BASINS AND PROTECTION OF WATER SUPPLIES.

THE last Legislature of Massachusetts passed a resolve for the appointment of a commission to consider a general system of drainage for the relief of the valleys of the Mystic, Blackstone, and Charles Rivers, and certain other portions of the Commonwealth, and for the protection of the public water supplies of the cities and towns situated within the basins of these rivers, such commission to consist of five persons, of whom no two should be residents of one municipality. A previous commission, consisting of two physicians connected with the State Board of Health and one sanitary engineer, reported to the Legislature three years ago, considering especially the condition of the Blackstone River, into which the sewage of the city of Worcester was being emptied, greatly to the annoyance of towns below. No action was taken at that time, and the commission was dissolved.

No more important question in the immediate future awaits the action of the legislatures of this and other thickly-settled Eastern States, in which extensive manufactories add their refuse to the sewage of a large and growing population, thereby complicating a problem already sufficiently serious. A certain profit may be derived from studying the experience of other and older communities who have been grappling with these questions already for a number of years with varying success. The conditions, however, change so greatly in each country with soil, climate, rainfall, and dilution of sewage that results elsewhere can only be accepted as applicable anew after the most careful study and revision.

This commission is expected to consider the various methods of disposal of sewage and the application of such methods to any portion of the territory mentioned, and to report its conclusions in print to the Legislature of the year 1886, or to that of the year 1885, if practicable, for a portion or the whole of the territory, and to consider and report upon the needs of any other portion of the Commonwealth as to the disposal of sewage and the protection of the public water supplies. It must also include in its report suitable maps and plans of the territory to be drained, an estimate of the cost of the work, and a recommendation as to the methods of apportioning the cost. The commissioners are to receive such compensation for their services as the Governor and Council may determine, provided that the whole amount expended under the provisions of the resolve shall not exceed twenty thousand dollars; and their term of office shall not extend beyond January 31, 1886. Power is given to employ such engineering and other assistance as may be necessary for carrying out the objects of the resolve.

The commission as named by the Governor consists of two lawyers, one manufacturer, and two men of business. There should unquestionably have been at least one medical man, especially acquainted with the questions involved, among the number. The expert knowledge of the engineer may be easily and probably better supplied from the appropriation than by appointment upon the commission.

The report will be awaited with great interest by those who for some years past have been impressed with the urgency of the subject, and should be a valuable document, which we hope may be so conceived as to attract the support of our legislators to wise measures.

— The advent of Asiatic cholera at a number of places on the Mediterranean Sea is announced.

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[1] Deutsch Med. Wochr., No. 20.

MEDICAL NOTES.

— Dr. Fordyce Barker is reported to have said that for two years he has directed his nurses never to give a vaginal injection, unless especially ordered, in the puerperal state. Experience has taught him that patients did better than when antiseptic vaginal injections were used in a routine manner.

— Some workmen engaged in excavations in the bail within the boundaries of the old Roman city at Lincoln lately came across a crematory furnace and a sarcophagus. In the latter were found ten urns, which contained dust and calcined bones. The urns were of different sizes and shapes, and were all provided with saucer-shaped covers. Only one of them, however, was got out perfect. The interior of the sarcophagus was lined with long, thin bricks, which perished on being exposed to the air.

— Dr. Wythe, in the *Pacific Medical and Surgical Journal* for March, 1884, says: "The sanitary condition of the great cities of the world to-day is vastly better than of those of the Middle Ages, although very far from what common prudence deems desirable. It is still true that people live longer in rural districts than in cities, yet ever since civilization began to inquire into and regulate public hygiene there has been steady improvement. Statistics may not yet be fully reliable, yet the best we have prove that life has been prolonged by civilization. According to Wagner, 'In the twentieth year of life the probable survival was in the sixteenth century twenty-two years; in this century forty years.' Among children the death-rate depends upon the social position or high civilization of the parents. In England, according to the tables of Mr. Ansell, of 100,000 children born alive 74,000 will live at the end of their fifth year; but among the upper classes, who can afford the appliances of modern life, there will be 87,000, and among the peerage there will be 90,000."

— The Paris correspondent of the *Lancet* sends an account of an invalid artillery soldier at Landrecies, in the Department of the North, who was wounded in the late Franco-German War, when he was horribly mutilated by the bursting of a Prussian shell. The man's face was literally blown off, including both eyes, there being left behind some scanty remnants of the osseous and muscular systems. The skull, which is well covered with hair, was left intact, so that the man had a most hideous and ghastly appearance. This disfigurement has been completely concealed by a mask, which was made for him under the direction of the principal medical officer of Val de Grâce, in Paris, whither he had been transferred from the field ambulance. The mask was constructed by a surgeon-dentist named Delalain. It includes a false palate and a complete set of false teeth, and it is so perfect that the functions of respiration and mastication, which were necessarily imperfectly performed, are almost completely restored to their normal condition, and the voice, which was rather husky, has resumed its natural tone. The man speaks distinctly, the sense of smell, which had entirely disappeared, has returned, and he can even play the flute. He wears two false eyes, simply to fill up the cavities of the orbits, for the parts representing the eyelids in the mask are closed. In fact, the mask is so well adapted to what remains of the real face as to be considered one of the finest specimens of the prothetic art that could be devised. The man himself, whose name is Moreau, and who is in perfect health, is looked upon as a living curiosity, and travelers go a good deal out of their way to see him. His face, or rather his mask, is, of course, without any expression, but his special senses, particularly that of touch, are extremely developed, and he goes by the sobriquet of "l'homme à la tête de cire." He wears the military Cross of Honor, and delights to talk about what he went through during the war. To add to his meagre pension he sells a small pamphlet containing a full description of his wounds and of the apparatus that has been so skillfully devised as to render him at least presentable to his fellow-creatures.

— Dr. R. Guaita, in the *Gaz. degli Ospitali*, quoted in the *Bull. Gén. de Thérapeutique*, has been advocating the use of benzoate of sodium in the summer diarrhœa of children. A belief in the zymotic nature of this disease has led him to give the benzoate in doses which would ordinarily be looked upon as dangerously large for infants. He uses four to six grammes of the drug in the twenty-four hours after an initial purgative dose of calomel. Milk and soup are absolutely forbidden, and the diet (except in nursing infants, who are allowed the breast every six hours) is limited to a little wine and lemonade. In spite of these heroic measures (or shall we say because of this radical onslaught upon the microbes?) the results reported were very good. In a series of fifty-three cases, between the ages of six and twenty-four months, all recovered; thirty-five in whom the disease had lasted from twenty-four to thirty hours, in four to eight days, while the remaining eighteen, in whom it had existed from six to fourteen days, all recovered in about twenty-one days.

NEW YORK.

— The usual corps of fifty physicians for service in the tenement-house districts during the summer were appointed by the Board of Health June 24th. They go on duty on the 6th of July.

— The judgment which was rendered over a year ago by Justice Van Vorst at Supreme Court, special term, against the "United States (Eclectic) Medical College," depriving the institution of its charter, was affirmed in May, 1883. From that judgment the defendants appealed to the Court of Appeals, and the latter has just handed down a decision affirming the judgment. As the attorneys for the "Buffalo College of Physicians and Surgeons" stipulated to let the case against that school abide the event of this suit, the decision disposes of both of these bogus colleges.

— At Grace Church, at Broadway and Tenth Street, some exciting scenes occurred on the afternoon of June 24th. By the fall of a derrick used in the construction of a stone spire now in course of erection to replace the old wooden one at the top of the bell-tower two workmen were seriously injured, one of them fatally. The latter was bound down to the logs forming the derrick platform by several wire cables, which cut into the flesh like knives, and it took four men twenty minutes to release him with cold chisels and hammers. In the meanwhile medical aid had been summoned, and an ambulance surgeon from St. Vincent's Hospital being the first to arrive he was just in the act of ascending to the scene of the accident by outside ladders when five or six large blocks of stone, each weighing from 150 to 300 pounds, came crashing down upon the roof, through which the most of them broke, falling into the body of the church below. The stones were dislodged by the force of the parting of the wire cables which it was necessary to cut through. By this time an ambulance surgeon from the New York Hospital had also arrived, and he succeeded in reaching the injured man, who was terribly mangled. When his wounds had been dressed, the question arose how he was to be gotten safely down, as the only means of descent was a steep and narrow ladder. Finally it was determined to invoke the aid of the fire department, and a life-saving apparatus having been procured he was by means of this carefully lowered to the ground, an immense crowd of spectators watching the descent with breathless interest. He was then placed in an ambulance and carried to the New York Hospital, where he died on the following day.

— Dr. Henry G. Piffard has again gone back to the University Medical School, having received the appointment of clinical professor of dermatology. Drs. F. R. S. Drake, Joseph E. Winters, N. M. Shaffer, and P. A. Morrow, instructors in the same college, have been promoted to be clinical professors respectively of medicine, diseases of children, orthopædic surgery, and venereal diseases.

— Dr. Macartney, Deputy Health Officer since 1867, has resigned his position and gone to Europe for a year or two's rest. He served successively under Drs. Swinburne, Carnochan, Vanderpoel, and Smith, and had full charge of the quarantine hospitals from 1869 to 1876. During 1867 and 1868, when there was an epidemic of cholera, the disease having been imported by several English steamships, he attended more than 150 patients with it from the emigrant vessels, and in 1872 he took charge of the soldiers suffering from yellow fever at Governor's Island.

— Dr. John G. Adams died on the 19th of June at Liverpool, where he had recently arrived, having sailed from New York May 14th. He was a dignified and scholarly gentleman of the old school, and for many years had been corresponding secretary of the New York Academy of Medicine. He was born in New York August 12, 1807, and having completed his academic education at Yale, pursued his medical studies at the College of Physicians and Surgeons, where he was graduated in 1830. He was the first president of the New York Medical and Surgical Society, and in 1852 began to edit the *New York Medical Times*, of which four volumes were published.

Correspondence.

RESTORATION OF GUMS ABOUT LOOSE TEETH.

The formation of pockets between the roots of teeth and the surrounding tissues is one of the most troublesome conditions which the dentist is called upon to treat. As present methods of treatment are seldom satisfactory, some of the readers of the Journal may think the following one worth trying. Only one jaw should be worked upon at a time. An impression of this should be taken a week or more before the operation, and a plate struck to cover the teeth. It is not always necessary for this to cover all the teeth. In many cases it can be fitted about the sides, leaving the crowns bare.

The teeth are then to be cleaned with sharp instruments, and the edges of the alveoli scraped in the ordinary way. All the débris is to be carefully syringed out from between the roots and the surrounding tissue, after which the following solution is to be injected into the pockets: —

℞ Thymol	10 grammes.
Absolute alcohol	100 grammes.

Mix.

Fine sponge which has been soaked in a germ-destroying solution and then dried is next to be cut into pieces, moistened, and carefully placed in the largest pockets, as, for example, those often seen between the molars, where, it is evident, that by the ordinary treatment we could not get a restoration of the lost tissues. The solution already given, if diluted with ten times its bulk of alcohol, answers as well as another for treating the sponge.

The metal cap, made of the proper shape to allow of new tissue growth about the denuded roots, is now placed in the mouth, and the patient sent away, after directing him to remove the plate at least six times a day, in order thoroughly to rinse his mouth with whatever simple wash may be prescribed.

Each day for the first week the pockets should be thoroughly cleaned by injecting into them by means of a fine-pointed syringe the following solution: —

℞ Nitro-sulphuric acid	1 gramme.
Water	100 grammes.

Mix.

During the second and third week the same treatment is to be followed by the patient, who should be seen every third day to have the injections repeated at the necessary points. After this the plate can be taken out of the mouth. This treatment is sometimes quite successful.

William Herbert Rollins.

June 18th.

Miscellany.

A CASE OF EPILEPTIC AUTOMATISM.

An interesting case of epileptic automatism is described by a writer in the *Lancet* (May 31st).

A young man has for four years been subject to attacks of petit mal. He does not fall, but seems to "fix" his eyes, and sometimes walks forwards, or sideways, at others sits down, and generally ends by going to sleep. There are neither convulsions, nor frothing at the mouth, nor tongue biting. The only warning is that he suddenly begins to wonder whether he is going into an attack, and then he loses consciousness. He does not think he ever dropped anything out of his hand, but he has spilt tea out of a cup. In some of the attacks he will stop what he is doing and seem to "study" for a time, but in others he will go on doing what he was engaged in at the time.

A. On one occasion, while alone in the house, he had been playing the oboe, and was just turning over some music when he lost himself, and knew nothing more for an hour and a quarter (he happened to know the time); when consciousnesss returned he was lying on the sofa still alone in the house. He, however, must have, during the state of unconsciousness, put the oboe properly away in its case and taken out the reed, for it was uninjured in its place when he came to himself. Now, this taking the reed out of an oboe is an operation requiring very delicate manipulation.

B. Another day he was with several musical friends. I think he had been accompanying some of them on the piano. He was standing at the table turning over some pieces of music when they saw him go into an attack. While it was obvious to them that he was in a fit, for they had seen him before, he took up a piece of music, went to the piano, and played it; he was quite unconscious afterwards of having done this.

C. In his father's mill there is a machine for winding warps, which is not under the special care of any one, for, when started, it works for some time by itself; but occasionally a warp breaks, and when this takes place any one who happens to see the broken end of the warp hanging down stops the machine, "piecens" — that is, joins, — the ends, and starts the machine again. Now, one day his father and others saw him go into an attack ("fix" his eyes and walk forward); and while he was in it he passed this machine, in which a broken warp was at that moment hanging down. He stopped the machine, — which is a peculiarly complex action, for it must not be stopped suddenly, but has to be let down or "slowed" by degrees — he tied the broken ends, and then started the machine again. All this he did while obviously quite unconscious, and then he passed into the usual drowsy ending of the attack.

The writer points out that these phenomena were not those of purposive epilepsy; that they did not constitute the fit, but occurred in spite of it. According to Hughlings Jackson, if the epileptic discharge be limited to parts essential to higher consciousness only, and lower areas are left untouched, these, being freed from control, will act automatically, sometimes with even hyperphysiological activity, in response to any stimuli which fall in their way. Possibly these stimuli may have been in the case *A* the remains of intentions already cerebrally formulated, or they may have been sense impressions received while in the unconscious condition in the case *C.* But the seemingly violitional character of these "automatic" acts is difficult of comprehension under any view.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 21, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	634	280	22.82	15.68	10.08	2.94	1.68
Philadelphia	927,995	374	145	19.44	14.85	6.48	2.43	5.49
Brooklyn	644,526	256	108	24.96	13.65	12.09	3.90	3.51
Chicago	632,100	237	130	27.30	10.08	7.14	3.78	2 10
Boston	423,800	157	47	16.00	22.40	4.48	2.56	3.20
Baltimore	408,520	180	111	34.44	8.81	26.95	1.66	3.33
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	84	31	23.80	11.90	11.90	2.38	1.19
New Orleans	234,000	145	70	28.29	8.97	13.31	.69	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	121	70	35.69	15.77	24.90	—	3.32
Pittsburg	180,000	66	35	16.72	6.08	—	6.08	3.04
Milwaukee	142,400	46	28	13.02	8.68	4.34	—	2.17
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	23	0	17.40	21.75	4.35	—	8.70
Nashville	54,400	25	9	28.00	12.00	20.00	—	—
Charleston	52,286	44	14	18.16	6.81	4.54	—	—
Lowell	71,447	24	18	24.96	4.16	8.32	—	4.16
Worcester	69,442	18	5	11.11	16.66	—	11.11	—
Fall River	62,674	20	8	15.00	—	15.00	—	—
Cambridge	60,995	17	4	—	35.28	—	—	—
Lawrence	45,516	10	3	30.00	20.00	—	—	20.00
Lynn	44,895	9	1	—	11.11	—	—	—
Springfield	38,090	7	2	14.28	14.28	—	—	—
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	5	3	40.00	20.00	—	—	20.00
New Bedford	30,144	9	2	11.11	11.11	—	—	—
Salem	29,503	9	4	11.11	22.22	—	11.11	—
Chelsea	24,347	7	1	14.28	42.84	14.28	—	—
Taunton	22,693	8	2	12.50	25.00	—	12.50	—
Gloucester	21,400	6	1	—	—	—	—	—
Haverhill	20,905	7	0	—	14.28	—	—	—
Newton	19,421	4	0	—	50.00	—	—	—
Brockton	18,323	6	1	—	16.66	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	6	0	—	33.33	—	—	—
Fitchburg	13,433	5	1	—	—	—	—	—
Eighty-six Massachusetts towns	373,241	74	15	17.55	25.65	5.40	—	—

Deaths reported 2643 (no reports from Buffalo, St. Louis, and Providence): under five years of age, 1149; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 625, consumption 386, diarrhœal diseases 279, lung diseases 99, diphtheria and croup 74, measles 68, scarlet fever 68, typhoid fever 40, whooping-cough 29, malarial fevers 22, cerebro-spinal meningitis 19, erysipelas nine, puerperal fever nine, small-pox eight. From *measles*, New York 30, Chicago 22, Philadelphia, Brooklyn, and New Orleans four each, Pittsburg three, Cincinnati one. From *typhoid fever*, Pittsburg nine, New York and Chicago five each, District of Columbia four, New Orleans and Nashville three each, Boston two, Brooklyn, Baltimore, Cincinnati, Milwaukee, New Haven, Lowell, Springfield, New Bedford, and Bridgewater one each. From *whooping-cough*, New York nine, Philadelphia, Brooklyn, Boston, New Orleans, and District of Columbia three each, Chicago and Cincinnati two each, Baltimore one. From *malarial fevers*, New Orleans six, New York five, Brooklyn four, Philadelphia and Charleston two each, Baltimore, Cincinnati, and Nashville one each. From *cerebro-spinal meningitis*, New York four, Chicago, District of Columbia, and Chicopee two each, Philadelphia, Boston, Cincinnati, New Orleans, Lowell, Lawrence, Springfield, Holyoke, and Woburn one each. From *erysipelas*, New York three, Philadelphia two, Brooklyn, Chicago, Boston, and Baltimore, one each. From *puerperal fever*, Chicago, Boston, and Milwaukee two each, New York, Brooklyn, and Charleston one each. From *small-pox*, New Orleans four, Pittsburg two, Philadelphia, and Cincinnati one each.

In 104 cities and towns in Massachusetts, with an estimated population of 1,393,863 (estimated population of the State 1,955,104), the total death-rate for the week was 15.00 against 14.40 and 16.31 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending June 7th, the death-rate was 19.6. Deaths reported 3286: acute diseases of the respiratory organs (London) 249, measles 163, whooping-cough 131, scarlet fever 62, small-pox (London 40, Liverpool three, Hull two, Birmingham, Sunderland, and Cardiff one each) 48, diarrhœa 42, fever 39, diphtheria 24. The death-rates ranged from 14.1 in Leicester to 28.9 in Oldham; Birkenhead 16.1; Bristol 16.5; Blackburn 17; Nottingham 17.3; London 18.9; Birmingham 19.4; Sunderland 20.3; Sheffield 21.0; Liverpool 22.8; Manchester 23.1; Leeds 25.5; Wolverhampton 28.6. In Edinburgh 23.1; Glasgow 25.1; Dublin 21.9.

The meteorological record for the week ending June 21st, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
June, 1884.	Daily Mean.	Daily Mean	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 15	30.303	54	63	44	69	58	80	69	NW	SE	SW	5	13	8	C	C	C	—	—
Mon., 16	29.973	69	81	48	64	50	65	60	W	W	NW	14	8	8	F	O	C	—	—
Tues., 17	29.922	73	88	65	74	54	73	67	W	SE	SW	5	7	9	C	C	C	—	—
Wed., 18	29.826	74	92	62	76	55	76	69	SW	S	SW	4	7	7	C	C	C	—	—
Thurs., 19	29.749	69	92	62	75	89	99	88	W	N	NE	10	14	3	C	R	C	4.05	0.92
Fri., 20	29.792	68	76	61	99	86	87	91	W	E	W	3	7	12	H	C	C	—	—
Sat., 21	29.713	80	93	67	81	46	74	67	W	W	NW	9	9	6	C	H	C	—	—
Mean, the Week.	29.897	69	83	58				73										4.05	0.92

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM JUNE 21, 1884, TO JUNE 27, 1884.

Magruder, D. L., lieutenant-colonel and surgeon. Granted leave of absence for one month. Paragraph 7, S. O. 143, A. G. O., June 20, 1884.

Clements, Bennett A., major and surgeon. Ordered to relieve Major Jos. P. Wright, surgeon, of his duties as attending surgeon at the Leavenworth Military Prison, Fort Leavenworth, Kansas. Major Wright, on being relieved, ordered to report to the commanding general, Department of Texas, for assignment to duty. Paragraph 7, S. O. 144, A. G. O., June 21, 1884.

LIST OF OFFICIAL CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING JUNE 28, 1884.

Knight, J. S., surgeon, placed on Retired List.

Whiting, R., passed assistant surgeon, detached from U. S. S. Vermont, ordered to Marine Rendezvous, New York.

Babin, H. J., surgeon, detached from Marine Rendezvous, New York, ordered to U. S. S. Minnesota.

Wells, H. M., surgeon, ordered for examination preliminary to promotion.

Lumsden, G. P., passed assistant surgeon, detached from U. S. S. Pensacola and placed on waiting orders.

Appointments. — The Governor of Massachusetts has nominated as Commissioners on a System of Drainage for the Charles, Mystic, and Blackstone River Valleys John Quincy Adams, of Quincy, Solomon B. Stebbins, of Boston, Edmund W. Converse, of Newton, Edward D. Hayden, of Woburn, and Leverett S. Tuckerman, of Salem.

Books and Pamphlets Received. — Official Report of the Relief furnished to the Ohio River Flood Sufferers. By R. P. M. Ames, A. M., M. D., Assistant Surgeon United States Marine Hospital Service.

Sixth Annual Report of the State Board of Health of the State of Rhode Island. For the Year ending December 31, 1883, and including the Report upon Births, Marriages, and Deaths in 1882.

Treasury Department. Annual Report and Statements of the Chief of the Bureau of Statistics on Commerce and Navigation of the United States. For the Fiscal Year ended June 30, 1883. Foreign Commerce. Washington. 1883.

Address by the Rt. Rev. Hugh Miller Thompson, D. D., at Detroit. With an Introduction by Rev. Daniel C. Roberts. Reprint by State Board of Health N. H. 1884.

Education the Means for Unifying the Medical Profession, etc. By R. A. Kinloch, M. D., President South Carolina Medical Association. (Reprint.) 1884.

Medical German. A Manual designed to aid Physicians in their Intercourse with German Patients, and in reading Medical Works and Publications in the German Language. By Solomon Deutsch, A. M., Ph. D. New York: J. H. Vail & Co. 1884.

Original Articles.

DIETETIC DELUSIONS; THEIR DELETERIOUS EFFECTS, AND THEIR RECTIFICATION.[1]

BY R. M. HODGES, M. D.

THE amount of food required by a healthy adult will surprise most persons, even those who are good feeders. While this varies with the work performed, the heat or cold of the weather, and the condition and quality of the food taken, it has been estimated that, in the case of a man in health and of average size, the total daily ration should weigh six pounds thirteen ounces 128 grains, of which one pound four ounces 245 grains consist of dry food substance, the remaining five and a half pounds being water.[2]

Authorities on the subject of diet say that nitrogen is the most essential of all foods, and that a certain amount, about 316 grains, should be taken daily by an adult man. If the minimum quantity of nitrogen (which, for the sake of argument may be put as low as 250 grains) be not consumed, the various functions of the body languish, and a degree of weakness is induced, with greater or less rapidity, according as the quantity falls much or little below 250 grains per diem. But let the consumption drop to an average of only 138 grains, which is the smallest amount necessary for the bare maintenance of life, and in a year or two (not at once, for every body contains a store of nitrogen) important modifications of the nutritive processes, with distinct predispositions to disease, will inevitably be established.[3]

These results of experimental investigation have a practical significance. They find expression in the fact that a failure to consume all the essential elements of full rations, whether nitrogenous or non-nitrogenous, will sooner or later, as in the disastrous Irish and Lancashire famines, give rise to a train of symptoms which have been justly denominated those of "chronic starvation."

From the small knowledge of the value of food possessed by individuals as well as the public,[4] a diminution in its adequate supply easily escapes attention; loss of appetite is looked upon with indifference, and the first steps are inadvertently taken towards a condition which is as full of meaning in the case of a single person as when a whole community are its subjects. The absence or the keenness of appetite affords no indication of the amount of food which the stomach will digest and the body assimilate or an individual be benefited by swallowing.

The body requires not only to be fed but filled; and the object of eating is as often to bring up past arrears as to supply present demands. Quality of food, with all the heat and force it may contain, will not make up for quantity, which is required for constructive and reparative purposes. The constant waste of flesh and blood can only be compensated for by an equivalent assimilation of actual materials. Yet, in spite of this self-evident proposition, a large proportion of the better educated classes of the community readily deceive themselves and mislead others in regard to the amount of food necessary for their welfare and nutrition.

From a practice, often beginning in infancy with the common maternal prejudice against giving solid food at a sufficiently early period and in adequate amount, persisted in through childhood from an erroneous idea that "meat once a day" is an ample supply of animal food, still continued during adolescence, especially in the case of girls, under the conceit that eating heartily, or "between meals," is neither wholesome nor lady-like, a habit of going without enough sustenance is finally established in adult life which is further perpetuated and confirmed by a great variety of influences. Among the more common may be mentioned personal temperament, disturbed mental conditions, languid in-door life, fatigue and exhaustion, theoretical dietetic prejudices, fastidiousness as to eatables, unwise distribution of meals, insufficient variety of food, too rigid domestic economy, and, preëminently, the revived fashion of tight-lacing. These, and a multitude of similar agencies, apart from pathological derangements, are well-recognized causes of deficient bodily nourishment, and prolific sources of disturbed health, revealing themselves in deficient weight, "weakness," anæmia, feeble circulation, neuralgia, cough and throat trouble, constipation, headache, backache, nausea, and a variety of

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[1] Read before the Boston Society for Medical Improvement, June 9, 1884.

[2] Under ordinary circumstances a daily ration should contain something like the following proportions and quantities of its main ingredients: —

Water	5 lbs.	8 oz.	320 grs.
Albuminoids or flesh formers	0 lbs.	4 oz.	110 grs.
Starch, sugar, etc.	0 lbs.	11 oz.	178 grs.
Fat	0 lbs.	3 oz.	337 grs.
Common salt	0 lbs.	0 oz.	325 grs.
Phosphates, potash, salts, etc.	0 lbs.	0 oz.	170 grs.

This might be furnished by a mixed diet of the following foods: —

Bread	18 oz.
Butter	1 oz.
Milk	4 oz.
Bacon	2 oz.
Potatoes	8 oz.
Cabbage	6 oz.
Cheese	3½ oz.
Sugar	1 oz.
Salt	¾ oz.
Water alone and in tea, coffee, beer, etc.	66¼ oz.

Altogether these quantities will contain about 1 lb. 5¾ oz. of dry substance, though they weigh, in all 6 lbs. 14½ oz.

It will be seen that the weight of this allotment exceeds by one ounce — even when the solid matter contained in beverages is omitted — that of the analytic table which precedes it. This excess is mainly owing to the fact that in all articles of food actually used there are small quantities of matters (cellulose, etc.) which cannot be reckoned as having a real feeding value. A. H. Church. Food, Some Account of its Sources, Constituents, and Uses, London, 1880, page 49 *et seq.*

[3] Parkes, Practical Hygiene, page 173 *et seq.* Gr. Hewett, British Medical Journal, August 4, 1883, page 225.

[4] The manufacturers of cellulose and paper pulp propose, by an advancement of scientific cookery, to resolve nut-shells, wood shavings, and sawdust into wholesome and digestible food. They remind us that a pear, which when full grown in autumn is little better than a lump of acidulated wood, with careful storing for two or three months, becomes, by nature's unaided cookery, the most delicate and juicy pulp which can be tasted or imagined; and that cotton and linen rags have been converted into sugar artificially in the laboratory of the chemist. — *Paper Maker's Monthly Journal*, February 15, 1884, page 49.

At the existing (1884) International Health Exhibition, London, the "Vegetarian Society" are furnishing a sixpenny dinner to four or five hundred people daily. From a carefully kept account of the substances used for the bill of fare the following "food equivalents" have been reduced, showing that each diner receives, of

Albuminoids	.63 oz.
Fat	.44 oz.
Carbo-hydrates	3.17 oz.
Mineral matters	.09 oz.

Physiologists lay down the standard diet for ordinary labor pretty much as follows: —

Albuminoids	4.2 oz.
Fat	1 6 oz.
Carbo-hydrates	18.7 oz.
Mineral matters	1.0 oz.

It appears, therefore, that it would require about six of the six penny dinners to support a man during a day's hard labor. — *Medical Times and Gazette*, May 24, 1884, page 712.

phenomena, unconnected with sensible organic alterations, but characterized by neurotic and functional symptoms easily magnified by the patient and overtreated by the physician.

The consequences of an insufficient dietary are most frequently exemplified in young people, of both sexes, growing school children, boys fitting for college, *débutantes* in society, young mothers of families, seamstresses, shop girls, etc.; and although they also appear at other periods of life, and under other circumstances than those which have been enumerated, it is during the years of adolescence that the utilization of feeding has its supreme value and its prophylactic and curative effects, as a therapeutic method, are most easily obtained. Sir Andrew Clark, Mr. Grailly Hewett, Mr. Clifford Allbutt, and others who have described the ailments which follow inadequate alimentation, have especially urged the necessity for greater attention to the question of diet in the bringing up of families.

The underfed constitute so considerable a class that a large part of medical practice is devoted to attempts at satisfying their importunate demands for "something which shall make them feel better." To attack with drugs symptoms which are daily regenerated by starvation is labor in vain, so long as that condition is permitted to exist. But if the famished tissues of those who say they are not sick, and there is nothing the matter with them, only that they "don't feel well," and "cannot eat," be permeated with the fat which is so often loathed in food, — if veins be filled with a more bounteous supply of blood, and if out-door air be made attainable without the expenditure of an already slender supply of strength, — their bodily functions will take on renewed vigor and be reanimated from better life-giving resources, force will be stored up, energy will be developed, and innumerable discomforts evicted. The futile use of iron, quinine, bitters, elixirs, and other so-called "tonics," either when self prescribed or methodically directed by physicians, and the insuccess of medicines, as a rule, to relieve the wearisome complaints daily listened to from persons whose mode of living is an injustice to themselves, do not always serve as a reminder that suitable nutriment, in some form or other, is the only real "tonic," and that its methodical consumption can alone relieve the protean afflictions of many, if not most, of these querulous supplicants. To say to them in a vague and general way that a nourishing diet should be taken, and that anxiety and overwork are to be avoided, is to give weak advice. The most rigid and literal obedience to fixed and precise rules in regard to the quantity and character of their food and the times of taking it — in fact, the carrying out of a process of "stuffing," practiced at short intervals of time, without regard to appetite and pushed to the stomach's maximum capacity of digestion — is necessary to extricate them from their deplorable situation.

It is not my purpose to describe in detail the ailments and functional irregularities which are successfully dealt with by dietary treatment, but to make some criticisms on prevalent habits of eating, to offer certain practical suggestions in regard to methods of improving them, and a few homely remarks on the extent to which feeding beyond inclination may be advantageously pushed, and the kinds of food, and its adjuncts, by which its effective adoption may be promoted.

The theoretical standard of a full ration has been given. The conventional standard, however, is an unsettled one. The statement that a person eats as much as other members of his or her family may mean a great deal or nothing, for there are large and small eaters both by habit as well as by example, and there can be no criterion of the amount proper to be eaten under given circumstances except that which is determined by a physician's judgment. This amount, as has been said, should not only be specified exactly, but its consumption insured, and nothing but precise and positive evidence accepted in regard to the fulfillment of the specifications given.

To secure a constant and sufficient conversion of food material by those who are or have been insufficiently fed vigilant supervision is often requisite. The personal influence which accomplishes this is a variable possession. Some persons can win obedience where others might capitulate, and will exhibit a persistency in carrying out their suggestions which makes successful feeding a certainty when more lenient and compromising tactics would fail. Enfeebled subjects, especially women, often feel a great satisfaction in being controlled, and in being led, lifted, pushed by a strong will. With such individuals resolute oversight tells. That which they say, in regard to eating, they "cannot do" they are made to do. When they think they "do their best" they are compelled to do more and better, and an assertion that they will "try" to eat is counterbalanced by a determination that they shall succeed. No symptom of the feebleness which results from being underfed is more characteristic of the condition than the almost invariable obstinacy of its subjects to accept advice which suggests an increase in their consumption of nutriment, and no steps in securing a mutual understanding between physician and patient are so difficult as those directed to overcoming the dogged resolution and pertinacity which are manifested in this respect.

As a stomach may become over-distended and permanently dilated by long gluttony or by the accumulated ingesta which a slow and feeble peristalsis refuses to move on, so may it also become contracted from the habitual want of sufficient victualing, sometimes to such a degree that the introduction of enough food can only be accomplished after the gradual dilatation of its receptacle. This may be effected by increasing the frequency of meals. The custom, common in this country, of leaving a long interval between them is the reverse of that desirable for those who require extra feeding. The ordinary European arrangement adopts a system which is worthy of imitation, a "little and often" being the motto of the eater. It is useless to attempt too much at one time. The stomach conforms slowly, and rebels at a certain limit, but a brief respite and a short intermission put it in a less antagonistic attitude. If, for the reasons given, or from mere disinclination, two meals have been all which the subject under treatment declares can be "got down," as is often the case, then three must be taken or the time between successive feedings shortened to two hours, according to the aggregate amount of nourishment intended to be given and the readiness with which its forced consumption is effected. It is an advantage, therefore, that certain periods of the day, not precisely fixed, but approximative, should be established as meal times. For instance, before rising, at the usual breakfast hour, in the middle of the forenoon, at the accustomed luncheon, in the middle of the afternoon, at the regular dinner, and on going to bed.

It is a common impression that to take food immediately before going to bed and to sleep is unwise. Such a suggestion is answered by a reminder that the instinct of animals prompts them to sleep as soon as they have eaten; and in summer an after-dinner nap, especially when that meal is taken at midday, is a luxury indulged in by many. Neither darkness nor season of the year alters the conditions. If the ordinary hour of the evening meal is six or seven o'clock, and of the first morning meal seven or eight o'clock, an interval of twelve hours, or more, elapses without food, and for persons whose nutrition is at fault this is altogether too long a period for fasting. That such an interval without food is permitted explains many a restless night, and much of the head and backache, and the languid, half-rested condition on rising, which is accompanied by no appetite for breakfast. This meal itself often dissipates these sensations. It is, therefore, desirable, if not essential, when nutriment is to be crowded, that the last thing before going to bed should be the taking of food. Sleeplessness is often caused by starvation, and a tumbler of milk, if drank in the middle of the night, will often put people to sleep when hypnotics would fail of their purpose.[1] Food before rising is an equally important expedient. It supplies strength for bathing and dressing, laborious and wearisome tasks for the underfed, and is a better morning "pick-me-up" than any hackneyed "tonic."

That the particular food is alleged to be unpalatable, or the hour at which it is to be taken inconvenient, is of no importance. Indeed, it sometimes lends a helping hand to have each mouthful considered the equivalent of a dose of medicine. A tablespoonful of cod-liver oil is often taken regularly and amiably when even the smallest quantity of some inviting delicacy will not be swallowed. It is a matter of observation, says Mr. Francis Galton, "that well-washed and combed domestic pets grow dull. They miss the stimulus of fleas." The energy required to dispose of that which is disagreeable is often a discipline of great service to certain classes of persons. Their faculties need to be whipped and spurred to prevent them from perishing by disuse, and the degree of vigor capable of being generated is often proportionate to the amount of coercion to which they are subjected.

The rugged way, however, may be smoothed by various procedures, and need not be made unnecessarily hard to travel. It is helped by selecting food containing the most nourishment and the least bulk, and which is easiest to swallow after a minimum of mastication, or without any. The culinary art facilitates the ingestion as well as the digestion of meats, which, without its cajolery, might be tough and uninviting. Skillful feeding by a nurse who recognizes the art which may be exhibited in coaxing food into the stomach is often of advantage. Food thus administered must be introduced in large mouthfuls. Every gourmet knows how necessary this is for the satisfaction of the palate, and the correctness of the fact is substantiated by reason and by analogy. Well-shaped, wisely-seasoned, large morsels make a relishing and appetizing mouthful, inviting repetition. In divided bits they quickly satiate or excite repugnance. By this epicurean method the stomach is rapidly and persuasively charged with a sufficient supply of nourishment, as it never can be by the feeble pickings of an apathetic eater. *L'appetit vient en mangeant* is a paradoxical adage constantly verified. Not only mere disinclination to eat is often successfully overcome by persistent feeding, but a liking for, and dependence upon, full and hearty meals is established, and, what is more, retained.

In cases where food is urgently called for its artificial introduction is an easy and beneficial manœuvre. It does not require a stomach tube, and has but little resemblance to the procedure resorted to with the insane. It may be practiced with insignificant discomfort by means of a soft rubber catheter, not exceeding a No. 12 in size, fitted to a small glass tunnel, into which the nutriment is poured, or it may be sent through the tube by a Davidson's syringe. The catheter need enter but a short distance into the œsophagus. If no resistance be offered the operation can be performed by almost any one, even by the patient himself. Milk, cream, broth, eggs, and homogenous liquids are thus readily deposited, and to the desired extent, in the stomachs of those disinclined to eat.

The number of females, especially those who "do their own work," whose food consists almost wholly of bread and tea, is very large. How inadequately they are nourished is shown by the statement that, in order to get the required amount of aliment, persons who eat nothing else must consume about four pounds of bread. As this is so much more than any one can dispose of with comfort, the practice of eating butter with bread is almost universal. This not only meets the necessity for a heat-producing, non-nitrogenous food, but the unattractive character of dry bread as an eatable is compensated for by the relish of a savory addition. In proportion as the use of butter is increased the requisite quantity of bread may be decreased. To eat "more butter than bread" should not therefore be the reproach to growing children which it is often made, and the large amount of the former which may be profitably disposed of by the underfed, without "disturbing their stomachs," is not surprising if the process by which oleaginous substances are taken into the system is recalled. "Fat, butter, and oily matter in general require no digestion, the emulsion into which they are mechanically converted, chiefly by the pancreatic and duodenal secretions, passes (almost directly) into the general circulation of the blood."[2] For reasons similar to those which make cream and butter such useful articles of diet, and because the habitual food of insufficient eaters is so lacking in fatty matter, cod-liver oil has acquired its well-deserved place among therapeutic and alimentary agents.

The tendency of those whose appetite is deficient to lay great stress upon their readiness to take food which does not require mastication makes them willing consumers of soup. And yet of all articles entering into the common dietary soups are perhaps the most deceptive, and certainly the most important to discountenance with the underfed. They fill up the stomach at the expense of solid, "staying" nourishment, and contain so little in the way of sustenance that they are therapeutically almost worthless. As a rule they are but some form of meat tea, and are now known to have a food value not unlike that which urine would possess, were it drank, and which they resemble chemically.[1] "They may have on the system a stimulant action somewhat analogous to theine. They may render more prompt and efficacious the assimilation of any wholesome food with which they may be associated, and they may even give so effective a fillip to an exhausted system as to enable it to dispense for a time with real food, but it is clear that they must not be looked to for direct nutrition."[2] The established use of *bouillon* at lunches and "Germans," and of a "clear soup" at the commencement of dinner, is thus accounted for; and it is only in a sense, such as has just been indicated, that the Crimean saying, "Soup makes a soldier," has any justification in fact.

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[1] It should be borne in mind that a full bladder is a frequent cause of early morning wakefulness. Rising and passing water will often send restless sleepers back to bed for a refreshing nap, which without relief from this source of reflex irritation would not have occurred.

[2] Church, p. 36.

Broths, however, that is, soups which contain large quantities of solid matter, disintegrated meat,[3] vegetables, macaroni, vermicelli, *pâte d'Italie*, rice, barley, sago, tapioca, etc., are often, and in proportion to the consistency thus given, excellent alimentation. They are palatable and easily consumed in considerable quantities at a time. *Soupe à la Reine*, *purée de gibier*, various vegetable *purées*, chowder of fish, *bisques* of oyster, clam, lobster, are illustrations of the perfection of this kind of cookery. That they may be what is sometimes called "rich" is no objection. The digestive powers of the underfed are usually good, though the owners of them may not think so. They are apt to be active and ravenous even if the appetite is not.

Notwithstanding its capacity to digest there is, invariably, something repulsive to an insensible stomach in what are conventionally called "roasted joints." This antipathy, together with considerations of convenience as regards the size of portions to be cooked, makes it almost imperative for protesting but frequent eaters that meats should be either broiled or stewed; and steaks of various kinds, chops, cutlets, chicken, game, some kinds of fish, and shell fish, become, therefore, the only really available resources of the caterer for an ill-ordered appetite. And yet no more difficult undertaking can be given non-hungry patients than that of eating beefsteak. Apart from its somewhat uncertain quality nothing requires more mastication, and the class named always declare that there is no item of food of which they are already more "tired." Any other variety of meat, mutton, veal, venison, etc., cooked in the form of steak, is more readily eaten. The short, compact fibre of mutton chops, especially those from the loin, makes them less likely than beefsteak to be badly cooked, and far easier to be consumed. Well selected, carefully-cut lamb chops, in their proper season, are a delicacy of the highest order, and rarely fail to be appreciated by the most benumbed eater.

Meats stewed, or semi-stewed, and then partially browned in the oven (braised, as it is called in the language of cookery) are attractive and submissive preparations, and this method of cooking is an excellent one for purveying small portions of animal food. In the various forms and denominations of stewing and braising the *cordon bleu* finds scope for the highest aspirations of culinary art.[4] They impart an appetizing flavor to viands cooked to extreme tenderness, the perfection of these methods being found in their application to sweetbread, a costly luxury, but an article which, by its slight demand for mastication and its nutritious qualities, is peculiarly adapted to the requirements of an invalid eater. Others of the viscera besides the pancreas and the thymus gland, namely, the brains, the liver, the kidneys, the testicles of lambs, successfully lend themselves to this process of cookery, and, like calves' heads, pigs' feet, and sheep's tongues, are converted into delicate and easily assimilated nutriment for those who are ignorant of, or can overcome, the associations which they suggest.

Of various mechanical processes available for rendering food easily eaten preparatory mincing offers great advantages, and is particularly applicable to chicken and veal. A common and attractive method of serving both in the form of minced meat is that of *croquettes*. I am at a loss to know why veal is so often proscribed rather than prescribed. Its chief defect is in being a lean meat, containing more water and less fat than mutton or beef, and consequently of subordinate nutritious value. It is, however, the standard meat of France, as beef is of England, and properly chosen veal, from large calves, is open to no dietetic objection which I am aware of except the difficulty of cooking it well. It is not less digestible than other young meats, and if occasionally "poisonous" it becomes so from decomposition, which, in the season of its abundance, more readily takes place from keeping, or changes in the weather, than is the case with meats of maturer growth. But this, like poisoning by partridges which have been too long kept in winter time, is an inexcusable accident.

In spite of the somewhat flippant assertion of a justly distinguished medical writer "that there is a growing incapacity to digest fat which is truly alarming," I do not hesitate to assert that of all the modes in which minced meat may be presented the calumniated and much-libeled sausage is, in winter time, one of the most useful and successful articles for frequent feeding. Lean and fat meats, more digestible together than separately, are discriminately mixed in the compact and appetizing form of this ubiquitous and popular comestible, the sole secret of whose easy digestion is that it should not be eaten except when it has become thoroughly cold after cooking. Bread and butter can be tolerated with complete immunity when hot buttered toast would provoke exasperating dyspepsia, and it is exactly thus that sausage cold stands in relation to that which is served hot. Presenting the albuminates and fat in an economical, savory form, easily obtained and made ready for consumption, sausage, in some countries, might almost be said to have become a national food, and it offers to the fastidious or indifferent eater an article of diet from which great benefit may be derived. A trial of this stigmatized edible will be followed by a ready recognition of its alimentary value in the class of cases under consideration.

As has been remarked already, food to be taken outside the conventional meal hours must be of a kind easily obtained anywhere, readily "kept in the house," and which does not demand preparation or delay. Few persons can command the services of a "professed cook," or of a good "plain" cook, or have either at their disposal every two hours in the day. The practical articles of diet which meet these restricted requirements of convenience are few, and of these the chief in importance are eggs, milk, cream, butter, and bread.

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[1] An old and essential custom prescribed recently-passed urine at the completion of every case of labor. Such a practice, it would seem, was not altogether absurd. I can myself recall an instance when this draught was administered after her confinement, as a matter of course, to the wife of an eminent medical gentleman, at that time connected with Harvard University.

[2] [illegible], Familiar Lessons on Food and Nutrition, London, 1882, page [illegible].

[3] The meat from which soup is made, allowed to become cold, should be pounded to a paste in a mortar and then returned to the soup. Veal, pigeon, and rabbit are especially adapted to this procedure. "French" cooks prefer to make "chicken broth" from rabbit.

[4] The details of braising and other refined culinary processes are fascinatingly particularized by Sir Henry Thompson, in Food and Feeding, third edition, London, 1884.

"Raw albumen is one of the most digestible of foods; coagulated, it is comparatively indigestible."[1] Eggs to be easily digested must be eaten uncooked, since albumen under prolonged heat acquires progressive degrees of toughness.[2] When cooked, buttered, salted, and peppered they are soon tired of as articles of food, and alleged to be "bilious." Cooking, moreover, involves waiting and preparation. An uncooked egg is always ready and at hand, is clean to be kept anywhere, and scarcely needs to be broken into a glass. With a little knack it may be swallowed direct from the shell, as most persons know if in childhood they have had access to country barns. A raw egg weighs from two to two and a quarter ounces, and is said to contain about the same flesh-forming and heat-giving material as an equal amount of butcher's meat.[3] It offers in perfection the quickest and neatest mode of taking a large equivalent of substantial and nutritious food at a swallow. Every bar-room realizes this, and supplies its counter with a bowl of eggs. The steady drinker, who has eaten nothing for breakfast and has no appetite, but knows the injurious effect of a drink on his empty stomach, can crack an egg, quickly dispose of it, and justify himself for an early dram. Even "soda shops" appreciate their value, and dispense them with lemonades and phosphates. Beaten-up eggs are the certain provocative of dyspepsia. When subjected to this process with the infinite pains taking of an attentive friend or nurse an inviting draught of creamy froth is brought to the unfortunate recipient, — a tumbler full of air, which has been introduced in the largest possible amount to a given quantity of egg, milk, wine, sugar, and nutmeg, — than which nothing could be better devised to promote indigestion, abominable eructations, and the most uncomfortable flatulence or acidity. Every beer drinker has the good sense to blow off the "head" of his mug of beer, or to wait patiently for the froth to subside, before he imbibes the draught; and if crotchety persons will not learn the trick of swallowing an egg whole, they can compromise the difficulty by slowly stirring the white and the yolk, which may be thus mixed together and made to seem a less revolting dose without the incorporation of air by beating. Taken as medicine, and looked upon as such, eggs are at least equally palatable with cod-liver oil, for which they offer an equivalent substitute, adapted to winter or summer, as the latter hardly is, and are far more readily digested. There is no limit to the number which may be taken with advantage continuously and for months at a time. Eighteen eggs are required to furnish the flesh-forming materials and other nutrients sufficient for the various needs of an adult man in one day. No more striking illustration of their concentrated food value, or a better proof of its general appreciation, can be given than the statement that during the first quarter of 1876, in Great Britain, the consumption of eggs reached the enormous number of seventeen and a quarter millions.[4] Fifteen millions were imported into this country from Europe in the year 1883. It is but fair, however, to remember that a vast number of eggs are used in the arts, especially photography, and in manufacturing processes.

Milk and cream are convenient and therefore important and desirable articles of food. It is a common assertion of patients that milk "always disagrees with them," — that they have "never been able to take it." This statement, which, as a rule, may safely be attributed to mere prejudice, is also in some cases a true one, simply for the reason that the milk is drank too rapidly, or because it is not rich enough, an easy remedy being to take the given quantity more slowly, or to increase by addition the amount of cream which the milk naturally possesses, the trouble being due, in the first instance, to the fact that a large and solid cheese curd is suddenly formed in the stomach by the rapidity with which the milk is deposited in that organ, and in the second, to the hardness of the casein derived from milk with an insufficient percentage of cream, which is always inconstant in amount (varying between ten and fifteen per cent.) or in composition, the water alone ranging from forty-five to sixty-five per cent.[5] Milk is often too poor, but never too rich, for purposes of enforced nutrition, and the fact is incontrovertible that it is the model food for digestibility.[6] By adding cream to milk the amount of fat is increased and the curd is softened; and its digestion can be still further facilitated by the disintegration of its coagula, accomplished by crumbling into it bread, cracker, etc., or by the addition of a small amount of cooked meal or flour. By this latter means cold milk is made warm, which gives it an increased efficacy. This end may also be attained and the distastefulness of warm milk removed by flavoring it with the preparations of cocoa, weak coffee, or some of the inert substitutes for the latter, sold by grocers, the best of which, it has seemed to me, is known as "new era coffee," consisting simply of roasted and ground wheat. But, as hot milk demands a certain amount of trouble, cold milk alone, or with bread broken into it is, after all, the only practical resource so far as its use for frequent nutriment is concerned; and two quarts of milk, or three pints of milk and one pint of cream, are not more than the minimum quantity desirable for ingestion in twenty-four hours. Clear cream may be administered in doses of a wine-glassful after each meal, as any other medicine might be, and a great deal can be disposed of by eating it liberally added to cooked fruit and various dessert dishes. *Blanc mange*, Italian cream, and the various forms in which many delicate farinaceous articles are cooked, may thus be made more eatable through the zest given them by this accompaniment. There is a great difference in the palatableness as well as digestibility of cream which is obtained from milk by centrifugal force, as is largely done for the market, and that which is skimmed after

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[1] Twining, p. 184.

[2] Eggs should not be cooked by boiling but by placing them in hot water, and allowing them to remain there from seven to ten minutes.

[3] Church, p. 147.

[4] Church, p. 148.

[5] Church, p. 136.

[6] The analysis of "market" milk sold in Philadelphia and New York is as follows: —

Water	87.7 per cent.
Total solids	12.3 per cent.
Total solids, not fat	8.48 per cent.
Fat	3.75 per cent.
Milk sugar	4.42 per cent.
Albuminoids	3.42 per cent.
Ash	0.64 per cent.

A. R. Leeds, Medical News, July 21, 1883.

"setting." This distinction should be borne in mind in prescribing cream which is to be taken uncooked. The last-named product is by far the most desirable article.

Very few patients, especially women, drink a sufficiency of water to maintain their health or an adequate nutrition. Water is an important constituent of food; is, indeed, the carrier of food into and through the system, and forms more than two thirds of the whole body. Neglect to keep up the supply of water leads to a diminution in the quantity of blood, and lessens the body's strength.[1] When it is remembered that there are daily eliminated from eighteen to thirty-two ounces of water from the skin by perspiration, eleven ounces from the lungs, and fifty ounces from the kidneys, it is easy to see that the amount consumed by many persons falls short of the demand, and that their bodies must be insufficiently supplied with the requisite degree of moisture; some sixty-six ounces of water alone and in tea, coffee, beer, etc, being required for a daily supply over and above that which is contained in the solid food of a full ration to make good the average regular waste.[2] The constipation which is so common in ill-nourished persons is largely due to a want of liquid in the intestinal canal. This, therefore, will be ameliorated by the free use of water, as is also the constipating tendency of milk which is sometimes complained of, the curds being liquefied and reduced in size, and thereby made more readily digestible. Its effect on hardened fæcal masses or accumulated mucus in the intestines is equally obvious, and explains in part the intention as well as the success of the hot-water craze at present so popular.[3]

The underfed are benefited, and the process of feeding is helped, by alcohol. But the amount of alcohol which such persons may take as a food adjunct with advantage is very small. The cumulative effects of a medicinal dose at stated intervals are of greater utility than the more instant result of a larger allowance swallowed in a single drink. A measure of alcohol which produces an effect quickly, that is, which flushes the face, or exhilarates, as a sherry-glass of wine does with most females, for instance, is a toxic dose, and will be followed by reaction. It is a quantity short of this which is allowable. A teaspoonful, or at most a dessertspoonful, three or four times a day, is usually as much as can be borne without such sequelæ as are above alluded to. Spirits serve their purpose better than wine, for the reason that the relative quantity of alcohol administered is more measurable. Wines vary in strength; spirits are comparatively uniform. Tinctures even, or elixirs, may be given when spirits are objected to either on principle or from prejudice. In any case there should be a large dilution with water, as a more gradually stimulating effect is thus produced. Alcoholic medicines ought never to be taken on an empty stomach.[4]

The subject of bathing, incidentally alluded to, leads me to call attention to the fact that cold baths chill down the feeble circulation of the badly nourished, and provoke a physical torpor which is obstructive to the processes of nutrition. They drive the blood from the surface of the body in upon vascular organs, whose circulation is already sluggish from general weakness. They thus produce discomforts which aggravate existing languor, and enhance the feeling that food and drink ought not to and therefore cannot be taken. A bath described as one "from which the chill has been taken" is too cold for subjects under medical advice who are in need of extra feeding. Great pains should be taken to discountenance everything which reduces the bodily heat, and employments or amusements which in any sense tax the strength ought to be abandoned when a forced diet is attempted. Even ordinary exercise is often objectionable, and its complete discontinuance sometimes so important that confinement to bed is a necessity. Those who raise animals are practically made aware that a restless disposition is fatal to successful growth in vigor and flesh. The truthfulness of this observation is equally apparent with human beings who need "building up" in the literal sense of these remarks.

Mere fattening is not the object of full feeding, but it is to a certain extent its necessary accompaniment. The motive of the measure, as has already been stated, is to add to the quantity and quality of the blood, and it is hardly possible for an individual to grow fat without a decided increase in the volume of his blood. Weighing at stated intervals is therefore an important procedure, and there is no other way to make sure that the subjects of treatment are sufficiently well fed to gain blood. Persons who put on fat rarely fail to improve in color; their comfort is enhanced; warmth of body is gained, in itself no slight improvement; the pulse becomes fuller; the cheeks grow redder; the spirits are raised; the general mien becomes brighter; and these phenomena are explainable only by admitting that there has been an accession to their stock of blood. The scales thus become a thermometer of improving health and strength, by the aid of which the physician measures the progressive results of his regimen. Like the "pass-book" used at banks, they reveal in a ready and serviceable way the healthful standing of an individual, the relation of his resources to the wear and tear checks which he is continually drawing, and whether his account is nearly or quite overdrawn or superfluously plethoric. They ought not to be put into requisition too frequently, and only when there is reason to think that an encouraging increase of weight has taken place. This should manifest itself soon after systematic feeding is begun, and continue at the rate of two pounds a week, or not less than one pound, so long as improvement seems desirable, or until a weight has been reached the minimum of which shall be equivalent to two pounds for each inch of stature.

Experience and observation have universally confirmed the expediency of a heartier and more systematized diet than recently prevailed. Its utilitarian advantages are publicly recognized. Within twenty years the rations of armies, of institutions, charitable, penal, and medical, have been liberally increased. Family habits in regard to eating, since the flush times of the Civil War, have greatly changed, and the large allowance of food requisite for the maintenance of a sound health can scarcely be exaggerated in any statement of its details. In the application of this accepted dogma to special and personal cases there is much, however, still left to be desired.

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[1] The diarrhœas, or those which attend great and sudden losses of [illegible].

Some [illegible] comments on the therapeutic uses of water, by Mr. [illegible], may be found in the Practitioner, May, 1884.

[2] Church, page 51.

[3] There was perhaps more common sense than Martin Chuzzlewit supposed in the American habit, prevalent when people lived more frugally, [illegible] went to bed with [illegible] stomachs oftener than nowadays, [illegible] at Mrs. Pawkins', [illegible] from [illegible] water [illegible] with [illegible] heavy [illegible]. Water drinking was [illegible] years ago more than at present, and in the [illegible] bred the lank and [illegible] type of American [illegible] days, I cannot but [illegible] that the comfort and [illegible] of the then living community were greatly promoted.

[4] There is much pragmatical talk about "pure liquors," and the difficulty of obtaining them. It may be questioned whether alcohol and water, except for an educated and fastidious palate, is not as wholesome for medical uses as any high cost wine or spirit. Noxious impurities, when they exist, are usually owing to imperfect distillation, or lack of age, rather than to deliberate "doctoring."

I cannot better conclude this paper than by a paraphrase of Mr. Clifford Allbutt's words in his recent Gulstonian lecture,[1] wherein he observes, although not precisely in the language which follows, that: Under the benign and self-controlling influences of an amended nutrition the domestic atmosphere changes. Sore throats and trivial indispositions which once raised the frequent suggestion of a conflict with school, or a dinner, or an evening party, no longer present themselves as subjects for anxiety. Headaches and vague, transitory pains disappear. Ill temper, fretfulness, the fidgets, crying-spells, shrewishness, sleeplessness, listlessness vanish away, and the complaint of being "good for nothing" ceases to be made. By the building up of digestive resources a reserve of strength, which never before existed, is created, or a wasted one is restored, not merely for use on great occasions, but, by its wisely managed expenditure, to serve permanently for the silent work and equable running of vital machinery. Convince underfed invalids that no further defalcation of diet or new combination of drugs is needed; that, instead of waving dishes aside, like the physicians of Sancho Panza, they should be indulged in liberally, and they will find health within their reach; and by careful advances and the frequent repetition of small and highly nutritious meals realize that they can steadily eat their way upwards to a regenerated and tranquilized condition of body and mind.

SIX GENERIC DRUG MODIFICATIONS.[2]

BY HENRY M. FIELD, M. D.

Thirdly. Respecting the modifications which *age* introduces into medicinal action, space can be allowed for but brief illustration. Viewed from this stand-point, it would be difficult to find a greater contrast, throughout the entire range of commonly used medical substances, when prescribed to the young, than is presented by two narcotics which generally stand side by side in our classifications, namely, opium and belladonna. For, while the extreme type of susceptibility to the former is invariably presented by the infant, the extreme type of susceptibility to belladonna may well be found in the adult, provided it be a female of a certain temperament and physique. Again, children are but little susceptible to the toxic effects of quinia; indeed, some of Briquet's experiments would seem to show that they are capable of making a firmer stand against massive doses than adults even. *Per contra*, strychnia should be used, if prescribed to the young subject, with extreme caution. A number of severe and fatal cases of poisoning are on record from its use, hypodermically exhibited, as against paralysis sequential to diphtheria. Now farther investigation may lead to a modification of present views, but there is certainly much support for the position that the sympathetic nervous system is about equally susceptible to response in the young and adult. Materials which exert their chief physiological impression upon the body through the sympathetic — as belladonna does largely and quinia almost altogether — will be but little modified by the age of the subject, at least short of senility. Whereas materials which act primarily and chiefly through the cerebro-spinal axis, as does opium on its upper portion and strychnia on its lower tract, must, if given to the young, be closely watched and directed with great caution.[3]

In old age this principle must be differently interpreted, at least to an extent. The aged do not bear quinia well, and the remedy should be used with care. The operation of narcotics generally upon the aged has not received the attention it deserves; hyoscyamus, especially, so innocent with young children, should hardly be used at all on account of its tendency to produce a peculiar kind of mental aberration; a question not of the sympathetic, as we might have assumed, but of the brain. Chalybeates are measurably contra-indicated, so are emphatically saline cathartics. So are, to an extent, remedies which act upon the vaso-motor system and whose influence is conditioned upon the production of a modification of calibre of arterioles and capillaries, as in the case of chloral hydrates and the bromides.

The relation of remedies to increased arterial tension is a fact of quite constant consideration with the aged. The small dose of digitalis, to energize cardiac contraction, may be opportune and beneficent in action; a few drops too much, increasing the stringency of the already too tense arteriole, may be equally disastrous. Herein probably lies an explanation of the intolerance of the aged for the larger doses of quinine, — and of ergot as well, — their physiological influence upon the heart and circulation presenting analogy with that of digitalis. Still again, hereby is explained and justified the popular repute of sweet spirits of nitre in old age, possibly greater in England than in this country; Dr. Leach having shown that the influence of this mild and widely applicable remedy is procured through its power to relax arterial tension, — this by virtue of its nitrous acid, an ingredient and an influence which it possesses in common with nitro-glycerine, nitrite of amyl, and nitrite of sodium, — an influence greatly to be desired in the fever, and in the arrested skin or kidney function, of the aged subject.

Much of ingenious philosophizing has been devoted by certain writers, who are in love with the theory rather than the practice of therapeutics, to the problem presented by the great variety of modifications which infancy introduces into the action of medicine. I do not know that it has occurred to any one to apply to this question the philosophy of Asclepiades. And I have sometimes wondered, by the way, — if a momentary diversion may be pardoned, — that some shrewd speculator in measures calculated to relieve those who suffer from the ills that flesh is heir to, observing the present craze of the community for the monstrous and the absurd in medicine, with whom the *omne ignotum pro magnifico* of homœopathy is an unfailing source of marvel and satisfaction; I have wondered that some such mountebank has not thought to erect a system of therapeutical statics and dynamics upon the cardinal principle of Asclepiades. For Asclepiades, although the author of the proverbial wisdom which we often quote, "cito, tuto ut jucunde," although the friend of Cicero, who speaks of him in his oration *De Oratore* as his personal friend and praises his skill in physic, was yet, in many things, a not unworthy predecessor of Hahnemann. Like Hahnemann, he affected to be wiser than, and to ridicule, all the fathers of medicine, and like Hahnemann he constructed his entire practice upon a preposterous proposition, — the one as preposterous in pathology as the other in therapeutics; both alike as captivating in the sound, to the untrained at least, as misleading in the sense, — to wit, that *all disease is due to obstruction of the primary atoms in their passage through the invisible pores.* This might serve us well in removing the difficulties of our present question, — if anything could be expected of remedies in such narrow and exiguous conflict, — for surely in infancy the atoms must be particularly "primary" and the pores particularly "invisible."

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[1] Lancet, April 5, 1884, page 605.

[2] Continued from page 6.

[3] I cannot, however, agree with Albertini, who goes altogether too far in his statement that "children of fifteen months to five years of age may take, with impunity, doses of belladonna which would give rise to many symptoms of poisoning in adults." Only recently I had the misfortune seriously to alarm a mother for whose babe of six months I had ordered bellad. tincture for spasm of the bladder. Four drops, thrice repeated in the course of twelve hours, produced a scarlatinal rash over the entire body, wide dilatation of the pupils, and a considerable degree of excitement, alternating with something like stupor. That children will bear belladonna as well as adults is as much as it is safe to assume.

It were to be wished there was time to consider, practically, the modifications occasioned by infancy in the action of three prominent drugs, namely, opium, antimony, and mercury. Dr. Beck is the only authority, so far as I know, who has thought it worth while to write upon this subject, and his monograph was published some years ago. And yet this is a matter of very great concern to every practitioner. As respects opium, the young physician, unless he have some other guide than text-books and lecture-courses afford, and unless he be a man of exceptional caution, is in danger of gaining his early information through fatal experience. I can remember several young children that I believe I nearly killed by opium in the first years of my practice, and I went by the books. The fact that this drug acts upon the upper part of the spinal cord, below the brain, in the very young, when the inhibitory power of the brain over this portion of the nerve tract is at its minimum, and the fact, which Seguin appears to have established, that the "convulsibility" of the spinal cord ceases at about three years of age, suggest the importance of avoiding opium, so far as we may, till the child has passed this age.

Some one has said that the words *never* and *always* should not be used in connection with any medical subject. If there be an exception to this rule I think we have found it when we insist that *antimony should always be avoided, should never be used, in treating the very young.* Ipecac will do almost or quite as well, and ipecac is wholly safe. A prominent English writer, whose name I do not recall, writing ten to fifteen years ago, suggests as explanatory of the much greater fatality of croup in rural districts than in London the so much freer use by the country practitioner of antimony in treating the disease. It will be admitted that this drug is not as much used as formerly, but it is still employed altogether too much, that is, with the infant. Again, we insist our remarks are pertinent when it is remembered how commonly and freely the seductive "hive syrup" is still used in domestic practice, often with entire unconsciousness, even on the part of intelligent families, of its composition and its power.

Fourthly. The modification which may take place in a remedy by the *contemporaneous operation of another drug*, once fairly considered, would lead us to the discussion of combination, antagonism, etc., and all this, of course, must be set aside. A recent astute writer has well observed that there are few facts of pharmacodynamics, as, indeed, of practical therapeutics, of equal importance with that which has to do with the elimination of a medicine, adding that the old aphorism "*non agunt nisi soluta*" should rather read *non agunt nisi secreta.* Gubler has applied the term *vector* to a material which diverts another material from its usual avenue of elimination. Iodine, and probably bromine also, in combination with iron, is an illustration of the vector, the metal in this form or companionship being carried to the salivary glands, at least in a measure, a direction which no other chalybeate has been observed to take. Camphor is not eliminated by the kidneys, and would seem to have the power of carrying with itself, away from the kidneys, cantharides, which, otherwise, would seek this avenue of egress from the system; hence the influence of camphor as an antidote. "Camphor, in whatever doses taken by the stomach, is never passed in the urine" (Gubler), but monobromated camphor leaves the body by the kidneys, the bromine serving as vector.

Fifthly. The modifications impressed upon the action of a prominent material, for example, quinia or opium, *according as the influence* exerted is *physiological or therapeutical*, are more or less familiar to every tyro in medicine. Thus the most innocent substance can be converted for the occasion into the most lethal, as iron in certain states of disease. *Per contra*, the most powerful alterative becomes an emphatic tonic, corroborant, restorative; and if that which, at all other times, is a most potent and a universal disorganizer, does not directly serve in the rôle of hæmatosis and histogenesis, it does certainly stand as the essential vital catalytic, the *sine qua non*, without whose interposition these processes cannot, to the best estate, be resumed and continued. All this we observe of mercury in a certain stage of syphilis.

Every physician is familiar with the difference between the physiological and therapeutical action of alcohol. I have known a delicate woman, suddenly exsanguinated, consume a bottle of brandy in the course of a single night, and never once, as the saying is, feel it in her head; and yet, from previous experience, she could not probably have told the difference between cognac and sherry. Suddenly produced anæmia is one of the three conditions, — anæmia, spasm, pain, — and first among the three, which renders safe and beneficial large doses of opium; we have therapeutic for toxic impression, as in the teaspoonful doses and upwards ordered by Gouch and Hamilton in puerperal hæmorrhage.

An incident related in a sketch of the life of the late eminent orientalist and hero, Edward Henry Palmer, illustrates the principle, now being considered, in respect of alcohol. "One night, in 1866, he fell back on the sofa, and lay resting on his head and heels. The case closely resembled tetanus. Gradually he came round, and for months afterwards was compelled to drink enormous quantities of brandy, which produced no more effect on him than so much water. One night he was in the rooms of a man who produced a bottle of whiskey. Palmer drank a glass of hot whiskey and water, and then leaned over and whispered to a friend, 'Take me away at once or I shall begin to talk about my rich uncles.' When he reached the bottom of the stairs he was so drunk he could not stand. 'You never before,' he said next day, 'saw a man who did right in thanking God that he was drunk. I was drunk last night, and now I know that I am quite well again.' There was no more drinking of brandy."

All that we know of the physiological action of the remedy would lead us to say that iodine never kills unless given with intent to kill or through ignorance or carelessness, equally culpable; and yet a brief course of iodine has been known to cause death. "True œdema of the glottis, as has been proven by the observations of Petitjean, may be produced by medicinal doses of iodide of potassium, *but only* in persons suffering from laryngeal affections before receiving the drug."[1] Here, through modification brought about by topical disease, the otherwise harmless and slight catarrh of the larynx, always liable to attend the physiological action of iodine, is magnified into a condition capable of causing speedy asphyxia.

Again, medicines may stand closely together as respects their physiological manifestations which have little in common when applied as remedies; physiologically nearly allied, therapeutically they touch at very few points or not at all. The phenomena of cinchonism and iodism are singularly alike, but cinchona belongs to the class of tonics, and iodine to the class of alteratives, while their medicinal indications are widely different. The physiological influence of ergot, digitalis, and quinia, as brought to bear upon the heart, stomach, and cerebral circulation, presents striking analogies, but not such as can be safely followed very far in practice, and of which, indeed, but little practical account can be made.

Once more, the physiological influence of a subordinate or obscure drug may tread closely upon that of a drug of the highest value, and yet the therapeutical power of the former be almost nil, or its range of medicinal influence very limited. Thus the excitation which follows apiol, in doses of two grammes and upwards, suggests at once the more characteristic phenomena of cinchonism as expressed by ringing in the ears, headache, titubation, and tendency to vertigo. The effluvia given forth by saffron possesses properties allied to those of the anæsthetics, producing, after a time, headache, muscular feebleness, a sort of indolence, torpor, and even stupor," etc., etc.[2] It goes without the saying that apiol would be a poor dependence in, perhaps, so much as one of the many conditions in which quinia is employed, while the aromatic odors of saffron would accomplish little towards the production of anæsthesia.

Sixthly and finally. Medicines are materially modified according to the *method and form of their use.* We have suggested changes caused (1) by the avenue through which the remedy reaches the system, (2) by its pharmaceutical status, and (3) by posology or dosage.

For a long time the constitutional effects of mercury were procured solely through inunction. It was not ventured to introduce into the interior of the body so powerful a poison. Our experience with the oleate, of the last few years, has partly revived the practice of former centuries, in less objectionable form, and assured us there was much to be said in its favor which had been long forgotten. Certain therapeutic modifications, certain wholly new resources, obtained through external and also through hypodermic exhibition, are of great value.

One fact, cautionary, respecting atomizing, and that of the cutaneous surface. "It has been proved by the investigations of Röhrig that finely pulverized, watery solutions of substances are taken up by the skin, while they are not absorbed if simply laid upon it. The experiments made upon this point, which were made with all possible precautions, showed that when watery solutions of the iodide or ferrocyanide of potash, for example, were applied to the skin in a finely divided condition one or the other of the drugs appeared in the urine. Animals could also be stupefied or brought into a paralytic condition by solutions of morphia or woorara exhibited in the same manner. This proves that the act of atomizing introduces substances into the body much more readily and in larger quantities than simple contact. Therefore the belief is fully justified that a very large portion of carbolic acid, employed in the form of spray, is absorbed by the skin or its sweat glands."[3] Such poisoning would be especially liable to obtain with children, who "naturally possess a much more limited power of resistance, since the surface of the skin occupied by the spray is much larger, in proportion to the whole surface of the body, than in adults, and, therefore, *cet. par.*, much more carbolic acid is taken into the system."

As respects modifications in medicinal action through rectal insertion there is need of farther research. We have at least corrected certain of the errors in vogue not many years ago. It has been proved that oils may be absorbed from this cavity, although this was, not long since, almost universally denied. We have repudiated the former false ratio which determined that the dose of opium, *per rectum*, should be threefold that *per os.* It may well be that children have been killed *secundum artem* by obedience to this rash tenet. Certain authorities, and Briquet prominently, assert of quinia that the dose by the rectum should be relatively small, as the activity of the remedy is relatively greater thus administered.

Space remains but for a remark concerning posologic modification, the contrast, to wit, always to be observed between the physiological and the toxic impression of any powerful remedy. This suggests allusion to the not infrequent charge, brought by the ignorant or prejudiced against physicians that they prescribe poisons for their patients; such triflers as amuse themselves with the inert inanities of homœopathy escaping this condemnation, and to them, in the present mood of the community, "it makes for righteousness." For although prepossession may expect some virtue from "*arsenicum*" or "*mercurius*" yet a very small modicum of common sense is prompt to declare that they can do no harm.

Now, gentlemen, it should be understood and insisted upon that we never prescribe poisons. We use morphia, strychnia, atropia as occasion calls, but we do not exhibit them in poisonous dose; they do not exert a poisonous action; they are not poisonous agents in our hands. There is as much difference — nay, there is more — in the operation of aconite as a remedy and aconite as a poison as there is in the toxic operation of aconite and digitalis, or the toxic operation of opium and nux vomica, of arsenic and mercury.

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[1] Lewin.

[2] Gubler.

[3] Lewin.

RECENT PROGRESS IN OTOLOGY.

BY J. ORNE GREEN, M. D.

DISEASES OF THE EAR IN TYPHOID FEVER.

BEZOLD [1] has made a clinical and pathological study of the aural complications of ileo-typhus, which is of great value from the large number of cases and from the many dissections. He distinguishes, as Schwartze has already done, three forms of ear disease as occurring in the course of typhoid fever: —

(1.) Deafness without symptoms of inflammation, and without objective appearances on the drum-membrane, and in the middle ear, which appears to be due to central changes.

(2.) Closure of the Eustachian tube, with the appearances of consecutive retraction of the drum-membrane.

(3.) Purulent inflammation of the middle ear (*a*) without rupture of the drum-membrane, (*b*) with rupture of the drum-membrane and otorrhœa, otitis media purulenta acuta.

The first, so-called nervous deafness, is characterized exclusively by subjective symptoms, a variable deafness of moderate degree, and subjective buzzing. That such cases sometimes produce permanent impairment of the hearing is shown by a case which was carefully watched from beginning to end, and which never showed the slightest objective appearance of inflammation or retraction of the drum-membrane, and which was not accompanied by any severe pharyngeal catarrh.

Wunderlich, Griesinger, Murchison, and Liebermeister consider the ringing and buzzing partly symptoms of the prodromous period, partly of the beginning of the disease itself, but all agree that the deafness comes on only when it is evident that the general sensorium is affected. C. E. E. Hoffman says that these disturbances of hearing without objective symptoms, in severe cases of typhoid, appear very early in the disease, and often quite suddenly.

P. C. A. Louis,[2] gives the following figures, which are of interest in showing the proportions of patients with ear symptoms: Of thirty fatal cases eleven complained of buzzing, twenty of deafness, and two of pain in the ears. The buzzing began in four of these with the very first symptoms, in the others at various times, but nearer the beginning than the end of the disease. Of forty-five patients who were very ill but finally recovered nineteen had buzzing, thirty-three deafness, seven pain, and four discharge. The suppuration only appeared in the later stages of the disease, never before the twenty-second day. Of twenty-four lighter cases six had buzzing, five deafness, three pain, and one a purulent discharge, which began on the fourteenth day of the disease.

From his own observations Bezold agrees with these writers that subjective noises and a diminution of hearing, without objective appearances, belong to the earlier symptoms of abdominal typhus, and are of practical value for a differential diagnosis from many other acute general diseases. No statistics are given of the frequency of this form of ear affection.

Of the other two forms of ear disease, the catarrhal and purulent inflammations of the tympanum, fifty cases were found in 1243 typhoid cases examined between 1876 and 1880. Of these fifty cases but two, however, were of the simple catarrhal variety, while forty-eight were purulent inflammations of the tympanum, and Bezold gives the conclusion that in typhoid fever acute inflammations of the Eustachian tube are not more common than they are in healthy adults. The small number of cases placed under this second, catarrhal, division will be a surprise to those who have examined many typhoidal patients, but the explanation is found in the fact that Bezold classifies under this division distinct and undoubted tubal catarrh only, while cases of catarrhal inflammation of the tympanum proper, as they used to be called, are by him classified as acute inflammations of the tympanum, according to the recent nomenclature of Politzer.

Of 1243 typhoid cases examined, forty-eight, or four per cent., showed acute inflammation of the middle ear. Of these forty-one had perforation of the drum-membrane and otorrhœa, or 3.3 per cent. of all the cases examined.

While the nervous affections of the ear are found in the beginning or even in the prodromous period of the disease, the inflammations of the tympanum are first seen towards the end of the general disease, usually between the twenty-fifth and thirty-fifth day. In Bezold's cases only three began before the twentieth day, namely, on the ninth, the thirteenth, and the seventeenth day.

The acute inflammation is either slight, without rupture of the drum-membrane, or more severe with perforation of the membrane. In the former case, usually towards the end of the disease, moderate intermittent pain is complained of in the ear, with a little deafness, which latter may gradually increase to a marked degree. A diffuse injection is seen on the drum-membrane, most marked in the posterior upper quadrant, while the rest of the membrane appears opaque and grayish-white. Without the inflammation going on to any higher development this condition may remain for several weeks, and then, by a retrograde process, return to the normal. The appearances here aré those of acute middle-ear catarrh, but a dissection of such a case, by Bezold, proved that the secretion, even in the beginning, was purulent.

The more severe variety was observed in thirty-six cases unilaterally, and in five bilaterally. The time of its appearance averaged between the fourth and fifth week. The appearances and symptoms are those of a more pronounced inflammation; the injection and swelling are more intense; buzzing, sometimes pulsating, is often present; the pain is more severe, and, even in the beginning of the disease, there is a decided sensitiveness to pressure over the mastoid process; fever is generally present, and the temperature raised until perforation of the membrane occurs. From the late period of the disease at which the ear trouble comes on Bezold considers, and with justice, that the increased fever is due to the inflammatory ear disease. Often in one and usually within a few days rupture of the membrana tympani occurs, and an abundant serous, or bloody serous, discharge, with which a few masses of pus are mixed, appears. As the result of the discharge maceration and a hyper-production of epidermis takes place in the meatus, obscuring the view. The perforation is almost always located in the posterior half of the membrane. The secretion, in a few days, becomes muco-purulent, and may so remain for weeks and even months in spite of careful antiseptic treatment. Succulent polypoid growths may develop from the mucous membrane, and in several cases Bezold has seen white spots on the inflamed mucous membrane which suggested diphtheritic deposits. Very marked sensitiveness of the mastoid was found nineteen times in the forty-one cases, and in eleven of these this sensitiveness was found at the very beginning of the ear disease, while in eight it appeared from the second to the twelfth day, due, Bezold thinks, to inflammation of the mastoid cells as well as the mastoid antrum. In five of these nineteen cases there was external periostitis. The temperature in the milder cases often becomes normal after rupture of the drum-membrane, but in the severer cases it may show the great and irregular variations characteristic of pyæmia.

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[1] Bezold, Ueber die Erkrankungen des Gehörorgans bei Ileotyphus. Archiv für Ohrenheilkunde, vol. xxi., p. 1.

[2] Das Typhus-Fieber, etc., Leipzig, 1842.

The extreme deafness sometimes met with in typhoidal suppuration of the tympanum is, Bezold says, greater than he has ever seen with spontaneous tympanic inflammation. In one case the deafness for speech was total for nineteen days, but at the same time bone-conduction for the tuning-fork was good.

The suppuration of the tympanic mucous membrane Bezold regards "as the natural healing process of the acute inflammation produced by a local infection. He regards it as the normal reaction of the mucous membrane to the inflammatory irritation which has reached that spot, and that it leads directly to healing in that thereby the infecting agent is eliminated from the tympanum." With this belief he limits therapeutic measures to preventing new infection and the decomposition of the secretion by using antiseptics, of which he prefers boracic acid, and by washing out the middle ear, preferably through the Eustachian catheter, as advised by Politzer.

The cause of the ear diseases in typhoid has been variously given. Griesinger goes so far as to refer even the purely nervous disturbances which occur in the beginning of the fever to catarrh of the Eustachian tube and tympanum, while Hoffmann and Troeltsch would only refer the secretory inflammations of the tympanum to an extension of inflammation upwards from the pharynx. Schwartze regards the tympanic inflammation as a purulent inflammation of the tympanic mucous membrane independent of closure of the Eustachian tube or pharyngeal disease. The question whether the specific typhoid germs find in the middle ear a favorable seat for their development, and act here as exciters of the inflammation, Bezold answers in the negative because of the marked absence of lymphatic tissue, and especially because the purulent tympanic inflammations, as has been said, only show themselves in the later stages of the general disease when it is fair to assume that the specific germs are already eliminated from the system.

The middle ear process may be the result of naso-pharyngeal disease in two ways, either by long-continued closure of the tube or by a direct extension of the catarrhal or diphtheritic disease of the pharynx, per continuitatem, into the tympanum. That a closure of the tube is the cause Bezold denies, for, during a year, he examined every typhoid patient frequently, and in no one of them could he find the recent retraction of the drum-membrane characteristic of closure of the tube, and yet many of these cases afterwards developed purulent tympanic inflammations. A direct extension of the inflammation from the pharynx, he thinks, may explain the lighter cases of ear disease, but wholly fails to explain the severe cases, for these begin quite suddenly, and are accompanied from the beginning by involvement of the mastoid cells. Dissections also prove that very often the inflammation is limited to the tympanum, and does not extend into the Eustachian tube, a condition which would not exist if the disease had extended along the tube from below. The secretion in the tympanum, at least in the majority of cases, is purulent from the very beginning both in the perforative and non-perforative forms.

Besides extension from the pharynx for the milder cases Bezold suggests two other causes of the tympanic inflammation, the entrance of septic material from decomposition of the naso-pharyngeal secretion, and possibly of small particles of food, and, secondly, emboli in the vessels of the tympanic mucous membrane from endocarditis and thrombus of the left side of the heart, or from masses of suppuration in the periphery. The former has not been proven, the latter was found in a case examined by Bezold in a branch of the arteria stylo-mastoidea, and although in this case the heart was not examined infarcts in the kidneys showed the existence of embolic material in the left heart. Trautmann also has found small emboli in the tympanic mucous membrane.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

June 9, 1884. The President, Dr. Charles D. Homans, in the chair.

Dr. R. M. Hodges read a paper entitled

DIETETIC DELUSIONS; THEIR DELETERIOUS EFFECTS AND THEIR RECTIFICATION.[1]

Dr. Francis Minot wished to make one or two suggestions called out by the paper. The temperature of food is often too high. Particularly is this the case with potatoes, and with tea and coffee, which are not uncommonly used when hot enough to interfere with digestion. Among the foods at once nutritious and palatable he gave a high rank to fresh condensed milk, which differs from the canned milk that is imported, and somewhat resembles the so-called boiled milk of the French cafés. This last is not really boiled, but is allowed to simmer and evaporate all night over the fire, preparatory to being served with coffee in the morning. The speaker had met with the difficulty described by Dr. Hodges in getting some women to eat. He believed that there are cases that can be successfully treated only by refusing to make another visit unless the prescribed quantity of food is taken. This course will probably succeed provided the patient has confidence in her attendant.

Dr. R. T. Edes said that he thought there has already been some little reaction from the acceptance of Weir Mitchell's teaching about forced feeding in bed.

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[1] See page 25 of this number of the Journal.

Some cases do well with a less active treatment. He did not mean by this, however, to imply that the reader was accepting that treatment in full. He thought it a mistake to regard too carefully the chemical composition of food. To get the best results from food it must be palatable, and he was somewhat surprised that Dr. Hodges had not had a good word for mince pie. The speaker would hardly call malt extract a tonic, but rather considered it a food, although it does have diastatic qualities, and the question of the predigestion of food is sometimes important. He took the opportunity to speak of preparing milk by slowly adding dilute hydrochloric acid to it drop by drop while warm, stirring at the time. By this means the curd is broken up and becomes more digestible, while the taste is more agreeable to some people than other predigested foods.

Dr. G. K. Sabine thought that the subject is very important, often more so than questions of drugs or exercise or of hygienic surroundings. Even bad air can be borne for a time by those who are well fed. The importance of good food is well seen in the country, where it is astonishing how poorly farmers live, and how underfeeding and overwork tell on the health of the women. It had occurred to the speaker that the hours of meals may have an influence on the drinking habit. A dinner at noon followed by a light supper leaves one empty and uncomfortable at night. A glass of whiskey will often relieve this feeling, while had a full meal been eaten in the evening the discomfort would probably not have existed. The value of eggs mentioned in the paper might perhaps be overestimated, as now and then they upset the stomach.

Dr. H. C. Haven deprecated a too free use of meat in the dietary of *childhood*, and up to the seventh year would exclude it entirely, provided that the dietary was intelligently constructed, so as to furnish in other forms the proper amount of albuminoids. He believed that the old rule of meat once a day for children was much better than twice or thrice a day. In childhood, especially during the earlier years, when developmental changes are still most active, there is a relatively greater susceptibility to stimulants to the nervous system. Reflex action from the slightest irritants is a well-known phenomenon of infancy and childhood; and the salts or extractive matters in meat, which give to their solutions the stimulating qualities they possess, should be used with great caution, or, if nitrogen-containing food is otherwise furnished, dispensed with.

Dr. Haven believed this to be especially important in the cases of children who either had, or might be supposed to have, inherited the neurotic disposition. He had seen the "nervousness" of children, manifested by the symptoms of irritability, night terrors, or talking in the sleep habit, chorea, etc., disappear after exclusion of meat from the dietary.

If Americans *are* more "nervous" than the people of other nations, it behooves us to be especially careful of American children during the period of development of the nervous system.

He spoke of statistics quoted by Dr. Cannan in an article entitled Milk Diet in Childhood.[1] In an institution in New York, where for the past twenty-five years meat has been excluded from the dietary, even in the form of soup, the average number of inmates between three and eight years of age has been 110. In only nine of the twenty-five years has there any death occurred among these children. In these nine years the total number of deaths has been only twenty, or less than two per cent. of the inmates. The children are kept from three to twelve years, and are therefore under observation for a considerable time. These figures are certainly worthy of careful consideration.

Dr. J. J. Putnam agreed with Dr. Haven, and stated that epileptics often do better without meat.

Dr. Hodges said that while individuals may do well without it, yet that it is not the rule.

Dr. J. C. Warren referred to a recent book by Professor Erbstein on the Banting process, which shows that absolute abstinence from fat is needless, patients losing two or three pounds in a week while taking butter freely, but having their starchy food and sugar reduced. There is a limit to this, however, and *milk* is not allowed by Erbstein, possibly on account of its sugar.

Dr. Hodges, in reply to Dr. J. J. Putnam, said that for fat anæmics he always tried exercise.

Dr. Minot thought that they were improved by forced exercise, and related some cases in support of his statement.

Dr. J. B. Ayer said that while it is true that milk disagrees with some people, yet by beginning with somewhat small quantities, and adding lime water or cream, the difficulty disappear.

Dr. C. P. Putnam agreed with Dr. Haven that children ought not to have more than a limited quantity of meat. In them it produces dyspepsia. He has observed that when they get much of it at an early age the fæces assume a putrid odor different from that of the milk-fed child or the meat-eating adult, and he thinks this also should be taken as an indication that with them meat is not easily disposed of in the economy.

In adults, he thought the quantity of meat eaten should vary with the amount of exercise taken, and he spoke of [illegible] caused by milk. He also said that while sausages form, in some countries, a staple article of diet, yet that the Germans eat so much bread at the same time that that is with them the more important article of the two.

Dr. Sabine said that the German sausages are made of one half beef and one half pork, less highly spiced than ours, and are boiled instead of fried. They can be bought in this city.

Dr. Buckingham said that he, as well as Dr. Sabine, had met with people who could not eat eggs, and so many of them as to surprise him, considering the common opinion on the subject. It was fair to say, however, that he had not made the same distinction between cooked eggs and raw eggs that is made by Dr. Hodges. He agreed with Dr. Haven that up to five, six, or seven years milk should form the principal part of children's diet. It was his impression that children otherwise fed were more likely to have digestive disturbances. Children always like milk if they are encouraged to do so, or acquire a distaste if too early weaned from it, and this matter of liking may play an important part in disease even after childhood is passed.

—"Death owing to visitation of Providence under suspicious circumstances" is reported as a coroner's verdict in Munster.

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[1] New York Medical Journal, vol. xxxix, No. 13.

MEDICAL ASSOCIATION OF THE COUNTY OF NEW YORK.

At a meeting of the Association held June 16th, Dr. J. Lewis Smith read a paper on

THE SUMMER DIARRHŒA OF CHILDREN.

Having remarked that it was gratifying to know that of late years the enormous mortality from this affection in large cities had been somewhat controlled in consequence of the measures adopted for this purpose by boards of health, he said that it still continued the great scourge of the community during the heated term, and proceeded to quote a number of statistics showing this, which were taken from the records of vital statistics of the city of New York.

The ætiology, he went on to say, depended on two principal factors, the one atmospheric and the other dietetic. In regard to the first, the prevalence of the affection corresponded closely with the increase of atmospheric heat, commencing in the month of May, and reaching its maximum during July and August. The fact that the mortality from it was greater in October (when the average temperature was lower) than in May, was explained by the circumstance that the deaths from it were among children who had contracted the disease in the summer and whose constitutions had finally yielded to its debilitating effects. Although the summer season was responsible for the wide-spread mortality from it, it was not easy to ascertain the precise elements to which this was due, since much the same degree of heat prevailed in the rural districts as in cities. It seemed altogether probable, however, that noxious effluvia constituted or contained the morbific agent or agents; and in support of this hypothesis Dr. Smith related a number of facts which had come under his personal observation. Murchison found that twenty out of twenty-five boys were attacked with diarrhœa which was excited by the emanations from an old drain near the school which they attended, and the purgative effect of impure air was well illustrated by the fact that medical students previously in good health were not infrequently attacked with diarrhœa as the result of working in the dissecting room.

In all large cities solid impurities were very numerous in the atmosphere, and this accounted in great part for the hazy cloud that could usually be seen hanging over cities and towns. Whether organic impurities giving rise to diarrhœa were organized or not was not yet definitely determined. A bacillus of cholera infantum, it was true, had been discovered; but whether it was a causative agent, or merely an incidental concomitant, was still an open question. He then referred to certain gases and gaseous combinations liable to be found in the air, which were supposed to have a distinct effect upon the bowels, and mentioned the sulphates as being among the most active chemical compounds in this respect. In the present state of our knowledge, we had to be content with saying that impure air was one of the great causes of infantile diarrhœa, without being able to state precisely in what manner it produced this effect.

This led, however, to the presumption that, in addition to heat, infectious germs constituted an important element in the ætiology; and the conditions existing in the summer in cities were certainly favorable to the development of low organisms. He then proceeded to describe the various circumstances characterizing the life in the crowded tenement-houses in New York, which were so productive of disease and death among the infantile population, and especially during the heated term.

Going on to speak of the dietetic factor in the causation of infantile diarrhœa, he remarked that in the large cities children under eight months of age, if bottle-fed, were almost invariably attacked by it in summer. In institutions it was a well-known fact that every bottle-fed infant under four months, and often under six months even, died at this season. But in addition to being bottle-fed the infants in the tenement-houses were very frequently allowed to have various kinds of fruit as well as the ordinary table fare of adults, so that it was no wonder that diarrhœa was prevalent among them.

Occasionally it happened that from continued ill health the milk of the mother became deteriorated, and no longer agreed with the infant, and although under ordinary circumstances breast-milk was incomparably the best diet, it thus became necessary to put it upon some other food, provided it was impossible to secure a wet-nurse for it. Cow's milk was, on the whole, the best substitute for mother's milk, but the milk that was obtainable in New York, especially by the poor, was often of such bad quality that it was exceedingly apt to disagree with the child. In New York improper feeding was quite sufficient to produce diarrhœa without the influence of atmospheric conditions, but with the two causes combined it was not to be wondered at that the infant mortality was so large during the summer months.

Having spoken of the better care now taken of foundlings, as compared with the former condition of affairs, when this class were intrusted to the care of pauper women in the almshouse on Blackwell's Island, and it was a very rare occurrence for one of these little waifs to reach an age of more than two months, Dr. Smith spoke of the supposed influence of dentition in the ætiology of summer diarrhœa, and expressed the opinion that this had nothing whatever to do with its causation. This, he thought, was proved by the fact that infants under three or four months (or before reaching the age of dentition) were even more liable to the affection than older ones in whom the process was taking place.

He passed over the portion of the paper describing the symptoms, except so far as to mention that in the great majority of cases the disease began very gradually, so that mothers were apt to neglect attending to it until the pathological process had reached a considerably advanced stage. There were, however, certain sudden and severe cases which were properly designated as cholera infantum, or choleriform diarrhœa, and which bore a striking resemblance to true Asiatic cholera. In no other disease except this was such a marked change in the appearance of the patient so quickly produced. In referring to the anatomical characters of the disease he stated his firm conviction that it was an inflammatory affection from the first, an opinion which was based on his own personal observations in a large number of autopsies. It was really an ileo-colitis, as it was in the ileum and colon that the lesions were principally, although not exclusively, found.

On account of the length of the paper he was obliged to omit the portions of it relating to diagnosis, prognosis, and preventive measures, and pass on to a consideration of the curative treatment, which, he said, comprised four principal points. These were: (1) to give the best available food, (2) to supply the child with pure air, (3) to aid digestion, and (4) to use appropriate medicinal agents to check the diarrhœa. If the mother was not able to nurse her child and a wet-nurse could not be provided, it became the physician's duty to recommend some substitute for breast-milk. Cow's milk was universally conceded to be the best substitute for this; but, unfortunately, cow's milk in cities was extremely apt to be defective, and so likely itself to be one of the causes of diarrhœa. How to modify cow's milk so as to make it resemble human milk as closely as possible was one of the most valuable suggestions that emanated from an important congress of well-known German physicians interested in children's diseases, which was held in 1881, and this suggestion was, that peptonizing it had the effect of rendering the casein, which was the chief source of indigestion in the milk, readily digestible. In peptonized cow's milk it was found that the casein was in delicates flakes, instead of the hard masses in which it ordinarily existed in this fluid, and it was recommended that the process of peptonizing should be suspended as soon as the milk began to assume at all a bitter taste. In order to have the milk in the best possible condition for the child's use it was necessary to peptonize it in small quantities as required, and Dr. Smith then proceeded to describe the way in which it was now prepared at the New York Foundling Asylum, an institution with which he was connected: five grains of extractum pancreatis and ten grains of sodium bicarbonate being added to one gill of warm water and one pint of cow's milk. The liquid should be tasted frequently during the course of preparation, and as soon as it became in the slightest degree bitter the peptonizing should be arrested. This could be done either by heating the milk or by placing it on ice, and the latter he considered preferable, as this only suspended the process (which it was desirable should be renewed in the child's stomach), while the application of sufficient heat to arrest it had the effect of destroying the ferment. This peptonized milk was then to be further diluted, according to the age of the infant for whom it was intended.

Before the process of peptonizing was resorted to barley flour was frequently added to infant's food for the purpose of separating the cakes of casein found in cow's milk into smaller subdivisions, and this was probably the next best substitute. Liebig had been the pioneer in devising a physiological substitute for mother's milk, and by his process of converting starchy matters into grape sugar had conferred a substantial benefit. Having referred to the use of wheat flour and of malt extract in the preparation of the diet of infants and young children, he spoke in conclusion of several of the artificial foods now in use, omitting the part of the paper which was devoted to the medicinal treatment of summer diarrhœa.

Dr. H. A. Pooler, of Goshen, N. Y., and Professor Leeds, of the Stevens Institute, Hoboken, had been especially invited to participate in the discussion of Dr. Smith's paper. The former devoted his remarks principally to a consideration of the evils resulting from the adulteration of milk and its transportation from long distances, and to practical suggestions for securing a sufficient supply of pure milk produced within a comparatively short distance from the city. Through the efficient coöperation of the State Boards of Health of New York and New Jersey with the New York City Board of Health, however, much progress, he said, had already been made in the way of reform; so that within the last year or two the prevention of adulteration had reduced the supply of the city by about one hundred thousand quarts, and the milk was consequently of a much better quality. The result of this improvement, he thought, was shown in the fact that the mortality from diarrhœa was 3664 less in 1883 than in 1882. He also spoke of the importance of giving milk to young infants at the temperature of milk from the mother's breast, and in its preparation to add a sufficient amount of cream, since by diluting it with water in order to reduce the casein the quantity of fat was also proportionately reduced.

Professor Leeds spoke first of the impurities in the atmosphere as shown by the analysis of rain-water, which in falling became impregnated with them. Thus he had found rain-water collected in Hoboken to be very much more impure than any of the water taken from the head-waters of a number of streams in Eastern Pennsylvania, which he had analyzed for the purpose of advising in the selection of a new water supply for the city of Philadelphia. It had been a matter of surprise to him that the medical profession had not provided itself with more definite information as regards the purity and impurity of the atmosphere under different conditions, and he thought that it would be an excellent thing if the Signal Service Bureau of the government would supplement its meteorological reports with reports of the proportion of oxygen, organic matters, etc., in the atmosphere.

As regards the matter of infant feeding, he was of the opinion that we were much nearer a practical solution of this important problem than had been deemed possible ten years ago. This had been indicated by Dr. Smith, who had rightly attributed great importance to the results of the conference of German physicians to which he had referred. All authorities were agreed that cow's milk was, on the whole, the best substitute for mother's milk, and the practical point was, therefore, to determine what was the best way of preparing it for the infant's use. We did not know at the present time, he said, precisely what the elements were which made up the so-called casein of cow's milk, it having been determined simply that this substance was coagulable by acids. We did know, however, that there was a difference in the percentage and in the character of the albuminoids and the fats found in cow's milk and in human milk, while the milk-sugar was the same in both. As Dr. Smith had mentioned, it had been demonstrated that the casein of cow's milk could be rendered similar to that of human milk by peptonizing it. As to the fat in human milk, it was not all appropriated, since about twelve per cent. of it, as a rule, could be found undigested in the fæces of the infant. It was, therefore, supplied in excess by nature. In cow's milk the average quantity of albuminoids was twice that found in human milk.

In the preparation of a substitute for the latter he would suggest that to a pint of good cow's milk one pint of water should be added. If to this mixture two ounces of cream and four hundred grains of milk-sugar were added the percentage constitution would approximate very closely that of mother's milk. If, furthermore, the insoluble casein of the cow's milk were converted into soluble peptones by the action of extractum pancreatis, as recommended by Dr. Smith, it seemed to him that we should have a reliable substitute for the natural food of the infant, which would probably give satisfactory results if practically tested. The recent advances made in regard to this subject would, in the near future, he thought, work untold good in the reduction of the now enormous mortality among infants and young children.

At the conclusion of Professor Leeds' remarks **Dr. William H. Welch** presented the specimens from a case of

PRIMARY TUBERCULOSIS OF THE GENITO-URINARY APPARATUS.

It seemed to begin in the left epididymis, which was enlarged, mostly in the globus major, the distended tubules being filled with cheesy matter. The left testicle was involved, as well as the corresponding *vas deferens*, and the caseous substance mentioned could be traced up to the situation of the seminal vesicles and prostate gland. In that position, behind the neck of the bladder, a tuberculous abscess having a cavity of the size of an orange was found, and this had completely destroyed the seminal vesicles, as well as the central portion of the prostate gland, while at one point it opened into the prostatic portion of the urethra. Miliary tubercles were found throughout the whole length of the urethra, as well as in the bladder. The left ureter was dilated and filled with the same cheesy matter as other portions of the genito-urinary tract, and the left kidney was also the seat of extensive tubercular disease. Dr. Welch supplemented his presentation of the specimens with some remarks on primary tuberculosis of the genito-urinary apparatus in general.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. M. GREEN, M. D., SECRETARY.

January 12, 1884.

Dr. T. M. Rotch, present by invitation, reported a case of Malformation of the Vagina closely simulating in its external appearances exstrophy of the bladder.

CASES OF PREGNANCY COMPLICATED WITH FIBROID TUMOR OF THE UTERUS.

Dr. W. L. Richardson reported two cases of Pregnancy Complicated with Fibroid Tumor of the Uterus.

Case I. The patient was a stout married woman, twenty-seven years of age, whose general health had always been good: the catamenia had usually been regular and not profuse, lasting four to five days; but for a few months preceding pregnancy the flow had been rather light colored.

There was nothing especial noticed during pregnancy except that nausea was much more marked in the later than in the earlier months. There was no œdema. The urine contained a slight trace of albumen; but no casts were discovered.

The patient entered the Boston Lying-in Hospital for her first confinement.

The os dilated very slowly under chloral and ether. After sixty hours the breech, the presenting part, began to descend, and in two hours it reached the perinæum, where it remained. After ten hours, as no advance was making, the fœtal heart beating 200 per minute, and the woman becoming much exhausted, the patient was etherized.

Examination showed that one foot was pressing against the symphysis pubis, preventing the advance: the foot was pressed up with difficulty. The conjugate diameter was found to be narrowed. The fillet was now tried, but could not be passed: finally a tape was passed around the thigh by means of a hard rubber catheter. The fillet was tied to the tape, and thus was drawn around the groin.

The body was extracted without much difficulty; but forceps were necessary for the aftercoming head: the child was still-born.

There was no hæmorrhage. The placenta was retained and had to be removed by the hand passed into the uterus. The patient was given a douche every six hours, and ergot twenty minims every three hours, with enough morphia to make her comfortable.

On the following day her temperature rose to 102° F., she was very nervous and excited, and complained of great pain in the abdomen, which was tympanitic and tender on pressure.

The catheter was necessary. The inner surface of the perinæum was black: iodoform was applied.

On the fourth day large sloughs were discovered which included most of the vaginal surface. She was given a douche every six hours followed by an iodoform spray. While the nurse was absent from the room the patient got out of bed.

On the sixth day she slept a great deal and when awake seemed in a dazed condition: she talked much in her sleep. When asked a question she repeated the answer several times. Bromide and chloral did not quiet her. The pulse had become much smaller, the lochia scanty and very foul: vaginal douche with iodoform every four hours.

On the seventh day the tongue was dry brown and cracked: the fundus of the uterus was still at the umbilicus: the vaginal walls were a mass of sloughs. The patient was taking several pints of nourishment daily: had an attack of urticaria.

On the ninth day, after several large dejections, she seemed somewhat brighter, but her mind was wandering and she was very restless and talkative.

The urine was dark brown, acid, specific gravity 1017 to 1021; indican increased, urophæin and urea normal, uric acid much increased; very slight trace of albumen. The sediment contained much uric acid, and an occasional blood globule and hyaline cast, the urine resembling that of renal hyperæmia of carbolic-acid poisoning. The iodoform was at once omitted, but was soon resumed though very sparingly.

For the next week the patient's general condition was much improved. The temperature and pulse both fell nearly to normal, she slept better, and was more rational. The vaginal discharge was very offensive; but the sloughs had nearly disappeared.

On the seventeenth day it was noticed that the vaginal discharges came away in gushes, were exceedingly foul, of a slaty color, and purulent in character: the fundus of the uterus was just below the umbilicus. The patient now became more restless and delirious, and her general condition was much worse, the temperature and pulse rising. Abdominal tenderness had about disappeared. Iron and malt were given.

On the twenty-second day she had two decided chills.

On the twenty-fifth, after much pain in back and abdomen, a large foul mass was discharged from the vagina, which Dr. Whitney pronounced a sloughing fibro-myoma.

For the next three days her condition remained about the same, the temperature rising to 103.5° F., and the pulse to 125: the vaginal discharge was still intermittent and very abundant, foul and purulent.

After these three days her condition improved decidedly: she became much less delirious: the temperature and pulse both fell; but there was a marked morning rise with an evening remission. The discharge had nearly ceased.

On the seventh day after the discharge of the tumor temperature and pulse were nearly normal. She was much more rational, but still made frequent attempts to get out of bed.

On the twelfth day after the discharge of the tumor, the thirty-sixth day after her delivery, she had practically recovered: her mind was clear, the vaginal discharge had ceased, the walls of the vagina were healthy, and the patient was sitting up.

Examination forty-three days after delivery, and seventeen days after the expulsion of the tumor: Uterus somewhat fixed; position, slight anteflexion; cervix, stellate laceration; depth, three and three fourths inches. Vaginal walls appeared healthy, with the exception of a few depressions and cicatrices resulting from the loss of tissue.

Case II. In the service of Dr. W. E. Boardman. The patient, thirty-nine years of age, entered the Lying-in Hospital for her eighth confinement in the seventh and a half month of her pregnancy, having been advised outside to have labor induced because of a fibroid tumor of the uterus.

Examination under ether showed an interstitial tumor the size of a child's head in the anterior uterine wall.

On consultation it was decided to defer the operation one month in the interest of the child. On the following day, however, labor began, and in seventeen hours she was delivered of a still-born child weighing two and one quarter pounds: the presentation was half breech. The membranes and placenta came away without difficulty. She was given a vaginal douche every morning and evening, and a poultice over the abdomen.

The temperature rose the next evening to 103° F., and with the exception of one day remained above 100° F. throughout.

The patient was given supporting treatment, with small doses of ergot and iron frequently repeated, and enough morphia to make her comfortable.

By the fifth day the lochia had become very offensive, and there was much pain in the abdomen. The evening temperature was, however, but 101.4° F., and the pulse 90.

On the sixth day the tumor presented at the os, partly protruding.

On the eighth day the tumor was visible at the vulva; it was sloughing, and very offensive; small bits were readily detached.

The pulse throughout had remained below 100, but for the past three days the temperature had been gradually rising. The same treatment was continued.

On the tenth day, Dr. Boardman being absent from the city, the tumor was thoroughly removed by Dr. Richardson, and the uterine cavity washed out with dilute carbolic acid. That night the pulse ran up to 120, but the temperature fell somewhat.

Abundant food and stimulants were given, but on the following day peritonitis supervened, the patient collapsed, and at the end of six hours died. There was no autopsy. During the whole course of her sickness there had been no well-marked symptoms of septic absorption. She was nervous and worried about her condition from the first, slept and eat poorly, and seemed weak and exhausted.

Dr. O. W. Doe also reported briefly a case of fibroid of the uterus complicating pregnancy to illustrate how little injurious effect this condition may exert at the time of labor in contrast with the serious results in the two cases reported by Dr. Richardson.

Mrs. P., thirty-nine years of age, first noticed, in February, 1878, an enlargement in the right iliac region about the size of a small orange. It was dull on percussion, and there was no sense of fluctuation. This continued to increase slowly in size until, in the latter part of 1881, the enlargement extended five inches above the level of the umbilicus on the right side.

The catamenia last appeared on August 23, 1881, having been always regular previously. Three months later she sought medical advice in London as to the cause of this sudden cessation, and was assured that it was only the beginning of the menopause. A month later, still feeling uncertain as to her condition, she returned to Boston, and consulted her family physician, Dr. J. M. Smith, of Barnstable, who found undeniable evidences of pregnancy, and referred her to Dr. W. H. Baker, of Boston, to whom I am indebted for the case.

She came under my care early in March. At that time the abdomen was very much distended and tense, the tumor apparently occupying that portion of the abdomen to the right and four inches above the level of the umbilicus. Respiration was very much impeded when lying down, so that in April she was obliged to rest in a semi-erect position, and suffered very much from sharp lancinating pains throughout the abdomen. These became so wearing upon her, and the dyspnœa so troublesome, that I decided to induce labor at the end of the eighth month.

The membranes were easily ruptured at 9.10 A. M. on April 29, 1882, the cervix being quite soft and yielding. Pains came on one hour later, and the child was born at 4.15 P. M., a healthy boy, weighing six pounds. One peculiarity of the labor was that after every vaginal examination the pains would recur frequently and be very strong in character, continuing so for nearly an hour, when they would become weak. There was no undue hæmorrhage, ergot having been given a short time before the expulsion of the child, and the convalescence was uninterrupted, the patient being able to travel sixty miles by rail at the end of four weeks.

After the placenta was removed the fibroid could be easily felt, and was about the size of the head of a ten-pound child; by vaginal examination it was found to extend to, but did not involve, the cervix.

On October 13th following the labor the probe passed eight and a half inches, and the tumor seemed to have diminished slightly in size.

Dr. B. Cushing, present by invitation, read a paper[1] giving the experience of the Ste. Mary's Infant Asylum and Lying-in Hospital. The inference which he seemed to draw from a study of the cases was, that however desirable it may be among the rich for the accoucheur to come to the bedside of his patient enveloped in a cloud of carbolic vapor, the poor do very well under pure air, if they are kept clean and do not have too much "doctoring."

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[1] See Boston Medical and Surgical Journal, vol. cx., No. 16.

Dr. Richardson stated that at the Boston Lying-in Hospital about half the admissions had been of single women, among whom the percentage of deaths was considerably in excess of the mortality in the other half.

Recent Literature.

Post-Nasal Catarrh and Diseases of the Nose Causing Deafness. By Edward Woakes, M. D., Senior Aural Surgeon and Lecturer on Diseases of the Ear, London Hospital, Senior Surgeon Hospital for Diseases of the Throat, London. Illustrated with Wood Engravings. Philadelphia: P. Blakiston, Son & Co. 1884.

The same physiological principles which underlie a previous work by the author (Deafness, Giddiness, and Noises in the Head) are brought forward in this volume to explain the catarrhal lesions of the nose and naso-pharynx, of which ear disease is a secondary issue. The results of the author's studies have led him to certain conclusions in regard to the functions of the vaso-motor system, which are at variance with the opinions held by experimental physiologists at the present time. We search in vain through the book to discover the nature of these studies or for proof to substantiate the theories which the author advances. We shall, therefore, simply state what the hypotheses are upon which this work is founded without comment.

Disease of the nose and naso-pharynx, acute or chronic, of whatever kind, the author regards as a neurosis. The specific seat of this neurosis is to be found in the superior cervical ganglia of the sympathetic chain and their afferent and efferent branches. The anatomical elements of these ganglia are in organic communication with their afferent and efferent sympathetic nerves, which have a reflex relationship with one another. The ganglia are not only independent centres, but they are correlative organs as well, by means of which afferent tissue impressions from one direction are reflexly referred to a totally different tract where they take effect upon the blood-vessels, and, by enlarging or contracting their calibre, produce alterations of nutrition or of function in the areas affected by them.

The phenomena of an ordinary cold are explained by vessel dilatation in the parts of least resistance in response to an afferent impression (a chill) reflexly transferred from the respective ganglia of the sympathetic chain to the efferent area in the nose. The causes of the hypertrophic as well as the atrophic forms of catarrh, follicular disease of the pharynx, and pharyngitis sicca are all to be sought in some ganglionic neurosis and consequent vaso-motor deficiency. Why diseases pathologically distinct should have this common origin is accounted for by the assumption, which the author believes to be a fact, namely, "that every distinct histological structure has special corpuscles in the ganglion assigned for the regulation of the blood supplied to it, and with which set of corpuscles the nervi-vasorum of such special structures are severally connected." To show to what length the author's reflex-excito-vaso-motor-sympathetic theories lead him we quote the assertion, to be found on page 64, "that the mismanagement of a quinsy may compel the supervention of a peri- or endocarditis."

Turning from the theoretical to the practical portion of the book we find a good deal that is most useful. The importance of directing therapeutic measures to the nose and its adjacent structures in treating certain forms of ear disease is very properly strongly insisted upon. The external nasal meatus is considered the physiological end of the Eustachian tube. The tube is, therefore, as liable to obstruction from stenosis of the inferior nasal meatus as it is from a similar condition occurring in any part of its length. In the author's experience it is rare for the subjects of nasal polypi to complain of deafness, an exemption which is due to the fact that they seldom intrude into the inferior channel of the nose, which is the true auditory passage. The chapter on The Hygienic Management of the Catarrhally Predisposed is excellent. The description of the methods of examining the fauces, nose, and post-nasal space and the anatomical survey of these parts leave nothing to be desired. It is stated that Sir Andrew Clark was the first in England to draw attention to the post-nasal space and its contents. His contribution appeared in 1864, and in it the statement is made that the normal secretion of the pharyngeal tonsil is competent to convert starch into sugar.

The treatment of the different forms of nasal stenosis causing deafness is carefully considered. Besides mentioning all of the most useful modern operative procedures for removing the hypertrophied mucous membrane covering the turbinated bones, the author details his own method, which he employs in extreme cases. His instruments consist of a pair of thin forceps and a *nasal plough.* The part to be removed is first grasped by the forceps, then the plough, — a kind of gouge, — made to adapt itself to the forceps, is pushed along the nostril, and slices off whatever is to come away. The operator has never experienced any ill effects from the use of this instrument. We have had no experience with it, but we are aware of the hæmorrhage which sometimes follows the removal of this hypertrophied tissue even when done with the écraseur, and when considerable time — one to two hours — has been devoted to the operation. Although we cannot subscribe to all that this work contains we cordially acknowledge its originality. The whole of it is interesting, and a great deal of it of real value.

A Year Book of Therapeutics for 1883. Edited by Royal W. Amidon, M. D. New York: G. P. Putnam's Sons. 250 pages.

This work is made up of short abstracts of articles on therapeutic topics which have appeared in many medical journals during the year 1883.

By far the larger number are taken from foreign journals and comparatively few from American publications. About fifty pages are given to a translation of a paper by Dr. Gaetano Rummo, entitled Experimental Studies on the Physiological Action of Iodoform.

Those who have not had an opportunity to look over the current literature on this subject may find the work of interest.

Clinical Lectures on Mental Diseases. By T. S. Clouston, M. D. Edin., F. R. C. P. E. To which is added an Abstract of the Statutes of the United States and of the several States and Territories relating to the Custody of the Insane. By Charles F. Folsom, M. D. Philadelphia: Henry C. Lea's Son & Co. 1884.

In this book Dr. Clouston endeavors to treat the subject under consideration from a clinical and practical point of view. The book is, in fact, as will be seen by the title, a collection of lectures of a clinical nature. As is said in the preface, a good clinical lecture will appeal to the facts of disease as seen in actual cases. Direct appeals to the facts of nature make much more impression on students than any amount of elaborate descriptions. From these considerations Dr. Clouston was led to publish these lectures as a textbook for the use of his own students, and he hopes they may be useful to practitioners as well.

Two hundred and sixty cases of mental disease are described and embodied in these lectures, and there being only 550 pages in the book we thus get a case to every two pages. This is viewing the material somewhat as we would a pile of wood with reference to measuring it by the cord, but it gives in one word an idea of the wealth of clinical material made use of. Here are plenty of colors to paint with; can the writer make pictures out of them? Has he the ability, the patience, the discrimination, the accuracy to use them aright? The reader need not long hesitate on this point, for the attention and interest of the veriest tyro will be excited and caught, and held, we will venture to say, quite to the end of the volume.

The cases serve as a solid foundation of facts, which bring into clear relief the points which the writer wishes to emphasize, and we easily catch his meaning, and retain at least an impression of what he desires us to understand for some time afterward.

There are three ways of using cases in a medical book. The first is the general way, which is largely for effect, or for the purpose of showing extraordinary results. The second way is that of detail, in which trivial and unimportant data are mentioned at such length that the salient points are lost sight of, and the reader is wearied, bored, and uninstructed. The third way is the happy mean, in which there is enough of detail to show careful observation, but more particularly a short, definite, concise grouping together of the data which give an illustrative picture of the theory to be elucidated. The latter method Dr. Clouston is evidently master of. He details a case in such a satisfactory manner that it is nearly as good as having the patient in actual flesh and blood stand before us. Further than this he goes however, for his cases and text dovetail into each other so cleverly that both are necessary for a harmonious whole.

Dr. Clouston's book is not and cannot be regarded as a text book, except in as far as it is a text-book for his students, and this is all that he intended. It is not a *system* of psychology. It is not a history of all that is known on the subject, comprised within a certain number of pages. And we regard it as fortunate that it is not, as in that case the amount of original research which now characterizes it might have been partially wanting. As it now stands it is an able and original contribution to the literature of an obscure and difficult subject founded on the experience and study of an unusually acute and practical observer.

Like other writers on mental diseases, Dr. Clouston gives us a system of classification. It is not German, it is not Swedish, but it is the old system of the English, modified and improved. Though a classification of symptoms and not real diseases, it is as good as can be hoped for at the present time. The states of morbid mental depression and painful feeling are classed under one head. Most cases of melancholia might be called mental pain, or Dr. Clouston would suggest *psychalgia*. This characteristic of pain in melancholia is important and should not be lost sight of, and therefore the name suggested is a good one. Carrying the same idea of nomenclature further, mania is called *psychampsia;* circular insanity, *psychorhythm;* monomania, *mono-psychosis*, etc.

In studying mental diseases it is necessary to bear in mind the general functions of the brain, and to make this clear Dr. Clouston places in a column on one side of several pages many of the normal conditions of the brain, and in a column on the other side the departures from, and modifications of, these conditions which tend to develop insanity. Such a means of comparison as this is very instructive, and graphic enough to adhere to the most logy of intellects.

One of the things that Dr. Clouston does not do, and for which he deserves our profound gratitude, is to give us a definition of insanity. Apparently the lower the ability of the writer on medical psychology, which Dr. Clouston aptly calls "Mind — as it concerns Doctors," the more determined is he to define with the greatest ambiguity that which may be regarded as undefinable. It strikes us as nearer the mark to deal gently, or not at all, with the incomprehensible, preferring rather the better part of shedding our feeble lights on such matters as we may be fairly supposed to understand.

The Abstract of the laws of the United States and the States and Territories, by Dr. C. F. Folsom, of Boston, has been carefully and well done, and is an important addition for the reader in this country to what may be considered as one of the most valuable series of original observations on mental diseases of recent years.

Elements of Modern Chemistry. By Adolphe Wurtz, Member of the Institute, etc. Second American Edition. Translated and Edited from the Fifth French Edition by William H. Greene, M. D., etc. With One Hundred and Thirty-two Illustrations. London and Philadelphia: J. B. Lippincott & Co. 1884.

The first American edition of this book was noticed at some length in the Journal of February 12, 1880. We therefore consider it sufficient to state in this place that the book has been carefully revised and considerably enlarged. The most extensive additions are to be found in the organic portion, naturally, as the chief progress during the last few years has been made in this branch of the science. This book is one of the best of the smaller treatises on chemistry.

— The hypodermic use of pilocarpine is recommended for obstinate hiccough. A writer in the *St. Louis Courier of Medicine* describes a case in a man of seventy-three where the use of .03 gramme succeeded after all other attempts had failed. Other favorable results are also quoted.

Medical and Surgical Journal.

THURSDAY, JULY 10, 1884.

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AN ACT RELATING TO MEDICAL EXAMINERS AND CORONERS.

Influenced, doubtless, by the fortunate experience of their Massachusetts neighbors, the legislators of Rhode Island have enacted a law bearing the descriptive title which is given above. Under its provisions the executive of the State has appointed twenty-four "able and discreet men, learned in the science of medicine, to be medical examiners." Of these twenty-four twenty are regular physicians in good standing, and we are assured that, on the whole, the selection of the new officers will be considered judicious, and will give very general satisfaction throughout the State.

The act contains a brief but very significant section repealing all statutes heretofore in force concerning coroners and their inquests, and provides that the present law shall go into full effect on the first day of the present month. The people of Rhode Island are now living, therefore, under the new system of inquests, and it is to be hoped for them and their public morals that the medical examiners will have very infrequent calls to duty.

In one important respect the Rhode Island law departs from the precedent offered in the Massachusetts statute. So far as the medical examiners and their duties are concerned the two statutes are very nearly identical, but in the matter of inquests Rhode Island, it appears, required what Massachusetts dispensed with, namely, the services of coroners. In Massachusetts when a medical examination results in the conclusion that a death was by "violence" the medical examiner reports the case to the justice of the district or municipal court in whose jurisdiction the dead body was found or the death occurred, and this judge holds the inquest and makes record of the material circumstances, issuing, if need be, a warrant for the arrest of suspected parties. But in Rhode Island the established judicial administration was deemed insufficient or unsuited to undertake this work, and "coroners" are to be elected triennially by the town councils for each town to do inquest duty. We see no advantage in this plan of independent inquest officers except the purely theoretical one that the interests of an accused person would, presumably, be a little safer under the decisions of a judge who had not previously heard the testimony at an inquest, and thus had not received a twist in his judgment. Moreover, the name "coroner" has an unfortunate odor sticking to it. If it were necessary to retain the office (bereft, of course, of the coroner's jury) we wish that the Rhode Island wisdom might have devised another title, such as "inquest justice;" even the incomprehensible Scotch name, "procurator fiscal," is preferable to coroner.

But waiving these objections, it gives us unalloyed satisfaction to record that the excellent Massachusetts plan of inquests is making progress, and that the lawmakers are recognizing the fact that a medico-legal investigation has two distinct elements, a medical element and a legal one. Certainly nothing could be more successful than the practical operation of this principle during the past seven years in Massachusetts; we confidently anticipate equally good results wherever the experiment is tried.

It is worthy of mention that the Rhode Island statute goes into effect upon the very day on which the second septennial period of the law begins in our own State. The commissions of those medical examiners who were appointed in June, 1877, and who continued in office during their full term of seven years, having expired, Governor Robinson has recently given an illustration of his conservatism and has paid a compliment to the good judgment of his predecessor, Governor Rice, by reappointing, with but a single exception, all the original medical examiners who were candidates for his favor. In three conspicuous cases the re-appointment was not desired, and these places have been filled very worthily by the choice of regular physicians of excellent reputation. It is greatly to the credit of the entire corps of medical examiners in Massachusetts, that upon a careful canvass of their record and after a clear notice that charges of misconduct, bad habits, and inefficiency would receive proper attention, his Excellency has seen no reason to make changes in the list, except in the one case which was controlled largely by geographical considerations.

We hopefully predict a continuance of the excellent success which has thus far attended the Massachusetts method of investigating violent deaths.

THE TRAVELERS' POCKET PHARMACY.

A contemporary for whose opinions we have in general great respect discourses in a timely manner on the hygiene of summer travel. There is certainly room for a caution of the traveling public as to impurities of drinking-water, and as to the importance of prompt and regular attention to the calls of nature during the vicissitudes of journeying. Attempts to popularize a knowledge of hygiene are not to be lightly discouraged. But there is a limit, we believe, to the drugs which it is wise to place in the grip-sack of the average summer tourist. The list which our contemporary suggests as comprising the "small stock" that travelers will do well to provide and carry for preventing illness is as follows: —

"Seidlitz powders, cathartic pills, brandy, cholera-mixture, paregoric, aromatic spirits of ammonia, soda-mint, ginger, a few opium suppositories, quinine pills, and prepared mustard leaves."

Some of these drugs are tolerably active in their effects, and it is pleasant to know that the average traveler is so familiar with their therapeutic uses as to be able to employ them with precision and safety.

We have only to add that surgical casualties ought to be equally well provided for, and to suggest a similarly efficient armamentarium in that department. The prudent paterfamilias will do well to take in his valise a stomach pump, a few catheters, some splints, an amputating knife and saw, etc. Possibly it would be well to add a *trephine* and a *tracheotomy tube*.

We regret to say that it appears that the English are not always to be similarly trusted in carrying about and administering active drugs. Just after writing the foregoing paragraph we chanced upon the report of evidence before a coroner's jury in England by which it appeared that one Josiah Haynes, an auctioneer, having gone on a journey one day with his housekeeper, Mrs. Todd, gave her at the Victoria Park Station, as she was feeling ill, a "calomel" powder, "telling her to take it at bedtime, as it would do her good." It appeared, moreover, that about four years ago Mr. Haynes, wishing to kill a dog, had purchased from a friend, a druggist in Somersetshire, some strychnia, some of which he gave to the dog and killed it, whilst the remainder was put away in a box. A few days before the day in question, whilst turning over some papers, he accidentally came across it, and put it in his waistcoat pocket for safety. On reading an account of the case in the papers he felt in his pocket for the strychnia and found it gone, whilst the calomel powders were still there. Mrs. Todd had passed the "calomel" along to her father, wishing also to do him good. The parent unfortunately died of strychnia poisoning. The jury censured Haynes.

THE CHOLERA IN FRANCE.

Since our last issue the epidemic of cholera has been gradually increasing in Toulon and Marseilles, at least if it is to be measured by the records of daily deaths and of cases in the hospitals. The panic among the inhabitants cannot be taken as a measure of the extent of the disease or of the reality of the danger, for it has evidently been very much exaggerated. On the other hand, the intelligence emanating from government sources seems as little reliable for an exact index of the real condition prevailing.

Quantities of people are reported as having fled from Toulon and Marseilles, and trade in the former place seems to be completely at a stand-still. Later reports tend to confirm the statement that the disease was introduced at Toulon by the French transport Sarthe returning with troops from the East, and it is now said she had fourteen cases of cholera on board when in the Red Sea.

The weather in the South of France has been extremely hot of late, and the usual condition of the streets, the drains, and the houses in southern French towns is such as to offer, in connection with hot weather, all necessary facilities for the propagation of a disease like cholera. The unreasoning fear of the populace is another element aiding its spread.

Our general government and local authorities are, we are glad to see, taking suitable steps to guard against an introduction of the disease, and against extreme consequences should it find a lodgment on our shores, an event entirely within the bounds of possibility.

Whilst deprecating panics and senseless fears, it is equally our professional duty to discourage foolish writing about this disease being something else than true cholera, or that having reached its present proportions in populous centres, it is likely to retire propitiated by the limited number of victims hitherto secured. True courage and foresight are not made manifest by depreciating an enemy, least of all one which in times past has proved itself so formidable.

THE FISKE PRIZES.

Too little publicity, as it seems to us, is given to the details of the Fiske prizes, as by the limitations of the will of the late Dr. Fiske the trustees of the fund are permitted to advertise only in certain newspapers. For 1885 four prizes are offered, each of two hundred dollars. The following are the subjects proposed: —

I. Original Investigations in Household Hygiene.

II. The Present State of the Germ Theory of Disease.

III. Physiological and Pathological Effects of the Use of Tobacco.

IV. Migraine; its Nature and Treatment.

Every competitor for a premium is expected to forward to the secretary of the trustees, Charles W. Parsons, M. D., Providence, on or before the first day of May, 1885, free of all expense, a copy of his dissertation, with a motto written thereon, accompanying it with a sealed packet having the same motto on the outside, and his name and residence within.

The author of the successful dissertation must transfer to the trustees all his right, title, and interest in it for the benefit of the Fiske fund.

These prizes were established by the late Dr. Caleb Fiske, at one time president of the Rhode Island Medical Society, and the fund is in the hands of trustees who are members of that Society.

FREE BATHS IN WINTER.

Dr. Tauzsky, of New York, is endeavoring to inaugurate a movement for securing public bathing facilities for the poor of the great cities in the winter time. Free public baths for the summer months have become an established institution in many of the large cities, but warm baths for the "great unwashed" the year round are not as yet generally provided. We understand that the Society of Ethical Culture of New York has in its possession quite a large sum of money contributed for the elevation of the condition of the poor, some of which it is proposed to expend in this way. Compulsory cleanliness is harder to secure than even compulsory vaccination, but it seems a pity that those of the poor who desire to be clean should not have facilities therefor. It is possible that emigrants whose condition warrants it might be compelled to bathe before landing, and if with the bath-house were associated a wash-house for the simultaneous purification of their clothing, it is possible that the measure might be of some value as a preventive of disease. We understand that in London arrangements of this sort are provided under the auspices of the several parishes. In this country obviously the proper channels for the establishment of such baths are the local boards of health.

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MEDICAL NOTES.

NEW YORK.

— In the final estimate of city expenses for 1883 $25,000 was appropriated to enable the Commissioners of Charities and Correction to furnish additional accommodation for the pauper insane in their charge. A short time since the Commissioners selected 1067 acres of land on Long Island, between Farmingdale and Deer Park, for this purpose, and have now secured the approval of the Board of Estimate and Apportionment in making the purchase with the above appropriation.

— Dr. William M. Smith, Health Officer of the port, has issued orders to the effect that mails leaving French ports after the 28th ult. shall be detained for disinfection at quarantine, and that all French mails arriving from English or other ports, which leave such ports subsequent to the 30th ult. without having been disinfected at the port of departure or at the port where received from French ports, shall also be detained until disinfected. In addition, he requests that French mails via English ports should be isolated from other mails on shipboard, in order to facilitate the disinfection and release of such mails and prevent the necessity of disinfecting mails from other ports.

— The street-cleaning department seems to be fully alive to the necessity of keeping the streets as clean as possible, in view of the possible introduction of cholera into this country, and the Commissioner has intimated to the contractors that he would require of them more than ordinary attention this summer, particularly in those neighborhoods where some of the people are known to be careless in observing the ordinances and the rules and regulations of the Sanitary Code.

— Dr. Joel Foster, one of the oldest practicing physicians in the city, died on the 29th of June, after an illness of about six weeks. He was born at Barnard, Vt., March 10, 1802. He first studied medicine under Dr. Gallop at Woodstock, Vt., and afterwards attended lectures at the Jefferson Medical College of Philadelphia, from which he received the degree of M. D. He practiced for a number of years at Schoharie, N. Y., and in 1855 came to New York to live. When the President called for volunteer surgeons after the second battle of Bull Run, Dr. Foster secured thirty-seven physicians from the Academy of Medicine and started for the field, afterwards receiving honorable mention for his services. He was the oldest life member of the State Medical Society, and was one of the founders of the Academy of Medicine.

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MEDICO-LEGAL NOTE.

— The *Weekly Drug News* remarks that Victor C. Vaughan, M. D., and James H. Dawson, Ph. C., have made experiments (abstract from Contributions from Chemical Laboratory, University of Michigan) with the view of determining whether or not arsenious oxide (common white arsenic) would diffuse through the body after it had been mixed with water and injected into the mouth or rectum after death, this having been the most important question which arose in a murder case tried in Michigan within the past year. They concluded, from experiments on dead bodies, that arsenic is widely diffused through the body when introduced after death, and that, therefore, in a case of suspected arsenical poisoning, if arsenic has been introduced into the body after death, the finding of the poison in the various organs is no proof that the arsenic was introduced during life and was the cause of death. Arsenical embalming fluids may, according to the above, be used as a means of covering up crime, and this fact should be borne in mind in cases of supposed poisoning by arsenic.

Miscellany.

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TREATMENT OF ACUTE ABSCESS.

PROFESSOR SMITH, of the University of New York, has recently published in the *Æsculapian* his treatment of acute abscess, for which he claims in the case reported a saving of at least a month to the patient. He advises a similar procedure in carbuncles and furuncles, in fact wherever there is necrosed tissue. The method is as follows: —

(1.) Wash well with soap and water and a flesh brush the skin at the seat of the operation, then douche with a solution of corrosive sublimate 1 to 500. (2.) Open the abscess with a knife treated with a solution of carbolic acid 1 to 30, the opening to be of a size to admit the nozzle of a Davidson syringe. (3.) Force out the contained pus by pressure, when it ceases to flow, introduce the nozzle of the syringe, well disinfected, the edges of the wound being held firmly around it, and distend the cavity to its fullest capacity with corrosive sublimate solution 1 to 5000. (4.) Force out the injected fluid by pressure. (5.) Repeat this injection as often as may be necessary until the water flows away quite undiscolored. (6.) Lay the cavity open to its full extent, keeping up irrigation with a corrosive sublimate solution 1 to 2000. (7.) Cut away all shreds of tissue, and scrape off gently any granulations that may be upon the living surface of the abscess by means of a curette, until a perfectly clean surface is everywhere apparent. (8.) Ligature any small vessels that may be bleeding with carbolized ligatures, thorough irrigation being kept up with the corrosive sublimate solution throughout. (9.) Close the wound with an uninterrupted suture, except at the most dependent point, where a small opening must be left for drainage. (10.) Over the drainage opening place a disinfected sponge to absorb discharge. (11.) Sprinkle the external wound and adjacent skin with iodoform; cover the wound well with folds of gauze between which iodoform is well sprinkled; over the layers of gauze apply a dressing of borated cotton, and if in a limb, secure all by a light plaster-of-Paris bandage. In the case reported, that of a man with abscess in the thigh, the result of injury, and large enough to contain a pint, and to get at which an incision two inches deep had to be made, the suffering and fever before the operation was considerable. Temperature 103° F. The day after the operation the temperature fell to normal, and did not again rise to 100°; the pain ceased entirely, the appetite returned, and he enjoyed sound and undisturbed sleep. The patient stated that from his recovery from the anæsthetic he had felt entirely well. The dressing was removed on the eighth day. The wound was entirely closed, and though there was some thickening of the tissues involved in the injury there was no tenderness. He could walk without pain or inconvenience, and there was a rapid subsidence of the swelling of the part.

A MEMORIAL PROFESSORSHIP TO THE LATE DR. S. D. GROSS.

The Alumni Association of Jefferson Medical College has inaugurated a movement to secure the endowment of a memorial professorship, to be designated the S. D. Gross Professorship of Pathological Anatomy. The profession at large, the personal friends of the late Professor Gross, and others who may be interested in such an object, are cordially invited to participate in this recognition of the services and extended reputation of the late Professor Gross.

Contributions may be sent to Dr. R. J. Dunglison, Treasurer, Lock Box 1274, Philadelphia P. O.

THE DIAGNOSIS OF SCIATICA.

A diagnostic point in sciatica is given by De Beurmann[1] which we have never seen alluded to. The patient lying on his back with the muscles of the leg and back relaxed, the affected leg is raised while in complete extension and flexed upon the abdomen. This causes marked pain in the course of the sciatic, especially intense at the sciatic notch, and the movement is resisted. If, then, the limb be lowered, and while the leg is flexed on the thigh, the latter is again carried up on to the pelvis, no pain will be felt. This phenomenon depends on the fact, verified by De Beurmann in experiments on the cadaver, that great tension of the sciatic is exerted by flexion of the thigh when the leg is extended, but almost none when the leg is flexed.

In the diagnosis of sciatica from crural neuralgia, affection of the femur, or coxalgia, in all of which diseases the position of the limb and seat of the pain may be similar, this manœuvre is of value. If the nerve trunk is free of disease there will be no difference in the amount of pain caused by the extension or relaxation of the nerve by the different positions indicated. In other words, in affections other than sciatica, the movements given to the coxo-femoral articulation will be equally painful whether the leg is extended or flexed on the thigh.

THE MORTALITY OF MARRIED LIFE.

The *Journal of the American Medical Association* cites some rather remarkable statements from an address delivered by Dr. William Pratt, of London, as follows: —

"According to statistics the married life is not only the purer, producing the minimum of evil-doers and criminals, but it is also by far the most healthy. Take the male sex, and it is seen that from twenty-five to thirty years of age one thousand married men furnish six deaths; one thousand bachelors furnish ten deaths; one thousand widowers furnish twenty-two deaths. The figures, however, become very unfavorable if the marriage be contracted before twenty. Out of eight thousand young men married before twenty their mortality has been found to be, before marriage, only seven per one thousand; after marriage, fifty per one thousand. With respect to the female sex we find a similar advantage of marriage over celibacy, but on the same condition. If young girls be turned into wives before twenty a like mortality befalls them which befalls the other sex. Everywhere young married people from eighteen to twenty years of age die as fast as old people from sixty to seventy years of age. The common sense and common law of Western Europe have with perfect justice marked twenty-one as the age of maturity. After that epoch, however, marriage should be contracted as soon as practicable. It is the healthiest and the happiest life; the best for the individual and for the community."

THE DRAWBACKS OF RANCH LIFE FOR THE PHTHISICAL.

In a paper on Colorado for Invalids in the current number of the *Popular Science Monthly*, Dr. Samuel Augustus Fisk thus corrects what he considers a common mistake among Eastern consumptives going to Colorado for their health, as well as among the physicians sending them: —

It may be a good thing for the person affected with phthisis to go into ranching after he has been in the State long enough to know what he is about in doing so; but we enter a protest against the idea, which is somewhat prevalent in the East, that in order to recover his health the invalid should go on to a ranch and herd sheep. The reasons for making this protest are that such advice is frequently given, and, as we are led to judge, by physicians who have but the vaguest ideas of the nature of the course they are prescribing. The invalid, on coming to Colorado, needs to have life made as easy and pleasant for him as possible. As a rule, the sacrifices he has to make, in consequence of his sickness, render him for the time being peculiarly dependent upon sympathy. He should be so situated that he can have the benefit of pleasant society and diverting companionship. Now, ranch life is necessarily somewhat rough and usually monotonous, and when it comes to herding sheep even a vigorous man, new at the business, finds it most irksome and fatiguing. We think it is a great mistake to increase the trials of an invalid by imposing upon him, in addition to a separation from his friends, an almost entire absence of companionship, a life that is rough in the extreme, and a dietary that is innutritious, uninviting, and monotonous. The average ranch house is a miserable shanty, out on the plains, away from neighbors, where the usual diet is bacon floating in grease; hot flapjacks, made fresh with water and baking-powder; molasses, and coffee without milk.

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[1] Arch. de Physiologie, April, 1883, also Revue Médicale, April 19, 1884.

If it be possible for the invalid to go to some nice ranch, near a village, where he can have good, wholesome diet, pleasant associates, out-of-door occupation, and where his hours will necessarily be regular, then the conditions for recovery are excellent. Such ranches are to be found. But the average ranch, on the plains, is much inferior to the average farm-house in the East, and the surroundings and diet are such as, at first, to try very severely the strongest man.

The matter of diet is one to which, as it seems to the writer, sufficient attention is not usually paid by the invalid. He should be so situated that he can have an abundance of plain nutritious food, well cooked, and a variety sufficient to invite the palate. It stands to reason that if the waste in the system, produced by the disease, is not only to be made good, but if, in addition, as is desirable, the patient is to put on fat, he must take into his system material sufficient in quality and quantity wherewith to do it. Any place, be it on a ranch or at a boarding-house, where the table is uninviting and nauseous, is a bad one for the invalid, and one that he should leave as soon as possible. It is on this ground that we base a good deal of our objection to ranch life. As indicated, the food is usually poor in quality, insufficient in quantity, and indigestible. Contrary to what might be supposed, even on a cattle-ranch, milk is seldom to be had, and if the black coffee is to be drunk *au lait*, it is made so with condensed milk. The life, also, is monotonous and trying, and the distance from medical assistance, if needed, is so great as to be, in hæmorrhagic cases, of serious importance. The writer is convinced that ranch life, the so-called "ranch-cure for consumptives," especially those just out from the East, is a mistake; and he is certain that its good qualities, in giving occupation and an out-of-door life, are to be had without the bad ones by going to some one of the many towns on the eastern slopes of the Rocky Mountains.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 28, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Measles.
New York	1,340,114	771	418	34.84	12.87	20.93	3.64	3.90
Philadelphia	927,995	402	179	22.32	11.76	12.72	1.04	1.43
Brooklyn	644,526	304	170	39.27	13.20	28.71	2.31	1.32
Chicago	632,100	245	136	36 45	7.20	13.50	4.95	9 90
Boston	423,800	159	54	15.75	17.64	2.52	5.67	—
Baltimore	408,520	237	154	21.84	9.66	18.48	.84	—
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	176	94	29.64	13.11	25.08	1.14	—
New Orleans	234,000	188	76	21.73	11.13	11.13	—	2.12
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	116	79	38.70	11.18	34.40	—	—
Pittsburg	180,000	87	15	16.66	8.33	—	4.76	5.95
Milwaukee	142,400	48	30	24.96	8.32	4.16	2.08	—
Providence	119,405	33	8	27.27	21.21	15.15	—	—
New Haven	62,882	24	—	12 48	12.48	8.32	—	—
Nashville	54,400	23	10	33.80	26.10	25.10	4.35	—
Charleston	52,286	34	13	8.82	8.82	2.94	—	—
Lowell	71,447	21	8	9.52	9 52	9.52	—	—
Worcester	69,442	18	12	44.44	16.66	16 66	5.55	—
Fall River	62,674	22	11	18.22	9.11	18.22	—	—
Cambridge	60,995	15	4	6.66	6.66	—	—	—
Lawrence	45,516	9	4	33.33	—	22.22	11.11	—
Lynn	44,895	12	2	16.66	25 00	—	8.33	—
Springfield	38,090	16	2	—	18.75	—	—	—
Somerville	31,350	6	2	16.66	16.66	16.66	—	—
Holyoke	30,515	12	6	41.66	25.00	41.66	—	—
New Bedford	30,144	2	0	50.00	—	50.00	—	—
Salem	29,503	16	1	—	37.50	—	—	—
Chelsea	24,347	10	3	10.00	10.00	10.00	—	—
Taunton	22,693	1	0	—	—	—	—	—
Gloucester	21,400	4	1	—	25 00	—	—	—
Haverhill	20,905	11	1	—	18.18	—	—	—
Newton	19,421	7	1	14.28	28.56	—	14.28	—
Brockton	18,323	5	0	40.00	20.00	20.00	20.00	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	5	0	—	40.00	—	—	—
Fitchburg	13,433	4	1	—	—	—	—	—
Massachusetts towns	355,060	66	17	15.20	12.16	4.56	4.56	—

Deaths reported 3109 (no reports from St. Louis and Buffalo): under five years of age, 1512; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 913, diarrhœal diseases 561, consumption 283, lung diseases 174, diphtheria and croup 82, measles 71, scarlet fever 54, typhoid fever 39, whooping-cough 27, malarial fevers 25, cerebro-spinal meningitis 21, erysipelas 18, small-pox eight, puerperal fever five, typhus fever two. From *scarlet fever*, New York 17, Philadelphia 11, Baltimore six, District of Columbia and Milwaukee three each, Brooklyn, Chicago, Boston, and New Orleans two each, Cincinnati, Pittsburg, Providence, Waltham, Weymouth, and Salisbury one each. From *typhoid fever*, Philadelphia eight, New York and Chicago five each, Boston, Baltimore, and New Orleans three each, Pittsburg, Providence, and Nashville two each, Cincinnati, Milwaukee, New Haven, Charleston, Worcester, and Lynn one each. From *whooping-cough*, New York and Brooklyn four each, Boston, Cincinnati, and New Orleans three each, Chicago, Baltimore, Pittsburg, and Milwaukee two each, District of Columbia and Somerville one each. From *malarial fevers*, New York eight, Brooklyn and New Orleans four each, Chicago and Baltimore three each, Philadelphia two, District of Columbia one. From *cerebro-spinal meningitis*, New York five, Philadelphia and Chicago three each, Milwaukee, Nashville, and Worcester two each, Boston, Cambridge, Brockton, and Peabody one each. From *erysipelas*, New York seven, Chicago, Boston, and Baltimore two each, Philadelphia, Brooklyn, Cincinnati, Providence, and Worcester one each. From *small-pox*, New Orleans four, Philadelphia two, Baltimore and Nashville one each. From *puerperal fever*, New York, Chicago, Boston, Milwaukee, and Charleston one each. From *typhus fever*, New York two.

One case of small-pox was reported in Cincinnati; scarlet fever 38, diphtheria 23, and typhoid fever five in Boston; scarlet fever 34 and diphtheria six in Milwaukee.

In 105 cities and towns in Massachusetts, with an estimated population of 1,420,465 (estimated population of the State 1,955,104), the total death-rate for the week was 15.41 against 15.00 and 14.40 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending June 14th, the death-rate was 19.8. Deaths reported 3326: acute diseases of the respiratory organs (London) 246, whooping-cough 121, measles 163, scarlet fever 66, diarrhœa 63, fever 33, small-pox (London 27, Liverpool five, Sheffield one) 33, diphtheria 29. The death-rates ranged from 13.4 in Brighton to 28 in Wolverhampton; Bradford 14.7; Nottingham 17; Leicester 17.7; London 18.8; Birmingham 18.8; Sheffield 18.9; Leeds 22.8; Manchester 23.9; Liverpool 26.9. In Edinburgh 21.4; Glasgow 26.7; Dublin 21.7.

For the week ending June 14th, in the Swiss towns, there were 38 deaths from consumption, diarrhœal diseases 21, lung diseases 20, typhoid fever 21, diphtheria and croup six, whooping-cough three, measles two, erysipelas two, small-pox one, scarlet fever one. The death-rates were, at Geneva 21.4; Zurich 15.7; Berne 37.8.

The meteorological record for the week ending June 28th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
June, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 22	30.100	66	76	61	51	68	74	64	NE	E	SW	10	11	6	C	C	C	—	—
Mon., 23	30.166	68	79	55	68	43	92	65	SW	SW	SW	6	12	8	C	F	C	—	—
Tues., 24	29.840	74	84	61	91	71	85	82	SW	S	SW	15	12	10	O	F	C	—	—
Wed., 25	29.830	68	87	58	76	97	100	91	SW	SE	N	11	7	12	C	R	R	—	—
Thurs., 26	30.232	57	60	54	93	72	81	82	NE	NE	NW	14	14	4	O	O	C	—	—
Fri., 27	30.225	62	71	52	82	65	86	78	N	SE	Calm.	5	9	0	C	C	C	—	—
Sat., 28	30.288	67	84	56	73	52	70	65	W	SE	W	4	9	7	C	C	C	—	—
Mean, the Week.	30.097	66	87	52				75										17.55	2.73

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM JUNE 28, 1884, TO JULY 3, 1884.

Hartsuff, Albert, major and surgeon (Fort Riley, Kansas). Granted leave of absence for one month, with permission to apply for one month's extension, to take effect when his services can be spared. Paragraph 6, S. O. 130, headquarters Department of Missouri, June 25, 1884

Middleton, J. V. D., major and surgeon. Ordered to relieve Surgeon B. E. Fryer from duty as post surgeon, Fort Leavenworth, Kansas, on or before July 1st. Paragraph 5, S. O. 133, headquarters Department of Missouri, June 28, 1884.

Dickson, Jno. M., captain and assistant surgeon. Assigned to duty as post surgeon, Alcatraz Island, California. Paragraph 3, S. O. 71, headquarters Department of California, June 19, 1884.

Girard, A. C., captain and assistant surgeon. Granted leave of absence for six months, with permission to go beyond sea. Paragraph 11, S. O. 148, A. G. O., June 26, 1884.

Girard, J. B., captain and assistant surgeon. Ordered to relieve Surgeon W. E. Waters from duty as post surgeon, Plattsburg Barracks, Plattsburg, N. Y. Surgeon Waters, upon being relieved, directed to return to his proper station (Madison Barracks, N. Y.). Paragraph 3, S. O. 131, headquarters Department of the East, June 30, 1884.

Benham, R. B., first lieutenant and assistant surgeon. From Department of Dakota to Department of Texas.

Gorgas, William C., first lieutenant and assistant surgeon. From Department of Texas to Department of Dakota.

Paragraph 8, S. O. 150, A. G. O., June 28, 1884.

Walls, Philip G., first lieutenant and assistant surgeon. From Old Fort Colville, Washington Territory, to Fort Cœur d'Alene, Idaho. Paragraph 3, S. O. 89, headquarters Department of Columbia, June 23, 1884.

LIST OF OFFICIAL CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING JULY 5, 1884.

Willis, H. M., surgeon, detached from Naval Hospital, Brooklyn, ordered to U. S. S. Lancaster.

Dr. J. S. Sayre, Dr. F. J. B. Cordeiro, appointed assistant surgeons. Commissions dated 27 June, 1884.

Books and Pamphlets Received. — Auscultation, Percussion, and Urinalysis. An Epitome. Edited by C. Henri Leonard, A. M., M. D. Fully Illustrated. Detroit, Mich. 1883.

The Sixtieth Annual Report of the Officers of the Retreat for the Insane at Hartford, Conn. April, 1884.

Address.

THE PHYSICIAN A POPULAR EDUCATOR.

THE ANNUAL DISCOURSE BEFORE THE MASSACHUSETTS MEDICAL SOCIETY, JUNE 11, 1884.

BY JOHN CROWELL, M. D., OF HAVERHILL.

Mr. President and Fellows of the Massachusetts Medical Society, — We live in an age remarkable for successful industry in every department of human skill and enterprise. Each day adds to the stock of man's inventive faculty in the curious mechanisms for the quicker and easier accomplishment of labor, and the splendid results are seen in every town and hamlet in the land. Material prosperity, as one of the elements of our civilization, is also shown in the colossal fortunes amassed in our great cities, and in the monuments of skillful labor that adorn our streets, and stretch from sea to sea in a net-work of iron bands.

We hear the almost boastful cry of the successful men of vast financial achievements, and the lips of praise do swift homage to those giants who control great enterprises and hold the stock market in the palm of the hand.

Amid the devotion paid to the energy and the force that move this mighty machinery of business, amid all our admiration for the wealth that builds cities, founds schools, endows hospitals, and contributes to the thousand charities that appeal to our humanity, let us inquire into another phase of a nation's greatness, — the intellectual elements that shape the thought and give direction to those movements without which material prosperity would work its own decay.

The present age is quite as remarkable for scientific investigation and philosophic research, for acute analysis and profound questioning, as for any material success and splendor. Against the achievements of the Rothschilds and the Vanderbilts we place the Pasteurs, the Darwins, the Spencers, and the Bains. Philosophy, science, and philology are also the products of our time, and stand side by side, and quietly but firmly hold their own with the more pretentious forms of success that mark the industry of man.

The exalted position of the medical profession to-day is largely due to the patient investigations of the scientist in the laboratory and with the microscope. While the great world has pursued its noisy way the scholar has been busy in the recluse of his inner sanctuary[1] solving those problems, and unfolding those subtle theories that challenge our respect and admiration. Recent contributions to medical science form an epoch in our history. Who can estimate the value of that treasure-house, the chemical laboratory? What wonders in pathological analysis are daily unfolded by the microscope! How, by the invention and use of the most delicate instruments, can we detect the faintest indication of incipient disease! How, by minute dissection and a thorough understanding of the adaptation and relations of bone and muscle, fibre and tissue, some of the recent triumphs in operative surgery have been obtained! How broad and generous have become the modes of thought that give shape to our literature, and place our profession among the foremost of the learned systems of the world!

This is seen in the sharpness with which the investigations, and theories, and hypotheses of scientists are challenged by their peers. No sooner does Robert Koch startle and delight the medical world by his Ætiology of Tuberculosis,[2] showing the result of a long series of microscopical experiments, than a score of enthusiastic investigators review his experiments, and out of Stricher's laboratory comes Spina[3] with a series of investigations calculated to completely overthrow Koch's theory which had made so promising a foot-hold, denying by the same line of experiments his most brilliant conclusions.[4]

To the physician whose experience stretches over a quarter of a century the condition of medical science to-day is full of sharp contrasts. He compares the abundant facilities for preliminary study with his own scanty resources in the days of his pupilage. He visits yonder building[5] with all its generous spaces and magnificent appliances; he examines the curriculum with its wide range of general and technical study; he sees the system of teaching and the methods of illustration conducted from a broader basis of scientific research and investigation; he looks with admiration upon the enthusiasm of the student, as, with an honest emulation, he works in the laboratory or in the dissecting room; and he mentally exclaims, "Would that I were young again, to revel in all this wealth of advantage and opportunity!"

But this evolution in medical teaching is but the outgrowth of humble beginnings. The foundations laid by the fathers were well laid, and, year by year, we have witness of their wisdom, and zeal, and patience in preparing the way for these larger results.

How redolent of honest praise are the names of Warren and Jackson and Bigelow. What a debt of gratitude we owe to those great lights in medical science that have just disappeared from our horizon. How universal is the homage paid to the genius of Sims, and Parker, and Gross, whose wise and profound teachings, combined with the labors of our eminent living teachers, have shaped the methods, and guided the research of modern thought and investigation, —

> "With truth's directness, meeting each occasion,
> Straight as a line of light."

The example of the University in establishing a sounder system of medical education has been productive of wholesome results. And, inspired and impelled by the example, the other great medical schools of the land are revising their courses of study, and broadening and deepening their methods of instruction. So that the ambitious student, desirous of obtaining a thorough preparation for the great duties of our profession, finds the doors of science wide open to invite and to receive him, that she may unfold her mystic stores.

As the preparations for the work of the profession are so ample, as the avenues to success are so full of dignity and honor, how steadfast and noble should be the allegiance to the hand that has led us on. For, as Lord Bacon expresses it: "I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereto."[1]

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[1] "The laboratory is the forecourt of the Temple of Philosophy; and whoso has not offered sacrifices and undergone purification there has little chance of admission into the sanctuary." — Huxley, Life of Hume.

[2] Die Etiologie das Tuberculose, Berliner klin., 1882.

[3] Studien ueber Tuberculose, Wien, 1883.

[4] And what is this contest but a repetition of the profound conception of Aristotle, that "Science begins when from a great number of experiences one general conception is formed which will embrace all similar cases."

[5] New Building of the Harvard Medical School, Boylston Street, Boston, dedicated October 17, 1883.

The physician, by the special discipline for his work, and by the delicate relations he sustains to his patients, enlists confidence, and his opinions carry the weight of authority. He stands at those gateways of anguish that open and close upon mortal life. His fingers are upon those delicate keys whose slightest touch vibrates through a thousand strings. His well-attuned ear detects the faintest discord in the vital harmonies, and the varying phases of morbid action cannot escape the searchings of his aided vision.

But there are relations of a more general character that demand our attention. The great public is ignorant upon matters of vital interest, and it may not be unprofitable to use the indulgence of this hour and consider the attitude of the

PHYSICIAN AS A POPULAR EDUCATOR.

What, then, are some of the topics that claim attention in our *general* relations to the community? Foremost stands the prolific question of Sanitary Science.

The literature of hygiene has been scattered broadcast over the land during the last decade. Science has been busy in unfolding to the public the more common sources of disease as found in house-drainage and in the ordinary methods of disposing of sewage. When the modern system of household appliances was first introduced into our dwellings we were so fascinated with the ingenious contrivances that they found a ready place in every part of our houses. Bedrooms, passageways, and halls were adorned with the glitter of marble basin and plated faucet, while convenient bathrooms opened directly into the sleeping apartments of guests, without much reference to the character of the plumbing or the construction of sewers. As a result, fine residences became the receptacles of filth distributed in an ingenious net-work of piping, as if contrived especially for the introduction of disease from cellar to attic.

This condition has been largely modified by the intelligent oversight of Boards of Health, and under the guidance of our State Board rapid strides are being made towards the remedying of many popular delusions. Still, much ignorance prevails concerning the simplest rules of health as respects domestic arrangements, and the physician by his familiarity with the location and the construction of houses can, by timely interference, reform many grave errors, and prevent their repetition in newly-constructed homes.

The ambitious and successful business man, anxious to build a fine house, is apt to leave the plan of its construction entirely to the architect, who too often concentrates his thought upon the æsthetic aspects of the structure, so appealing to the eye and so gratifying to the taste. The essential provision for plumbing and drainage is dealt with as of secondary importance, and the house of our friend and patient which we are expected to praise and admire is full of the results of bungling plumbing, and leaky pipes and a damp cellar unconsciously defile and dim the pretentious beauty of drawing-room and hall.

Says a recent writer of high authority in sanitary science: "The majority of even the best houses are now very badly drained, and are subject to the production of sewer-gas at many points between the outer wall of the house and the fixtures within it. Occupants are generally careless or ignorant of this fact, and the verdict of 'my plumber' is still considered by the average house owner a sufficient certificate of good sanitary condition. Large traps clogged with accumulations of putrefying kitchen waste, soapy compounds, fæcal matter, etc., are still the rule rather than the exception."[2]

(*To be concluded.*)

Original Articles.

A CASE OF MYXŒDEMA, WITH AUTOPSY.[3]

BY E. G. WEST, M. D.

In reporting this case of myxœdema, in which I was so fortunate as to secure an autopsy, — the only one, I believe, which has taken place in this country, — I shall try to mention fully *all* the symptoms noted by me and their development, even at the risk of being too diffuse, in order that in the subsequent study of this strange disease this report may be as full as possible, and for fear that some of the symptoms which may now appear of no value may prove to be of the greatest importance.

My patient, Mrs. P., was of American parentage and fair circumstances. Her father died at the age of fifty-eight of insanity, brought on by a blow upon the head. Her mother, now sixty years old, has a highly nervous temperament, and has suffered from gastralgia and other neuroses since her girlhood.

Mrs. P. was born and brought up in Roxbury, now a part of Boston, and during childhood contracted and passed through the measles, whooping-cough, and chicken-pox, but never had an attack of scarlet fever. At the age of fourteen she began to menstruate, and at seventeen had a mild attack of typhoid fever, which left no sequelæ. At about the age of sixteen, during the winter, when the snow was deep, she was suddenly awakened from a deep sleep, in the middle of the night, by a steam fire engine being stuck in the snow immediately in front of the house. She thought the house was on fire, which produced such a shock that for days, even weeks, she would often start out of sleep greatly frightened and crying, but this soon passed off. I note this fact inasmuch as almost all observers have noticed a similar mental shock, though very much worse than this. She has always enjoyed a peculiarly happy home and many advantages. She was very pretty and bright, and a good pianist, indeed, she played the piano long after her marriage for the Sunday-school of Rev. Dr. Patterson's church. She was slightly built, and never a strong girl, though generally considered as enjoying good health. She was married at the age of twenty. A few weeks after this she caught her hoop-skirt and fell down the front steps and hurt herself badly, but soon recovered. After this she fell down a whole flight of stairs. Soon after this, also after a severe effort, she suffered pain in the epigastrium, probably of the same nature as her mother's gastralgia, and for a long time this would return after almost every immoderate exertion.

At the age of twenty-two, or two years after her marriage, she gave birth to her first son. Nothing abnormal occurred during either gestation or parturition, and she was about the house in four weeks, but seven weeks after the birth both her legs swelled somewhat, and gave her considerable trouble, and although a diagnosis of phlegmasia dolens or milk leg was made by the practitioner in attendance still she was not confined to her bed, and there were no inflammatory symptoms, and she suffered an aching sensation rather than a pain. I shall anticipate by saying that no evidence of inflammation of the saphenous vein was found at the autopsy, and that the true beginning of the disease was here, thirteen years before her death, though the family set the beginning four years later. She lost a good part of her milk at this time, and was obliged to use the bottle as well as her breasts. After a few weeks she improved in health, and gained flesh, but was never as strong as before. About this time also she had a second attack of the measles, which left no observable sequelæ.

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[1] Maxims of the Law, Preface.

[2] Sanitary Drainage, North American Review, August, 1884. George E. Waring, Jr.

[3] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, May 14, 1884.

Two years after this, when she was twenty-four years old, she gave birth to her second son, with no abnormal symptoms before, during, or after confinement, except a great clumsiness, which came on during this pregnancy, and grew gradually worse through her whole life, and was the only symptom of incoördination present.

Two years after this, or when she was twenty-six years old, she gave birth to a daughter, and while carrying this child she suffered from cold and chilly sensations, and the legs and the veins in them swelled somewhat and gave her a great deal of trouble. She passed through parturition, and got up without abnormal symptoms of any sort. It is from this time that the family dates the origin of her disease, though I think it commenced soon after the first child. After nursing the babe for three months a feeling of pressure and heaviness was experienced in her arms, and later in her legs. They felt, as she expressed herself, as if her baby had rested upon them all night; this gradually grew worse, and her arms felt as if they would give out while practicing the piano, and soon she was obliged to give up playing at church. She used to joke about having "milk legs in her arms" at this time. While nursing the baby she also had severe pains in the abdomen, and thought she was going to have gastralgia through her life like her mother, but this passed off afterwards. She weaned her babe after nine months' nursing. At this time she described her legs as looking like "pig pork." Her appetite was good, and she slept and ate well, indeed, she could sleep at any time. Her back was very lame.

Mrs. P. was now treated with electricity, and improved somewhat, but during the next two years she became very fleshy, and grew gradually weaker and more clumsy, and her tongue thick and stiff. At this time the children (who are now quite strong and bright except the girl, who is rather delicate) had whooping-cough, and she got thoroughly tired out and was worse. She was not confined to bed, but after an attack of faintness when once alone, she gave up her cares and housekeeping and lived with her mother. She described herself as having no limberness anywhere, and as feeling like a stiff old lady even though she was only twenty-eight years old. She never went out alone, and when taking an airing she felt as if she could never get back, and dreaded crossing the street, and felt like catching hold of the fence and walking by it. She dreaded crowded places, and was liable to suddenly become dizzy and faint. She was always chilly, and wore a shawl even in hottest weather, her hands and feet were especially cold, and her head hot. She could not apply herself to anything.

At about this time Dr. Cheever removed several polypi from her nose, but with no undue hæmorrhage.

These symptoms continued with greater or less severity until December, 1881, when she first came under my observation and care. She had not then menstruated for over eleven weeks, and was fearful that she was again pregnant, which fortunately proved not correct. She had never miscarried in her life. Her condition then was like one suffering from chronic Bright's disease, for which I must certainly admit that I took it, and it was not until after constant observation, taking notes, and study of her symptoms, that I was shaken in my diagnosis and had to abandon it.

Her temperament was the most calm and deliberate, unruffled and unirritable I ever saw, even with her children who were apt to be rogues. Her facial appearance was very noticeable, all expression seemed to be ironed out, so to speak. The hair had fallen out so that it was very thin, and from the line of demarkation of the forehead backward there was a peculiar yellowness of the scalp as if stained by bile pigments, but this was the only part of the body so stained, and the pigment still remained even after repeated washings in borax, sapo viridis, etc., etc. Her forehead was clear, but the eyelids were very characteristic; they would puff out and become baggy and translucent, sometimes to such an extent that she could hardly open her eyes, and it was never wholly absent. The contents could be driven out by pinching, like the ordinary œdema. She was troubled about seeing, but sight was better in the right eye than in the left, and when I examined the eyes with the ophthalmoscope there seemed to be a sclerosis of the vessels of the retina about the optic nerve, and the whitish patch was larger in the left than in the right eye.

Her cheeks were swollen, nose was broad and thick, and lips large and protruding. The swelling here was not like that of the eyelids, which was puffy and translucent, nor the peculiar appearance of Bright's disease, but a thickness and heaviness. The skin of her whole body was rough, more especially of the hands and feet, and more noticeable in cold weather than in warm, and had the appearance of a general chronic eczema. Her cheeks had a most remarkable dusky reddish-purple hue which never faded away, but always remained and gave a semi-appearance of health to the casual observer. The mucous membrane of the lips and mouth had a deeper color even to a violet, except the tongue, which was pale in comparison.

Her tongue was entirely too large for her mouth, and indented with her teeth, and although her throat was large and broad still I could only with difficulty press down the tongue so as to get a view of the pharynx, which was rather pale than otherwise. The flesh of the tongue also had a harder feel than is usual.

She had lost some of the acuteness in hearing, and to a great extent that of taste and smell, especially when she was suffering from a cold, when everything tasted alike, and she had no choice in foods.

And here it would be well to mention her great liability to attacks of coryza and mild bronchitis, of catching cold, which she was continually doing in spite of precautions, and particularly in cold weather, when she was almost never free from it. Another peculiarity of the throat was that she had great difficulty in swallowing solids, being obliged to make several attempts before she succeeded.

Her voice and speech were very characteristic. The former was roughened, lowered, and nasal, and the latter was slow, deliberate, and rather indistinct. She dreaded talking with strangers. Her intellect was bright and clear; she was often witty, and understood her condition. There was nothing observable in the neck from external examination for or against the presence or absence of the thyroid gland. She slept soundly, though she almost always dreamed and snored very loudly. She would drop asleep in the daytime, particularly in the winter, even while talking; once she went to sleep while eating her breakfast, at another time while making her bed, which was about the only work she did.

She felt best in the hottest days of the summer, when she would perspire quite freely; at no other time did she perspire at all. (This was a valuable suggestion in my treatment of the case.)

There were no symptoms pointing towards the heart and lungs, and upon physical examination I found nothing. The heart sounds were clear and distinct though rather weak, and the size of the organ was normal. Her stomach was always in capital condition, her food never hurt her and seemed to be well assimilated. Her bowels were regular; as a rule, she had two movements a day, rarely she was constipated for a few days, and two or three times she suffered from a slight diarrhœa, while under my care. Her abdomen was enlarged, and she felt a dull heaviness, and imagined she might have a tumor of some sort. Her back gave her a great deal of trouble, she could not get upstairs with anything heavy in her hands, and complained of giving out altogether. She had some leucorrhœa, which yielded to mild treatment.

Upon examination of the abdomen the walls were so flaccid I could feel the spine. The liver was normal in size, as was also the spleen, but there was evidence of some fluid in the flanks which changed with the position of the patient. This afterwards disappeared and the walls grew quite fat.

Both legs were large and white and she used them clumsily. They were cold in all weather, and she could not get warm till night. There was a small amount of pitting on pressure over the tibiæ, but nowhere else. Her feet were enlarged, and horny in feeling, like her hands. She could not balance herself upon one leg at all; when trying this she experienced a tickling and numb sensation in her knees, which was especially marked when she knelt down. She could distinguish heat from cold when applied, and the tactile points on the calf were about two inches apart as tried by the compass. During the beginning of the disease, as I have noted before, she would often joke about having "milk legs" in her arms. Her hands and fingers were swollen, but by no means club-shaped or like a fin as they have been described, though they had a tendency that way. She could write a beautiful hand even to the last. Her pulse stood at about seventy five beats per minute. I never had occasion to take her temperature, but I have no doubt from the general coldness of the skin that it would have stood below normal, as most observers have found it to be.

She remained under my care from December, 1881, to the following November. As I have noted before, she consulted me about her catamenia, which had been absent eleven weeks, but the uterus was not enlarged, and under iron and tonics, good feeding, and diuretics she came around at fifteen weeks, and was fairly regular for more than a year after, when she was again troubled in this way.

I kept a special watch over her *urine*, making it one of the chief guides to my treatment.

The first examination which I made, on November 19, 1881, gave the specific gravity 1012, and no albumen nor casts. On December 7th, when the quantity was about thirty ounces, the specific gravity was 1015, and there was a slight trace of albumen and *no sugar*, and only a very few hyaline and granular casts. This was the only time I ever found any casts, though I have spent a great deal of time hunting for them, in the thirty odd analyses that I made. Her urine was measured each day for the first week she was under my care without treatment: the largest quantity was thirty-eight ounces and the lowest twenty-three ounces, with an average of twenty-nine ounces, and specific gravity 1010.

It will be seen from this that the excretion of solids, especially urea, by the kidneys was about one fourth of what it should have been in a healthy person. The kidneys reacted very quickly under diuretics, and the quantity jumped to seventy-eight ounces on the second day, with specific gravity 1006, and slight trace of albumen. The record after this shows an average daily amount of about fifty-two ounces and specific gravity 1010. Out of thirty-three analyses, in two only was there a trace of albumen.

	Quantity in Ounces.			Specific Gravity.			No. of Ex	Albumen.
	Highest.	Lowest.	Average.	Highest.	Lowest.	Average.		
January, 1882	[illegible] oz.	[illegible] oz.	[illegible] oz.	1013	1008	1010	7	Once only slight trace.
February, 1882	[illegible]	[illegible]	56	1012	1007	1010	6	Once only slight trace
March, 1882	[illegible]	[illegible]	52	1013	1008	1010½	6	None.
April, 1882	[illegible]	[illegible]	[illegible]	1014	1007	1009	4	None.
May, 1882	[illegible]	[illegible]	50	1015	1007	1010	3	None.
June, 1882	[illegible]	[illegible]	44	1008	1005	1006½	2	None.
July, 1882	[illegible]	[illegible]	[illegible]	-		1009	1	None.
August, 1882	[illegible]	[illegible]	46	-	-	1007	1	None.
September, 1882	[illegible]	[illegible]	55	-	-	-	-	-
October, 1882	[illegible]	[illegible]	50	-	-	-	-	-
Just before treat. began	38	23	29		-	1010	1	None.
May 7, 1882	-		60	-		1012	1	None.

Mrs. P. improved considerably under treatment. She slept better, the eyelids improved, and water left the abdomen; her catamenia came about regularly, and she seemed to be gaining healthy flesh.

Dr. Minot was called in consultation in September, 1882, and thought that, upon the whole, it was a case of Bright's disease.

Dr. Edes saw her with me in October, about four weeks afterwards, and thought that it was a case of myxœdema. It was chilly weather by this time, and she was feeling a little worse. Her friends were very desirous that she should try that far-famed and much-advertised Warner's Kidney Cure, an example of one of the disgraces of our civilization. After a single analysis of her urine, a part of which I analyzed myself, the only abnormal thing about it being a low specific gravity, without seeing the patient Warner pronounced it the beginning of Bright's disease, and ordered his Cure. During the next six months she took forty-two bottles, with no effect whatever, except what might be practicably attributed to the diuretics and hot-air baths, which she did not give up. There was certainly no change for her good, and she was considerably worse when she returned to me.

I met the patient frequently during this period, and was called in to see the children several times, but it was not until the 17th of September that I again saw her professionally. Then she complained of dizziness, and the face and whole system seemed to have swollen more than ever, and the dusky reddish-purple of the cheeks had deepened.

She had much difficulty in swallowing, and the tongue was more swollen. She found considerable difficulty in using her jaws on account of stiffness, and finally just before her death she about gave up chewing, and I was obliged to recommend soups almost entirely for her nourishment. She was also troubled with dyspnœa on exertion, and would get very tired upon doing the smallest things. The dyspnœa was more observable when she was asleep and had no control over herself; then she had the peculiar "Cheyne-Stokes" respiration. She slept a great deal in the day-time, and the interval between the shorter and the long deep breath was often so great as to be alarming, and her mother would frequently shake her to awaken her. The face was more stupid, though her intellect was as as bright as ever. Her temperament was unchanged; the same calm and quietude. She spoke of a stuffy sensation in the nose, and upon examination I found and removed with a snare a mucous polypus, one piece of which was as large as the last phalanx of the thumb, but it did not seem to improve her speech much. There was but little hæmorrhage, and even that spontaneously stopped.

This was in the last of November, and the dyspnœa and difficulty in eating gradually increased until the 9th of December, when she died quite suddenly. During the last day or two she perspired quite freely, even though it was quite cold. She knew without my telling her that the end was near at hand, and her calmness was supreme. Her death cannot but be considered an accident in the disease, and due to the local cause, for her general condition was such that she could have lived at least many months longer, and possibly many years. Her bad dreaming had returned, and sometimes she seemed to dream when half awake and half asleep. The night before her death her husband had to light the gas before he could persuade her that she was awake. The evening of her death she appeared to enjoy herself very well, but that night she passed away quietly in her sleep, not even disturbing her husband, who was lying beside her. Her mother, who slept in the next room, became aware of her condition when she ceased snoring, which awakened her.

Unfortunately, I made no chemical or microscopical examination of the blood.

DIAGNOSIS.

As to the *diagnosis*, it would lie between chronic nephritis, pernicious anæmia, and myxœdema.

The examination of the urine would exclude *chronic nephritis;* besides, the general œdema was not of that kind. It was hard, and would not pit with pressure, except at the beginning of the disease, when I think it was due to anæmia, which the iron and diuretics soon remedied. Besides, after nine years' standing one would expect to find hypertrophy of the heart, which was not present.

As to *pernicious anæmia*, it is unfortunate that there was no examination of the blood, which would have excluded this; there was no appearance of that intense anæmia in the facies; on the contrary, a flush in the cheeks; the long duration would be against it. There were no hæmorrhages; indeed, wounds healed very well. The œdema was not that of a general anasarca. There were no paroxysms of fever, but, on the contrary, rather a constant lower temperature than normal.

We have left that strange disease, *myxœdema*, all of the characteristic signs of which were present. Indeed, the description of Dr. Drewit's case[1] would correspond to my own almost exactly, as did also that of Dr. James Allan[2] and Dr. Edes's first case: They were all women; the duration of the disease; the mental strain, shock, or hardship; the rapid growth from slight to large, fleshy women; slow, languid motion; fear in going about alone; the even disposition, never irritable; chilliness even in summer; absence of perspiration; partial loss of taste, sight, and hearing; the round, fat face; the swollen, translucent, wax-like skin; the broad nose, thick, coarse, purple lips; the dusky, reddish-purple cheeks; the eyelids pendulous and transparent; the tongue pale, swollen, too large for the mouth; the abdomen enlarged, as if with fat, nowhere pitting on pressure; the universal swelling; the skin of extremities rough, hard, and scaly; no disease of the lungs, heart, liver, or kidneys; temperature lower than normal, 95° F.; urine of low specific gravity, and diminished excretion of solids; no albumen nor sugar. In addition to these, my patient, among other things, showed great liability to catching cold, difficulty in swallowing, stiffness of the jaws, sleepiness, and the "Cheyne-Stokes" respiration.

ÆTIOLOGY.

The usual cause has been assigned to mental shock or great hardship, which has worn on the nervous system. This certainly was not the case in my patient.

Possibly the shock she received at sixteen, and the heavy fall between twenty and twenty-one, may have favored it, but it is highly improbable. She had an exceedingly happy home, and everything possible for her comfort.

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[1] As reported in British Medical Journal, December 1, 1883.
[2] British Medical Journal, February 9, 1884.

It seems more probable that the insanity which developed in the father and the neuroses in the mother were transmitted in some unaccountable way, and became this strange disease in the child.

TREATMENT.

When I was convinced it was myxœdema instead of chronic Bright's disease, I could find no suggestions, and therefore adopted expectant treatment. I found her urine of low specific gravity and half its usual quantity and therefore gave diuretics, which brought the urine up to normal amount and increased the elimination of solids, though even then it reached only one half the normal amount. I tried bromine, digitalis, etc., but obtained the best results from simple cream-of-tartar water, one pint in twenty-four hours, which seemed also to keep her bowels in good condition. I ordered tr. ferri chloridi fifteen drops after each meal, and alternated every three or four weeks with the ferri et quiniæ citr. She certainly improved under these tonics; her catamenia became almost regular. She lost even the slight œdema over the tibiæ, the fluid in the abdomen disappeared, and the walls of the latter filled out with fat.

Besides this I used the galvanic or constant current of electricity for several weeks, but obtained no positive results from it. After a time I tried Fowler's solution of arsenic, but her stomach would not bear it. Having noticed during the first summer how much better she felt in the hottest of days, as soon as cool weather came on I used the hot-air baths under a wire cradle, carrying the temperature to even 125° F. before she would commence to perspire, which seemed to give her considerable relief and kept the skin from being so rough and hard. Sometimes I got a better effect by suspending a damp sponge under the cradle. I have spoken of her constant coryza and bronchitis; nothing seemed to allay them to any extent as long as the weather was cold and wet, and I did not care to give opium.

Under Dr. Minot's advice I used twice only a decoction of jaborandi, but it acted more on the salivary gland than it did on the skin, and made her sick.

When she returned to my care after taking Warner's Kidney Cure for six months she had lost a great deal of ground. I put her upon iron, but its virtue seemed to have gone. Then I ordered a pill containing one twentieth of a grain of strychnia three times a day. A hot-air bath twice a week was advised, but she was so weak they exhausted her a great deal. I can speak very confidently of the benefit derived from hot-air baths and the old tr. ferri chloridi. Perhaps if she could have borne jaborandi well it could have taken the place of the hot-air baths.

The chief centre of the disease was in the throat and neck, though it extended pretty well through the whole system. The immediate cause of death was evidently suffocation, and an accident.

Professor Ord describes the disease as seated in the connective tissues of the body, this being swollen and jelly-like and œdematous with mucin; death is caused by the patient being smothered in his own connective tissue.

There seems also to be a curious resemblance between myxœdema and cachexia strumipriva of Kocher, of Berne, who points out that almost a similar development of symptoms takes place when the thyroid gland has been totally removed.

By the kind invitation of Dr. R. T. Edes I have seen his recent case in the City Hospital, which certainly presented the same characteristic facial expression as my patient, only in a less degree; the eyes pendulous, nose broadened, the lips thick, large, and purple, and the same dusky reddish-purple hue of the cheeks, which gave a great semblance to health. As to the other symptoms, as Dr. Edes has said, they have not developed yet.

The post-mortem examination was made by Drs. Fitz and Whitney at three P. M. December 9, 1883. Rigor mortis present; interior of the body warm.

Skin everywhere unusually pale. Face and upper part of the neck swollen, as if œdematous, but not pitting on pressure. Lips of a pale blue tint. Legs slightly œdematous, pitting on pressure; a moderate quantity of serous fluid escaped from a cut through the skin.

Examination of the brain presented nothing abnormal.

Section through the parietes of the abdomen and thorax showed abundant subcutaneous fat tissue. The voluntary muscles wherever examined were remarkably pale.

The pericardium contained about two ounces of pale yellow fluid. The right side of the heart was distended with dark liquid blood, and the blood throughout the body was fluid. The left ventricle was contracted and empty. The valves and cavities showed nothing abnormal. The muscular substance was of a pale gray color and without microscopic evidence of any degenerative change.

Old pleural adhesions were found at the apices of the lungs. The lower lobes were injected; not œdematous. The bronchi and pulmonary vessels presented no abnormal appearance.

The organs of the mouth and neck were removed subcutaneously. The tongue was symmetrically increased in size, perhaps one half. With the exception of marked pallor of the muscle nothing abnormal was observed on section. Examination of the hardened tongue showed frequent pigmentation of the apices of the papillæ. The œsophagus presented no abnormal appearances.

Larynx small. True and false cords swollen, elastic; glottis narrowed. Section through the swollen mucous membrane showed a homogeneous, glistening, translucent surface, and the swollen tissue did not shrink in the course of twenty-four hours.

Microscopic examination gave evidence of an occasional fatty degeneration of the fibres of the thyro-arytenoid muscle. The sub-mucous tissue of the tongue and larynx gave the reaction of mucin. The larynx was hardened in alcohol, and numerous sections were made through the epiglottis and vocal cords. The results of their examination were for the most part negative. A swelling of the perineurium of a nerve trunk in a vocal cord was noticed.

The thyroid body was so injured in the removal of the cervical organs that an accurate determination of its size could not be made. Otherwise its appearances were not abnormal.

Spleen of normal size, firm, dark red. Details of structure distinct.

Kidneys firm, deeply injected. The surface of the lower portion of the right kidney showed several super ficial scars. The structure of the kidneys in general presented nothing abnormal on microscopical examination. Bladder contracted; its wall showed nothing abnormal.

Uterus nearly doubled in size; flaccid in region of the internal os. Ovaries large, with numerous dropsical follicles.

Liver large, deeply injected; nothing abnormal observed on section or with the microscope. Pancreas normal.

Stomach empty; its wall presented no abnormal appearances. Lacteals of upper part of small intestine injected. Large intestine greatly distended with gas.

Diagnosis. Enlargement of tongue. Myx(?)œdema of face, neck, and larynx. Vascular engorgement of spleen, kidneys, and liver. Hyperplasia of uterus.

The cause of death was evidently suffocation from swelling of the larynx. The submucous tissue of the latter presented the pale, homogeneous, translucent appearance of ordinary œdema, but differed in its elastic resistance to pressure. The swelling of the cords was regarded as a myxœdema of the larynx. This view is based not only upon the appearance of the swollen tissue but also upon the absence of shrinkage on exposure to the air after a lapse of twenty-four hours.

The determination of the presence of mucin was not regarded as of diagnostic importance, since the intimate connection between the mucous membrane and submucous tissue readily permitted the presence of an apparent excess of this constituent in the removal of fragments for examination.

It is to be regretted that the conditions of the autopsy were such as to prevent a thorough examination of the skin of the neck and face.

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A TYPHOID EPIDEMIC AT THE "NORTH END" (BOSTON).[1]

BY W. N. BULLARD, M. D.

I desire at this time merely to give a short description of an epidemic of typhoid fever, which occurred during last autumn and winter at the North End, and which was especially noteworthy from its being so closely confined to the inhabitants of two, or at the most three, houses, and from the fact that in those families which were attacked so few members escaped the disease. In spite of diligent investigation I have not yet been able to satisfy myself in all respects in regard to the origin of the disease and the method of its propagation, but certain conclusions have been arrived at. All the houses were carefully examined many times by the officers of the Board of Health, whose reports I will present later. The instructions of the Board of Health in regard to disinfecting were faithfully carried out, and in most of the later cases extra precautions were used.

HOUSE I.

On the 12th of October, 1883, I was called to a child (boy) of seven years in the family A, living on the ground floor of this house. He was ill with a typical case of typhoid fever, which went through a regular course, and I saw the child every day until his recovery. There had already been a number of cases of sickness in this house, and three persons had died here since the preceding July. The first of these was the mother of the child, aged twenty-eight, who died July 28th. She was attended by irregular practitioners, and the diagnosis in her case was uncertain. The second was the child's aunt, thirty-two years old, living with the family on the ground floor, who died some time in September; and the third was a woman who lived on the second floor (that is, two flights up), the mother of a large family. This family (B) had at the time I was called removed from the house, but we shall hear of them again hereafter. Both these latter women were seen by regular practitioners, and in both cases the diagnosis of typhoid fever was made. In addition to these fatal cases three children in family A had been ill since the summer, but it is doubtful with what disease.

Thus when called to this house there had already been two deaths in the family on the ground floor since the preceding July, one of which at least was from typhoid fever, and one death in family B on the second floor. In addition to this, three children in the first family had been ill. The child I saw recovered in two weeks after a mild attack, but on the 13th of November, just a month from the time when he was taken ill, another child, a girl three years old, was attacked. In her case the disease was very light and she recovered perfectly.

As I have before said the family B had moved out of the house some time in October, and their rooms were occupied by a large family, most of whom had only lately (within three months) come from Ireland. This family consisted, when they moved into the house, of the mother and six children (five girls and a boy), an aunt, and a cousin (a young fellow who left the house shortly afterwards). The family, or most of them, had previously lived in a house in Foster Street in which there had not been any cases of fever, nor were there any there subsequently. On the 30th of November, about two weeks after the second child in family A was taken ill, I was summoned to this family. One of the children, a girl of thirteen, was then sick with typhoid. Exactly two weeks later the mother, aged forty, and a daughter of seventeen, were taken ill, and within three days thereafter a son (twenty) and a third daughter (eleven). On the 30th of December, again in two weeks, the fourth daughter was attacked with typhoid, and on January 23d the fifth and last. The only members of the family who escaped were the aunt, a woman of about thirty-five, and the cousin, who left the house shortly after the first child in this family was attacked. In the family on the ground floor the two adult men and the grandmother alone escaped. (It is possible that some of the children in this family did not have typhoid.) The family on the first floor consisted only of adults, a man and his wife, and were not affected.

In connection with this house, I should say that on the 3d of January a man of twenty-one was attacked with typhoid fever in the house in the rear of the one we have been considering. He was sent immediately to the Massachusetts General Hospital, where he recovered, and there were no more cases in that house.

HOUSE II.

(1.) This house, like the previous one, was on —— Street, and separated by only one house from House I. On the 26th of October, that is, about a fortnight after my first case in House I., I was called to the family on the first floor (one flight up) of the house, family D. The family were cousins of family A, and consisted of husband and wife, six children, and a young man, nephew or cousin. At this time the husband, aged forty, and three children, fourteen, eight, and six years old respectively, were ill. They all presented typical symptoms of typhoid fever, the man's case being a severe one. Again, about fifteen days after, that is, on the 12th of November, another child, eleven years old, was taken ill, and the next day the fifth child (five); one week later the young man, twenty-one years old. All these cases were treated at home, and all recovered. Of the whole family of nine persons only two, the mother and the baby, were unaffected.

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[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene, of the Suffolk District Medical Society, May 14, 1884.

(2.) At the same time that this family were so ill (about the 1st of November) the family above them, that is, on the second floor, was attacked. This family was made up of four persons, husband, wife, and two grown-up sons. The wife, aged sixty, was first taken ill and died. The son, twenty-two years of age, had typhoid shortly afterwards, and was sent to the hospital, where he recovered. These cases were not under my care, but were seen by a regular physician.

(3.) On the ground floor of this house lived an Italian barber with his family (wife and child). He moved away from the house about the 1st of November; was taken ill in his new residence on Endicott Street on the 21st of November; was sent to the City Hospital and recovered. His wife and child were not affected.

HOUSE III.

(1.) We will now return to the family B, who had formerly occupied the second floor of House I., but who, after the death of the wife, had removed. They took the ground floor of this house (House III.), which was several blocks distant from their previous residence. On the 7th of September a woman had been taken ill with typhoid fever, and had subsequently died in this house. Since then there had been no cases of sickness in the house. About a fortnight after the entrance of family B into this house, namely, on the 16th of October, I was summoned to see a sick boy (eleven) in this family (B). He was found to have typhoid fever, and the disease ran the ordinary course, ending in recovery. About a month later I found the father, a man of forty-three, a worker in the gas house, and the other three children, all boys, aged respectively five, six, and eight years, ill with the same disease. They were all sent immediately to the hospitals. A week later the hired woman, who had cared for the children, and washed their clothes, was also attacked. Thus in the family, consisting of husband, wife, and four children, every member had typhoid fever, and also the hired servant who lived with them a part of the time. This was, perhaps, the most striking evidence in favor of the contagiousness of the fever.

(2.) One flight above family B, in House III., lived a man and his wife with two young children, one a baby. On the 9th of November, that is, while those below were ill, the oldest child, a boy of five, was seized with the fever. His case was a typical light one, and he recovered well. On the 24th of November, just as he was thoroughly convalescent, his father, a man of thirty-two, was attacked. In his case the fever was severe, as he had been addicted to the use of stimulants, but he also recovered so as to be nearly well by the time that his wife, a woman of twenty-eight, took the disease (December 21st). She died in the hospital. Two or three days after the mother had become seriously ill the baby died, but probably not of typhoid. In this family of four, three were affected with the disease, and only the baby escaped. The baby's grandfather also lived in this house, but not in the same rooms. He died also suddenly about the 15th of December, but probably not of typhoid.

(3.) On the same floor as the last family was a family consisting of father, mother, baby, and, possibly, another child. They moved to another house temporarily about the middle of November, but were obliged to return again on account of sickness in their own family. None of this family had the fever.

TYPHOID FEVER.

HOUSE I.

Family.	Person.	Age.	Date.	Result.
A.	Mother.	28	July 28th.	D.
	Aunt	32	September.	D.
	* Boy.	7	Oct 12th.	R.
	* Girl.	3	Nov. 13th.	R.
B.	Mother.	–	September.	D.
C	* Girl.	13	Nov 30th.	R.
	* Mother	40	Dec 14th.	D.
	* Girl.	17	Dec 14th	H.
	* Boy.	20	Dec 16th	H R.
	* Girl.	11	Dec 17th.	R.
	* Girl.	18	Dec 25th	H.
	* Girl.	18	Jan. 2d.	H.
		House in rear.		
	* Man.	21	Jan 3d	H R.

HOUSE II.

Family.	Person.	Age.	Date.	Result
D	* Father	40	Oct 26th.	R.
	* Girl.	8	Oct 26th.	R.
First Floor.	* Girl.	14	Oct. 26th.	R.
	* Girl	6	Oct 26th	R.
	* Boy.	11	Nov. 12th.	R
	* Boy	5	Nov. 13th.	R.
	* Man	21	Nov. 20th.	R
Second Floor.	Mother.	60	October.	D
	Son	22	October	H. R.
Ground Floor	* Man ¹	35	Nov 21st	H. R.

HOUSE III.

Family.	Person.	Age.	Date.	Result
	Woman	34	Sept 7th	D
B ²	* Boy	11	Oct 16th.	R
	* Boy	5	Nov. 12th.	H R
	* Boy	8	Nov. 12th	H R
	* Boy	6	Nov. 12th	H
	* Father	43	Nov 12th	H D
	* Serv't, F	44	Nov 20th	H R
E	* Boy	5	Nov 9th.	R
	* Father	32	Nov 24th.	R
	* Mother.	28	Dec 21st	H. D.
		House in rear.		
	* Woman	24	Dec. 31st.	H D.
	Woman	28	Dec. 31st.	R

* Denotes that the patient was under my care for the whole or a part of the period of sickness. D. died. R. recovered. H. sent to hospital.

¹ Removed from house about November 1st.

² Removed here from House I.

(4.) In the family where the husband and wife were taken ill in succession [see (2) above], the wife was left for a time without proper attendance. One of the neighbors consequently, living in the next house, came in once or twice a day for two or three days to render her what assistance was in her power. About ten days afterwards both she and another woman living in her house were taken ill with the fever. Of these patients one died and one recovered.

To resume, in this house, containing three families, numbering in all fourteen or fifteen people, there were eleven dwelling in the house the whole time. Of these eleven, nine were attacked with the fever, and the two others both died of other troubles while their relatives were still ill. Those persons who were in the house only a portion of the time escaped, but two persons were attacked in the next house in which there had been no fever previously.

As a total, then, in these three houses we have thirty cases of typhoid fever, and if we add one case which was taken ill just after leaving one of these houses, and three cases in the adjoining houses, we have in the whole thirty-four. Out of these, twenty-eight were under my care for either the whole or a part of the time. The total number of cases under my care between October 12, 1883, and January 23, 1884, inclusive, at which dates the first and last of the cases in the houses under consideration were noted, was forty-five, leaving seventeen cases in the North End not included in the cases mentioned. But of these seventeen, four cases were in all probability connected with those described, three being in the family of a woman who had washed clothes for family B, and the fourth case being a girl of twenty-two, a cousin of family D. Out of forty-five cases of typhoid fever under my care there were, therefore, only thirteen in which no connection with these houses could be traced.

Out of sixty-seven cases, all that were reported from this portion of the North End within this period, we find but twenty-four not plainly connected with one of these houses.

Such an epidemic as this seems to me to point very clearly to the contagiousness of typhoid fever, particularly in the case of those naturally disposed to it. There can be no doubt but that, as Pfeiffer has lately pointed out in the *Berl. klin. Wochenschrift*, certain families possess a special immunity in regard to this disease, while in others perhaps there is a certain predisposition towards it. In these houses there were two families which entirely escaped, one of which, however, was away from the house a portion of the time, and the other consisted only of adults. There was one family in which there was only one case, but this family had already removed from the house when this case occurred. There was one family (all adults) in which there were two cases, one in which there were three, one in which there were four, and three in which there were seven.

As to the cause or origin of this epidemic, I have at the present moment nothing to say, but if any positive conclusions can be drawn from our investigations I shall hope to bring them to your notice at some future time. I will, however, say a word in regard to some of the ways in which this may have spread. In all these cases, except perhaps the very first, precautions were taken in regard to the water-closets or vaults and the excreta of patients. The Board of Health was of course informed of every case as it occurred, and examined the houses repeatedly, with the results to be given. In House I. the water-closet was outside and apart from the house.

In two at least of these cases the disease seems to have been obtained from washing the clothes of patients. This was probably the case with the servant in family B, and very possibly also in the case of the family who likewise had the fever after the mother had washed for one of these families. In the latter, however, it was not the mother who had the fever first, but one of the children.

(In a Portuguese family, which had the fever a little later in another part of —— Street, the disease in a young girl, the last of the family who had it, seemed directly traceable to her having washed the clothes of those ill previously.)

In none of these cases could the patient be isolated from the rest of the family. At the most there were only two sleeping rooms and frequently only one.

Before closing, I desire to express my thanks to the Board of Health of the city of Boston for their kindness and courtesy in permitting me to make use of their records and rendering me all the assistance in their power.

The conclusions to be drawn from this epidemic seem to me to be —

(1.) That we cannot be too careful in using every reasonable means to prevent the spread of typhoid fever, and not confine ourselves exclusively to care in regard to the excreta.

(2.) That although in ordinary cases typhoid fever is not an extremely contagious or infective disease, yet that under certain conditions at present not well understood it may become so.

(3.) That special attention should be paid to the washing of the clothes of patients, more especially of any which may be stained or soiled by their excreta.

(4.) That great care should be taken to disinfect the chamber vessel or pail used by the patient, and that no other member of the family should be allowed to use it under any conditions.

Reports of the Board of Health.

HOUSE I.

In March, 1883, foul and offensive vault and filthy cellar. Found in good condition April 30, 1883. Since then nothing wrong could be detected.

HOUSE II.

Nothing wrong discovered at any time.

HOUSE III.

May 24, 1883. An offensive and defective vault, also a defective waste conductor in passage-way under house. The waste water runs into the passage-way.

July 23d. Now in fair condition. Do not think there is sufficient cause for further action.

November 14th. Drainage defective. Traps needed to sinks. Vault in fair condition. Drain open in passage-way under house at foot of waste conductor.

December 5th. Nothing done.

January 1, 1884. Work not yet begun.

January 10th. Drainage defective. Traps supplied to sinks to-day. Vault offensive. Odors from vault and open drain in passage-way under house. There is general want of cleanliness in the house.

April 16th. Drain in passage-way obstructed. Water backs into basement.

HOUSE ADJOINING HOUSE III.

January 3d. The waste pipes from sinks empty into defective wooden conductors, which should be removed and tight pipes with traps put in. An apron should be put in under the privy seats to prevent the filth from lodging on the sills, and the vault should be deodorized.

February 16th. All right.

REPORT ON OBSTETRICS.

BY C. M. GREEN, M. D.

THE INFLUENCE OF PUERPERAL EPIDEMICS ON THE TIME OF DELIVERY.

AT the meeting on November 6, 1883, of the Académie de Médecine, M. Hervieux made a communication[1] relative to the influence of puerperal epidemics on the time of delivery. It has long been known that a certain number of pregnant women are liable to contract a puerperal septicæmia, which sometimes limits itself to provoking premature labor and sometimes develops itself with all its characteristics after the premature expulsion of the fœtus; but these cases have always been considered as exceptional. In the opinion of Hervieux, on the contrary, it is the exception for a pregnant woman to live in an infected place without being herself infected: he has been led to this conclusion by observations made at the Paris Maternité during more than twelve years.

The puerperal poison acts here like other poisons, and it is known that toxic maladies which affect pregnant women do not always act on the mother and on the fœtus in the same way, variola for example. In his treatise on Abortion, M. Garimond has given infection and contagion as the probable causes of miscarriage in many cases, without giving any clinical demonstration in support of his opinion. This clinical evidence M. Hervieux has now presented to the Academy. In his opinion, the more a pregnant woman lives in an infected place, the more liable is she to premature delivery: Hervieux therefore believes that in times of puerperal epidemics every maternity should be closed to pregnant women, and that even when there is no epidemic the entrance to hospital should be deferred until the woman is as near as possible to full term.

FORCEPS IN BREECH PRESENTATIONS.

Dr. Truzzi[2] believes that in cases of impaction of the breech in the upper or middle parts of the pelvic cavity, when a hip has not yet rotated to the pubic arch and the speedy extraction of the fœtus is necessary, it is safer to resort to forceps, when traction with the fingers fails, than to attempt extraction with the blunt hook or fillet. He thinks it is safer and easier to apply the forceps to the sides of the fœtal pelvis than to the sacrum and an opposing thigh; as, when applied in the latter way, the forceps are more likely to slip and to injure the abdomen or its contained organs. The iliac bones are elastic at this period and well protected by soft parts; so that even if the amount of compression is somewhat excessive, Truzzi believes it is almost impossible to injure the fœtal pelvis. The forceps blades are passed so that the tips extend above the iliac crests: when traction is made the tips of the blades bury themselves slightly in the parietes and obtain a firm hold over the innominate bones. The liver is above reach and the intestines from their great mobility easily elude compression. A folded towel should be placed between the handles when otherwise the compression would be too great. Truzzi has never seen the forceps slip when applied in the manner described to sacro-anterior positions.

PERITONITIS DEVELOPED DURING PREGNANCY.

Megrat[3] has collected thirteen cases of peritonitis developed during pregnancy, seven of which were observed by himself, and has described at length the ætiology, course and treatment of the affection, and its influence on the course of pregnancy and on the life of mother and fœtus.

Peritonitis in pregnancy is quite rare, at least attention has been called to it hitherto only by Schröder and Scanzoni. Of the thirteen mothers seven died: only two went to full term, the others aborted in the fifth, sixth, seventh, and eighth months. Of twelve embryos ten perished, partly on account of the peritonitis, partly by abortion.

Regarding the ætiology of the affection, the efficient cause is not always disclosed by the autopsy: there may be ruptures of the tubes, or rupture or inflammation of complicating ovarian cysts. There may be circumscribed foci of inflammation in the gravid uterus, with purulent softening and perforation into the peritoneal cavity: extension outward of the inflammatory process of an enteritis, and finally "taking cold" are mentioned as further causes. The severity of the affection depends upon its cause. If on account of rupture general peritonitis arises, the prognosis is very bad and death may occur in a few hours; if the peritonitis remains circumscribed, the prognosis is naturally more favorable.

As regards the symptoms, they are those usually characteristic of peritonitis, — extreme abdominal pain, tympanites, vomiting, collapse, and diarrhœa or constipation. Therapeutically Megrat employed cold, opiates, abstraction of blood, mercurial inunction, quinine, and carbolic acid in pill form.

Peritonitis appears in general to exercise a deleterious influence on the continuance of pregnancy, and on the other hand the complicating pregnancy aggravates peritonitis to a considerable degree. After the emptying of the uterus a sudden and considerable improvement of the inflammation was observed. The influence on peritonitis of the expulsive efforts of the uterus is a various one: on the one hand they appear to increase the inflammation; on the other, after the expulsion of the fœtus, there is an improvement in the symptoms. As a result of his observations Megrat cannot express himself as absolutely in favor of rapid, artificial termination of the pregnancy, since the result may be directly fatal.

THE USE OF IODOFORM SUPPOSITORIES FOR INTRA-UTERINE TREATMENT IN THE PUERPERIUM.

Ehrendorfer, assistant in Professor Späth's clinic in Vienna, in a recent paper,[4] advocates the use of iodoform suppositories, in preference to other methods of administration, in cases which require, for prophylaxis or otherwise, intra-uterine antiseptic treatment in the puerperium. When used in the form of a solution, the greater part of the iodoform soon flows out of the puerperal uterus and no lasting effect is obtained: if the drug is applied by insufflation, Ehrendorfer believes there is danger from the introduction of air: by the use of suppositories this latter danger is avoided and the endometrium is not irritated by the introduction of an intra-uterine tube. Ehrendorfer's method of using iodoform possesses one very great advantage over the customary intra-uterine treatment with carbolic acid, namely, that the patient is much less frequently disturbed, as the suppository melts slowly and its effects are therefore more lasting: in cases where there are tears of the vagina and perinæum, which have perhaps required the introduction of sutures, this is an advantage of some importance.

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[1] Archives Générales de Médecine, December, 1883.

[2] Gazz. Med. Ital. Lombardia, Aug. 4-18, 1883, and the London Medical Record, Jan. 15, 1884.

[3] Annales de Gynécologie, No. 10, 1883, and Centralblatt für die Medicinischen Wissenschaften, No. 10, 1884.

[4] Archiv für Gynäkologie, Band XXII., Heft 1.

Regarding the composition of the suppositories, Ehrendorfer believes that oil and cacao-butter are objectionable, since they are liable to become rancid and irritating: he therefore uses gum-arabic, glycerine, and starch in equal parts as the excipient mass, his formula being

Iodoformi pulv.	20.0
Gummi Arabici	
Glycerini	
Amyli puri	āā 2.0

Ft. suppos. no. 3, longit. cm. 5-6.

Each suppository contains, therefore, a little over ninety grains of pure iodoform; but Ehrendorfer has never observed any poisonous effects from the use of as much as one hundred and fifty grains. Before the insertion of a suppository the uterus should be washed with an aseptic fluid: the suppository may then be introduced with a dressing forceps.

THE INFLUENCE OF AGE ON THE LABOR OF PRIMIPARÆ.

Kleinwächter has studied this subject very thoroughly, not solely with reference to the length of labor, but with a view to determining the relative liability of primiparæ of various ages to antecedent menstrual disturbances, to the various accidental complications of pregnancy and to puerperal disease. He has also investigated the relative necessity of instrumental interference, relative morbidity and mortality, the liability to abortion, and the influence of the mother's age on the sex and weight of children. The material for study Kleinwächter found in the records of 920 cases of primiparæ in his clinic at Innsbruck. These cases he divided into three groups, namely,—

I.	16–19 years of age :	111 cases.
II.	20–29 years of age :	694 cases.
III.	30–41 years of age :	115 cases.

These groups he designated as the young, the middle-aged, and the old, respectively. From his study of these cases Kleinwächter draws, among others, the following conclusions:

(1.) Accidental complications, which have nothing to do with pregnancy, occur least often in the youngest primiparæ and most frequently in the old.

(2.) Ailments attributable to pregnancy are observed most frequently in the old and next most frequently in the young.

(3.) Hæmorrhages in the course of pregnancy occur most frequently in the young and least frequently in the old.

(4.) The duration of labor is most frequently abnormally protracted in the old: in this respect the young stand next to the old.

(5.) Inefficient pains, on account of which the duration of labor is abnormally protracted, are least often observed in primiparæ in the bloom of their sexual life, i. e. from 20–29, and most frequently in the old.

(6.) Therefore forceps must be used most frequently in the old and least often in the middle-aged.

(7.) The lengthening of the labor of primiparæ with the increase of age occurs chiefly in the first stage: the second stage is scarcely affected by differences of age: the third stage is not at all affected.

(8.) The mortality per cent. after forceps operations on primiparæ rises parallel with the increase in age.

(9.) The older the primipara, the greater is the danger of perinæal laceration.

(10.) The older the primipara, the more likely a post-partum hæmorrhage, although the frequency of hæmorrhage is by no means so great as hitherto supposed.

(11.) With increase of age increases the disposition of primiparæ to affections of the kidneys.

(12.) The frequency of œdema without kidney disease also increases with the age.

(13.) The older the primipara, the less the danger of mastitis, and the less also the likelihood of her ability to suckle.

(14.) The old most frequently, the middle-aged least frequently, sicken and die of puerperal fever: the same is true of puerperal mania.

(15.) The morbidity and mortality per cent. is highest in the old and lowest in those from 20 to 29 years of age.

(16.) Spontaneous premature labor occurs very frequently in old primiparæ, and least often in the middle-aged.

(17.) With increase of age the frequency of abnormal positions of the fœtus increases.

(18.) The older the primipara is, the more likely is she to bear a boy, except only those from 20 to 21 years of age, who bear more girls than boys.

(19.) Analogous to the discovery made by Hecker and confirmed by Wernich, that first-born children are heavier and longer the older the mothers are, is the fact that the umbilical cord of the first-born of old mothers falls off the earliest, and that of the first-born of the youngest mothers the latest.

(20.) The liability to twin pregnancy in primiparæ increases with their age.

(21.) With increase of age in primiparæ the frequency of bearing deformed children diminishes.

(22.) The mortality per cent. of first-born children increases with the mothers' age: among the oldest primiparæ the fœtal mortality reaches a not inconsiderable height.

— Some of those who are horrified at vivisection, but look upon hunting and fishing with complacency, may read with profit these words of Pasteur: "Never have I had the courage to kill a bird in hunting; but when experiments are concerned no scruple stops me. Science has the right to invoke the supremacy of the end."

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[1] Zeitschrift für Geburtshülfe und Gynäkologie, Band x., Heft 1.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

May 14, 1884. Meeting called to order at eight o'clock. **Dr. R. T. Edes** in the chair.

The **Secretary** read an invitation to the Society to visit the Institute of Technology May 15th to listen to a description of the new system of heating and ventilation which has recently been introduced there, and to inspect the Rogers Building, where the system would be in operation.

The first paper was by **Dr. E. G. West**, entitled

A CASE OF MYXŒDEMA, WITH AUTOPSY.[1]

Dr. West remarked that no pathological changes were observed macroscopically in the tissues of the brain, in the organs of the chest or abdomen. The blood presented a marked degree of fluidity, due, doubtless, to the accident which killed the patient, and appeared the same as in ordinary cases of suffocation or strangulation. The muscular tissues were everywhere very pale, almost white, so that these structures resembled the flesh of veal.

Dr. Edes stated that the paleness in color of the muscular tissues was not due to fatty degeneration of the fibres either in the voluntary muscles or in the heart. There was slight serous (ordinary) œdema of the limbs, and a small degree of pitting could be noticed after prolonged pressure. The mucous œdema was still present in the face and members after death, and was especially developed in and about the folds of the larynx. Here the mucous membrane was full and baggy, and no doubt was the immediate cause of death. At the autopsy these portions of larynx were incised, and after some hours no reduction in size or collapse of œdema could be observed. Under the tongue the tissues were especially swollen and œdematous from the accumulation of mucin.

Dr. White stated that the case seemed to be a typical one in all respects. He questioned the accuracy of the generally received opinion that the disease has not been observed in the male sex; and the utility of attempting to stimulate the action of the sweat glands, as they had often been found atrophied in the changes which the skin undergoes in advanced myxœdema. He doubted, too, the correctness of the statement that the disease was always or generally preceded by a mental or nervous shock. It appears to be more prevalent in some countries than in others, as seven cases were exhibited at the last meeting of the International Medical Congress in London, whereas a recent statement had been made that no case had as yet been observed in Vienna. Two cases had come under his own observation in Boston during the last five years.

Dr. Edes remarked that the reader was not quite correct in supposing this to be the first case in this country followed by an autopsy.

Dr. Elizabeth M. Cushier had reported a case, with a very careful autopsy, in the *Archives of Medicine*, viii., 1882, December. The cutaneous and subcutaneous tissues had undergone characteristic changes, and in addition there was well-marked degeneration of the spinal cord.

In reference to the remark made by Dr. White that no case of this kind had been seen in Vienna, it would be interesting to observe its relative prevalence in different nationalities in this country. It is certainly not confined to the British races. One patient seen by Dr. Edes was of Norwegian birth.

Mental shock is not a universal accompaniment or forerunner of myxœdema. In one special case no such accident could be remembered. In another case which has lasted fifteen years, and is still living, no mental shock has ever been known to occur. In this patient the hands are immensely swollen, and are unsightly and disfigured both in form and color, and the disease is evidently slowly but certainly progressing toward a fatal termination.

Dr. E. T. Williams asked if any amelioration was noticed after the use of diuretics.

Dr. West replied that the serous œdema of the lower extremities entirely disappeared, and the patient experienced a great degree of relief from the heaviness and fullness which this had occasioned.

Dr. Prince asked if any increase in the fibrous tissue of the parenchymatous organs was noticeable, and stated that Dr. John Harley had observed this in all the visceral organs, and had also made the assertion that in these cases there was well marked and frequently quite extensive degeneration of the ganglia of the sympathetic nervous system.

Dr. Edes remarked that although attention has been directed to these cases only within a few years there is no reason to suppose that the disease is one of recent origin. Cases have doubtless existed in the past, but have been confounded with other diseases. It is not necessarily so rare a disease as it would seem to be because the majority of cases would undoubtedly be mistaken for some affection of the liver or kidneys. In point of duration, course of symptoms, and termination, however, there is very little similarity with the progress of either of these diseases.

The second paper was by **Dr. W. N. Bullard**, upon

AN EPIDEMIC OF TYPHOID AT THE NORTH END.[2]

Dr. Prince opened the discussion as follows: —

The epidemic which has been so carefully studied and reported by Dr. Bullard is very valuable from the fact that it is one which shows almost conclusively the communicability of this disease under certain conditions. The difficulty with most epidemics is that it is generally impossible to exclude the possibility of all the cases having contracted the disease from the same source, but in the epidemic just reported it can hardly be believed that the inmates of houses No. II. and III., at least, could have contracted the disease otherwise than on the theory of contagion. It is on the evidence of such epidemics that we rely for our belief in the communicability of the disease. There is one fact which is always referred to as evidence against the contagiousness of typhoid, to which, it seems to me, too much prominence has been given, and that is, the fact that the disease is rarely communicated from one patient to another or to attendants in hospitals. I am unable to see any reason why much weight should be attached to this. For let us suppose that it was proven by experimental evidence, as I believe it has been by clinical evidence, that the stools contain the poison, that the germs have been isolated and shown to be capable of successful inoculation in a healthy person, how could we expect that under the conditions by which a patient is surrounded in a hospital the stools would be capable of infecting others in the hospital? I hold not. In the first place the poison is mixed with semi-liquid matter, and consequently prevented from impregnating the atmosphere. The vessels are quickly emptied and washed before the fæces become dry, etc., etc. Let, however, the stools become dry and pulverized, and a medium of contagion immediately is furnished. The atmosphere may take up the poison in this dry, dust-like form, and infection result. It is these conditions that exist in tenement and other houses, where the facilities for caring for the excrement are insufficient. It may be that a secondary fermentative process is necessary for the discharges to become poisonous, but this theory is neither absolutely necessary to explain the facts thus far known nor is the fact yet established, though it may prove to be true. It is upon the study of epidemics that we rely to show the poisonous nature of the stools of typhoid patients and the possibility of contagion. The evidence furnished thus far by experiments on animals has been unsatisfactory.

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[1] See page 49 of this number of the Journal.

[2] See page 53 of this number of the Journal.

It may not be out of place here to mention the results of some experiments which Dr. Bullard and myself have conducted during the past winter, with a view to determining this point by direct inoculation. The animals chosen were rabbits, and the experiments divided into two sets.

For the first we obtained some liquid stools from a patient ill with typhoid. The stools were strained through coarse cotton cloth, and about fifteen minims subcutaneously injected into each of five rabbits. In all the animals fever developed, but no diarrhœa or any other definite symptoms. The animals were killed at the end of from three to five weeks. No lesion of the intestines or of any other organs was found. One animal died the second day after inoculation. Unfortunately the body was thrown away by accident before it could be examined. The animal could not, however, have died of typhoid.

For the second set, the tissue about the edges and base of several intestinal ulcers from a patient who had died of typhoid fever was obtained through the kindness of Dr. Gannett, who made the autopsy. The lesions of the intestines were very marked and typical. The tissue thus obtained was cut into very fine pieces, macerated and bruised in about a teaspoonful of water till the tissue became white and mere pulp, then strained through coarse cloth and injected, in divided portions, under the skin of four rabbits. Fever developed, though not very high. No other symptoms. The rabbits were killed at varying periods. No lesions found after death. The results of these experiments were accordingly negative, and correspond with those obtained by other experimenters.

Küchenmeister, as long ago as 1850, reported an epidemic amongst rabbits which he regarded as probably typhoid fever. The principal anatomical changes which he found were infiltration of Peyer's patches, swelling of the mesenteric glands, and enlargement of the spleen, but no ulceration of the patches.

These changes resembled those found by Birch-Hirschfeld as a result of the infection of rabbits with typhoid stools. Birch-Hirschfeld made four different sets of experiments: —

In the first large quantities of typhoid stools were injected subcutaneously, and though the rabbits rapidly became sick, had fever, and when the quantity injected was particularly large, died, no lesions were found in the intestine.

Second. Blood from a person who had died of typhoid was injected subcutaneously. No alterations were found in the intestines.

Third. Typhoid discharges were introduced by the mouth. The result varied according to the quantity given. When the quantity was small, some of the rabbits remained perfectly well, others had fever, diarrhœa, and lost flesh, nine died. Those killed had slight swelling of Peyer's patches, but no swelling of the spleen. When large quantities were given the animals exhibited high fever, considerable emaciation, marked diarrhœa; in some cases the fæces were yellow, bad smelling, and pasty. In those which died there was found more or less pronounced swelling of the follicles, especially in the neighborhood of the ileo-cæcal valve and vermiform appendix. In two cases there was found beginning *ulceration* of a Peyer's patch. There was also found more or less swelling of the spleen, infiltration of the mesenteric glands, sometimes pneumonia. No difference was detected between the effect of fresh stools and those kept from two to six days.

Fourth. A rabbit was fed on a small quantity of the tissue from a typhoid ulcer which had been removed five hours previously from the cadaver. The animal exhibited high fever for several weeks. At the autopsy there was found *an ulcer of the size of a pea, of a Peyer's patch* situated at the ileo-cæcal valve. The surrounding tissue had a reticulated appearance, as well as that of the vermiform appendix. Beautifully reticulated appearances in the upper part of the small intestine; follicular catarrh of the cæcum and ascending colon. The other organs normal.

Although these rabbits showed some symptoms analogous to those of typhoid, the last experiment alone gave anything like positive results, and the rabbit which was the subject of this experiment was fed not on typhoid dejections, but on the tissue from typhoidal ulcers.

Bahrat later experimented on fourteen animals. In ten typhoid excreta were introduced into the stomach by means of a catheter, and in four the experiments were conducted so as to test the theory of infection through the air. The rabbits were placed over sand impregnated with typhoid dejections, over the sand was placed a layer of hay so as to prevent actual contact with the dejections. In both cases the results were negative.

Letzerich again injected four rabbits with typhoid stools. The first was killed fourteen days after the injection. The duodenum and the upper part of the small intestine were filled with turbid yellow fluid. The follicles were infiltrated. The second died twenty days after the injection. The duodenum and the small intestine were filled with the same material. The follicles of Peyer's patches were swollen and infiltrated. The third died twenty-one days after the injection. The content of the small intestine was the same. The follicles were swollen and infiltrated, in some places ulcerated. In the fourth (which died forty-eight days after the injection) the duodenum was red, the upper part of the small intestine dark red, the lower portion brown red. The content of the upper portion consisted of turbid yellow fluid; that of the lower portion of an intensely red fluid containing fibrinous flakes. Follicles mostly ulcerated. The third and fourth had fever and diarrhœa.

Murchison fed a pig for six weeks on fresh dejections without result.

Klein fed monkeys and white mice with milk with which typhoid dejections had been mixed. Results were negative.

Motschutkoffsky tried experiments on men and animals (apes, rabbits, dogs, and cats). He made repeated and thorough inoculations from patients with typhoid and typhus fever without success. His method of inoculating or what was inoculated are not given, but with relapsing fever he employed blood, milk, sweat, urine, saliva, and excrement, and was successful (with which?).

It appears then that only two experimenters, Letzerich and Birch-Hirschfeld, have succeeded in infecting animals with any disease resembling typhoid by means of the stools, and considering the small number of animals in which positive results were obtained and the failure of all other experimenters, it may be questioned whether the disease produced in these cases was real typhoid. The question must still be considered an open one. While successful inoculation would prove the poisonous nature of typhoid stools, failure does not show the contrary. There may be several causes of failure. In the first place animals, as with cholera, may not be susceptible to typhoid. And in the second place, though typhoid stools may be poisonous at certain stages of the disease, it does not follow that they are at all stages, and there is no means of knowing which is the poisonous period, consequently any given stool may or may not contain the poison.

This latter difficulty, however, would not obtain when the tissue from a typhoid ulcer was employed for inoculation, as in our second set of experiments, which would seem to indicate that, unless some secondary fermentative process was necessary for the development of the poison, rabbits are not susceptible.

The difficulty of eliminating other forms of poisoning from the inoculation of such stuff as excrement and necrosed intestinal tissue is obvious.

Dr. Blodgett remarked that grave doubts had been justly raised against the conclusions from experiments upon animals by the inoculation of zymotic diseases, from the fact that very frequently no proper precautions have been taken to prevent the introduction of other than the desired virus, and, therefore, some other disease might be implanted at the same time, and thus either modify or entirely prevent the normal development of the desired disease. Again, in cases in which unwilling animals have been forced to swallow the dejections of typhoid fever or parts of ulcerated human intestine it would certainly not be surprising if the disgust and repugnance of the animal to this offensive procedure, together with the loss of appetite and disturbances of digestion or diarrhœa, which might very probably follow such a repulsive experiment, should occasion appearances within the alimentary canal which might in some degree resemble those of typhoid fever in man. But such results should be very cautiously received on account of the great chances of error due to the circumstances mentioned, as well, no doubt, as to other conditions which might arise from the manner more than from the matter of the experiment.

Another frequent source of fallacy in the subcutaneous injection of the products of disease is the frequent occurrence of a train of symptoms of severe character and fatal termination which bear some resemblance to the phenomena of human typhoid, but are due solely to septicæmic processes which are occasioned by the presence in the tissues of a confined animal of foul, decomposing, often necrosed, portions of another animal, namely, man, who has died from an acute infective disease which has deranged the nutrition and modified the organic character of every part of the body. The occurrence of serious disease and frequently of death from this cause is not considered strange in cases of accidental infection in man, and there would seem to be no good reason why the same thing might not take place in the lower animals under circumstances so much more dangerous than could possibly occur to man. Under these conditions we should naturally expect to find the glands everywhere enlarged, and it would occasion no surprise to find ulcerations within the bowel, which might quite probably be due to tuberculosis or some other foreign process, but to an incautious or enthusiastic experimenter might seem to indicate the successful transplantation of another of the exanthematic processes affecting the human race into the organism of an animal subjected to experimental study.

While fully recognizing the great value of experimental pathology, which is daily assuming a more important relation to human well-being, it becomes doubly necessary to guard against false appearances and erroneous conclusions.

Dr. Barnes asked if the vaults were independent of the sewers or were in any way connected with them.

Dr. Bullard replied that he always supposed the vaults to be simple reservoirs for fæcal accumulations, not connecting in any manner with the sewer system. There were no water-closets, they were simply pit privies.

Dr. Barnes spoke of the specific character of the poison of typhoid, and mentioned the fact that it is not alluded to as one of the prevailing diseases in China, thus indicating that the virus does not thrive equally well in all parts of the world, but seems to be restricted to certain geographical limits.

Dr. Edes suggested that the susceptibility of the entire Chinese race to the disease may have been exhausted in previous ages, and that the present inhabitants of that region enjoy perfect immunity from the ravages of typhoid on account of changes in their organism or physical condition, which have produced a sufficient alteration in the tissues or organs to render them unsuited for the propagation of the typhoid germ.

On motion of **Dr. Henry I. Bowditch** a vote of thanks was tendered the Boston Society of Arts through its secretary, Professor Swaim, for the courteous invitation extended to the Section to attend the next meeting of that Society.

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PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

Thursday evening June 12, 1884. The President, **Dr. Tyson**, in the chair.

SARCOMA OF TESTICLE.

Presented by **Dr. G. de Schweinitz.**

A. K., aged forty-three, a native of Germany, married, presented himself May 22d in the Surgical Dispensary of the University Hospital for an opinion concerning a tumor of the left testicle, with which he was suffering. His general health had always been good until one year ago, when he first noted a beginning glandular swelling of the left testis. A short time previous to this he had suffered with gonorrhœa, which was followed by an attack of orchitis. He knew of no member of his family that had ever been afflicted with any form of morbid growth. Examination revealed a very large, somewhat pear-shaped growth of the left testicle, over which the skin was freely movable. The veins were much enlarged. The inguinal glands of the left side were also involved, and the thigh and leg of that side swollen from œdema. Above the line of Poupart's ligament both palpation and percussion revealed another mass situated in the left iliac fossa. A very unfavorable prognosis was given, and operative interference not advised. He, however, earnestly begged for the removal of the tumor of the testicle, which caused him severe dragging pain, and incommoded him in walking. The dangers of the operation and the fact that it would at best only be partially palliative were explained to him, and as he still asked for its performance the growth was removed. The case progressed very well for a few days, when he died rather suddenly. Dr. Hughes and myself made the post-mortem examination and found the following conditions: Lungs showed commencing phthisis of apex; left pleural sac occupied by a pint of serum in which floated some flakes of recent lymph. Heart normal; cavities occupied by post-mortem clots. Liver very fatty. Right kidney apparently normal. The retroperitoneal glands were all converted into a huge sarcomatous mass, as were also the glands and tissues of the left iliac region, and from there the growth passed up to the lumbar region and surrounded, although it apparently did not greatly involve, the kidney. Upon cutting into the tumor of the testicle about a pint of bloody serum escaped from the cavity of the tunica vaginalis. The growth occupies the body of the testis, is soft and friable, in places breaking down, and the cavities thus formed filled with semi-fluid contents. The growth has burst through the tunica albuginea, thus showing the first step in the march of this morbid process up the spermatic cord into the abdominal cavity to the retro-peritoneal glands and other tissues involved by the disease.

Microscopically the tumor is a sarcoma composed of round and spindle cells, which are in relation to the remnants of connective tissue stroma. A very distinct tendency to alveolar arrangement is observable in places. It would probably be classed by some pathologists as an endothelial carcinoma or carcinomatous sarcoma.

Dr. Shakespeare said that the history of this case, the post-mortem finding, and the microscopic examination forcibly reminded him of the last discussion by this Society of the same subject. In this case the disease has evidently traveled along the deep lymphatics as far as the retroperitoneal lymph glands of the lumbar region. In this particular it has followed the course of systemic infection pursued by a carcinoma rather than a sarcoma. But it seems to be now well established that the well-known law governing the generalization of sarcomata meets with frequent exceptions in the case of so-called sarcoma of the testicle. Dr. De Schweinitz had spoken of the presence in this tumor of an alveolar structure, and in truth the manner in which the growth had exceeded the bounds of the testicle brings to mind at once the history of an alveolar sarcoma. The reporter had spoken of that tumor as "an endothelial sarcoma." Dr. Shakespeare objected to this use of the term "endothelial," and thought that the tumor in question would be more properly defined as "an alveolar sarcoma." He thought that the term "endothelial" was most commonly applied to carcinomata of certain kinds rather than to sarcomata, and did not think that the tumor named by Klebs "an endothelial carcinoma" differed from other genuine carcinomata in the form or nature of its cells and alveolar structure, but only in the fact that it may originate or be propagated in the lymph spaces or channels. If the term "endothelial" be insisted upon in this case, why not call the growth "an endothelial carcinoma"? This naturally raises the question of pathogenesis. We are told that the testicle is a derivative of the mesoblast. If this be true here is ground for debate as to the proper name to give a tumor of the testicle which has an alveolar structure and a clinical history analogous to that of true carcinoma. He who believes that true carcinoma never has a real connective tissue origin will not consent to call such a growth of the testicle a carcinoma unless he can satisfy himself that, by some chance, a few epithelial cells from the blastoderm have become misplaced in the process of development, and have remained here to form a nidus of a future carcinoma. Malignant tumors of the testicle seem to occupy an anomalous position. They are called sarcomata in the main, and yet, as a rule, their clinical history does not correspond to the sharp outlines which comprise this class of tumors in other localities. On the whole Dr. Shakespeare was inclined to agree with those writers who accepted in general a connective tissue origin for true carcinoma in contradistinction from the epithelial origin of true epitheliomata, and therefore saw no well grounded objection to applying the name of true "carcinoma" to those growths of the testicle which present a typical clinical history and anatomical structure of carcinoma, although they may spring from connective tissue. As bearing upon the subject of pathogenesis of carcinoma he referred to the observations of a few authors who deny the pure epithelial origin of some glandular structures, mentioning in particular the opinion of Creighton, who, after a careful and extensive series of observations on the development and involution of the mammæ, concludes that the acini of this gland are not developed from the cutaneous epithelium but are derived from the connective tissue.

ANEURISM OF THE LEFT VENTRICLE COMMUNICATING WITH THE AORTA.

Presented by W. E. Hughes.

J. C. W., aged thirty-nine years, a ship carpenter, was admitted to the University Hospital, under the care of Dr. E. T. Bruen, March 6th. He had always worked hard, been much exposed to the weather, was a fairly temperate man, and had never had syphilis. He had had several slight attacks of articular rheumatism, but during none of these attacks had there been any symptoms referable to the heart. There was nothing of moment in the family history. Three years ago his strength, which had never been excessive, failed somewhat, and it became impossible for him to work constantly. There was with this failure of strength more or less dyspnœa on exertion, with a tendency to take cold on any slight exposure, but no pain over the heart, and very little palpitation. Six months ago he was very much exposed, and since then has been much worse, palpitation now for the first time becoming troublesome. When first seen the slightest exertion caused the most intense dyspnœa and very annoying palpitation; his hands and feet were congested, and his lungs filled with moist râles. The apex beat of the heart was in the fifth interspace, in the nipple line, its action strong and heaving. Over the aortic cartilage could be heard a strong, blowing, double murmur. He died April 6th of gradually increasing dyspnœa, due apparently to congestion of the lungs. He had never complained of pain about the heart. There had been no œdema.

Autopsy by Dr. Barber six hours after death. Pericardium normal. Heart large; its left ventricle moderately hypertrophied and dilated; right normal. Muscular tissue apparently normal. Between the posterior leaflets of the aortic valves was an oblong opening, with smooth, rounded edges, extending a quarter of an inch above the point of juncture of the leaflets with the aorta, and one half an inch below into the wall of the left ventricle, much wider in the ventricular than in the aortic wall. The opening prevented the closure of the leaflets, holding them at least one quarter of an inch apart, and permitting free regurgitation of blood into the ventricle. The leaflets were attached along the opening, in fact, above they formed its edges. This opening led back into a cavity, about as large as a walnut, lying between the base of the aorta and the upper part of the left ventricle on the one hand, and the right auricle on the other, bulging it decidedly into both auricle and aorta. Its lining membrane was continuous with the endocardium, and was thickened and roughened, but not calcareous. The endothelium of the posterior wall of the aorta covering the projection was also somewhat thickened and roughened. Between the upper part of the sac and the aorta where the separating tissue was very thin, composed apparently of only two layers of endothelium, there was an irregular tear permitting free intercommunication between the sac and the aorta. Between this tear and the upper margin of the opening described above was a bridge of firm aortic tissue. The endothelium of the right auricle over the sac was rough and thickened. The wall of the sac was formed of connective tissue and endothelium. It contained only some recent coagula, none that were laminated. The coronary artery arose immediately above the sac but was not involved in it. The leaflets of the aortic valves were perfectly healthy; other valves normal. The endothelium of the heart showed no spots of degeneration except that mentioned in the right auricle. The aorta above the sac, as well as the coronary arteries, was not in the slightest degree atheromatous. Both sides of the heart contained some chicken fat clots. Lungs deeply congested. Other organs normal.

ANEURISM OF THE AORTA. EMPYEMA.

Presented by W. E. Hughes.

J. H. W., aged thirty-five years, a shoemaker, was admitted to the University Hospital under the care of Dr. E. T. Bruen, December 26, 1883. He had used alcohol decidedly to excess, but has never been much exposed to weather, and has never done any hard work. There is no history of venereal disease. There is a distinct rheumatic family history, and he himself had had, two years ago, acute articular rheumatism; since then he has had occasional fugitive pains, principally in bad weather. Fifteen months ago he caught cold, and soon after began to feel slight pains along the crest of the left ilium. The pain increased for four days when it had become almost unendurable, and extended from the left loin along the crest of the ilium into the groin. His urine was passed frequently and painlessly in small quantities; and contained no blood. The pain was ameliorated by treatment, but not wholly removed, though there was not enough to keep him from following his usual occupation; it was almost invariably aggravated by damp weather, and was not influenced by motion. Twice since then he has had paroxysms of severe pain, and each time, after taking a mixture containing oil of turpentine, urination has been frequent and painful, and the urine has contained blood. For the last two months he has had more or less stitch like pain at the base of the left chest and a hacking cough. His general health has been failing only slightly. He thinks he has lost about ten pounds of flesh. On admission his face was pinched and anxious, his breathing rapid and shallow, with intense pain at the base of the left lung. Physical examination showed friction sounds at the base of the left lung, with evidences of a small amount of fluid in the left pleural cavity, collected posteriorly. The respiratory murmur over the upper part of the left lung was not quite so distinct as that over the right. The apex beat of the heart was not ascertainable with certainty, but seemed to be a little outside the normal point. The sounds at the apex were indistinct, and synchronously with the systole was a rubbing sound, heard only during inspiration. Toward the base of the heart was developed a harsh systolic murmur, best heard over the upper bone of the sternum, conducted feebly into the carotids, and not heard posteriorly. The heart action was too strong, the whole pericardium heaving. The normal area of cardiac dullness over the upper bone of the sternum was somewhat widened.

He complained of constant dull pain running from the left loin along the crest of the ilium. Urination was normal, and the urine contained no abnormal constituents. Under the use of salicylate of sodium the pleuritic pain was quickly relieved, the lumbar pain completely disappeared after a course of alkaline diuretics. The fluid in the left pleural cavity slowly increased for a while, then remained stationary till one week before his death, when there was a rapid increase. The pleural friction sounds came and went. The friction sounds heard over the heart were even now variable, sometimes systolic, sometimes double, occasionally dependent upon the respiration and again occurring regularly with every beat of the heart. Gradually to the left of the sternum in the second and third interspaces a new centre of pulsation developed apparently distinct from the cardiac impulse, and over this area resonance was impaired. Two months after he was first seen a systolic murmur was detected about the middle of the posterior border of the left scapula distinct from the murmur heard anteriorly. Coincidentally with the development of these conditions there was a steady decrease in the amount of air passing into the left lung. There was no other pressure symptom. For a month before he died he had irregular rises of temperature with profuse perspirations and lost flesh rapidly.

April 22d Dr. Wharton introduced a tube into the left pleural cavity through which a large amount of sero-pus drained off. He died April 27th.

Autopsy, twenty-four hours after death. Body much emaciated. In the sixth interspace one inch anterior to the mid-axillary line is an opening leading directly into the left pleural cavity which is filled forward to the anterior axillary line and upward to the spine of the scapula with a sero-purulent liquid surrounded by walls covered with a pyogenic membrane. The lung occupies the remainder of the pleural cavity and is everywhere closely adherent: it is compressed, the fibrous tissue is increased, and there is slight catarrh of the bronchial mucous membrane. The pericardium is dotted with scattered patches of recent lymph and its cavity contained three ounces of flaky serum. The heart is somewhat enlarged, the valves perfectly normal. The aorta is dilated, its endothelium proliferated, roughened, and in places calcareous. Springing from the arch posterior to the origin of the left carotid and subclavian arteries is an aneurism the size of a filbert extending back into the connective tissue to the left of the trachea. At the end of the descending part of the aorta is another aneurism as large as a peach springing from the right posterior surface of the aorta eroding the anterior face of the bodies of the fifth, sixth, and seventh dorsal vertebræ, pressing toward and almost occluding the left bronchus. It has ulcerated through the wall of the bronchus, but exudation of blood has been prevented by a firm laminated clot which fills this opening. There was no pressure on the œsophagus nor on nerves. At the origin of the cœliac axis is another aneurism half as large pretty well filled with laminated clots. Kidneys and other organs healthy.

Recent Literature.

The Treatment of Backward Displacements of the Uterus and of Prolapsus Uteri by the New Method of Shortening the Round Ligaments. By WILLIAM ALEXANDER, M. D., M. Ch. Q. U. I., F. R. C. S. Eng. London: J. & A. Churchill. 1884.

The title of this book explains its purpose and scope. We confess to having taken it up with a rather strong impression that it would be difficult to commend it, but find, after reading it, that we must modify our preconceived judgment somewhat. The author refers to his ill success in treating many obstinate backward displacements and cases of prolapsus uteri by the routine methods of plastic operations on the vagina and by pessaries, and hence conceived this operation to help him out. It is simple, merely cutting down on the round ligaments before they spread out in the mons veneris, shortening them by traction, and then fastening them in their new position by sutures. The author gives the history of twenty-two cases, in all of which the operation was successful, that is, the uterus was held in its new position, and annoying symptoms were relieved. Other cases treated in the same way by other surgeons have been equally successful.

We were prepared to condemn the operation as unnecessary, and as forcibly illustrating the "*cacoëthes operandi*" which is said to be so characteristic of gynæcologists in general, and a failing of which our English brethren are only too ready to accuse Americans, and after reading what Dr. Alexander has to say we are still of that opinion as regards the majority of his cases. In the first place our experience as to the difficulty of holding the uterus in place by a pessary and the discomfort of the patient while wearing it have been totally different from that of the author. Where the uterus is not bound down by adhesions (and such cases he does not pretend to treat by this method) it is an exceptional occurrence that a suitable pessary cannot be fitted and be well borne. For the rare case where a support cannot be tolerated we can conceive this operation to be of great value.

In cases of prolapsus uteri, however, where, as a rule, there is cystocele and rectocele, consequent upon a ruptured perinæum, we should be afraid that the operation would be only palliative, and that the ligaments would again stretch. In such cases the restoration of the perinæum, or a plastic operation on the anterior wall, or both, it may be, would seem absolutely necessary to prevent a recurrence of the trouble. A sufficient length of time has not elapsed since the first operations to fairly test this point.

The author is enthusiastic, and naturally so, and would be inclined to operate without sufficient trial of more simple methods. He deserves credit, however, for the ingenious operation he has advised, and we think it deserves its place with other methods, to be used in the exceptionally obstinate case which will not yield to other forms of treatment. F. H. D.

The Hip and its Diseases. By V. P. GIBNEY, M. D. Bermingham & Co. 1884.

In stating that Dr. Gibney's work is the most important book that has appeared upon the subject there is little fear that the limits of truth are overstepped, for not only is it a valuable and useful publication, written by one who has familiarized himself with what others have written, who is an accurate and conscientious observer, and who has had for many years unsurpassed opportunities at his hospital clinic for observing this disease and its consequences, but also the subject is one which has not attracted many medical writers of weight. Many books have been written upon the diseases of joints, but the diseases of the hip-joint have been chiefly considered in monographs advocating certain methods of treatment. It is certainly a relief to find something written on the subject in a broad catholic spirit too often wanting in the enthusiast who believes that Rome is to be approached only by one road, and that all other ways lead to the Avernus of unsuccessful surgery.

Dr. Gibney justly insists on the necessity of a clear diagnosis at the outset and not of a guess on the part of the medical attendant that "trouble at the hip" exists. The pathological changes wrought by the disease are clearly stated by Dr. Gibney and well illustrated by clinical and pathological facts, and the matter of diagnosis is well treated. The chapters on treatment are perhaps less satisfactory, chiefly because Dr. Gibney in a desire to be just has been led to describe all the methods in vogue, giving to some perhaps more prominence than they deserve.

A word must be said in regard to the illustrations, for which we imagine the publishers (and not Dr. Gibney) are responsible. If we were in the state of civilization of the North American Indians perhaps some satisfaction might be derived from these blurred woodcuts, as some value is accorded to the carved figures of the Aleuts, but as Americans confessedly lead the world in wood engraving, it is simply an insult to the medical profession to offer illustrations which indicate either that physicians are decades behind the public in matters of taste or that medical men are intellectual cormorants, and do not care how their mental food is cooked and served provided only the lump of nutrition is given them.

Medical and Surgical Journal.

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PUBLIC HEALTH, PUBLIC WEALTH.

We reproduce in another column extracts from Sir James Paget's eloquent address on the National Value of Public Health, delivered at the inauguration of the juries of the International Health Exhibition and published in the London medical journals of June 21st. Sir James never touches a subject without illuminating it, and there are few speakers or writers whose English is more attractive. It is impossible to read this address without a glow of philanthropic enthusiasm at the thought of the apparently possible realizations in health and wealth if wisdom could only be inculcated. Not the degree of wisdom which may be attainable in the future, but even that which is already in possession, and is crying aloud through public and private organizations that men may hearken. As the address points out, we are in no way more justified in indulging our fancy as to what may be done for national health in the future than by noting what has been done in the immediate past, which is strikingly illustrated by a statement made in a paper before the London Statistical Society, "that if the English death-rate should continue at the low average of the five years 1876–1880, the mean duration of male life in that country would be increased by two years, and that of female life by no less than 3.4 years as compared with the English life table; moreover among males seventy per cent., and among females sixty-five per cent., of this increased life would be lived between the ages of twenty and sixty years, or during the most useful period."

Whatever is possible in England for the amelioration of sickness and suffering and the mitigation of sorrow and waste is in a larger measure possible here in the United States, where there is less of the past to contend with and more of the present to encourage in varied climates and cheap, abundant, and accessible lands for a vastly larger population than we shall have for many years to come. And one potent auxiliary we should be able to count upon in striving for an ideal national health is a widely diffused system of popular education which, where it does more than to make the young discontented with "that station in life unto which it has pleased God to call them," should help them to find out what nature has fitted them to do, and to learn to adapt themselves more readily than the ignorant to the surroundings among which they may find themselves.

In the address the pattern healthy man is described as one who can do his work vigorously wherever and whatever it may be, and a distinctive characteristic of the best health is offered by a union of strength with a comparative indifference to the external conditions of life and a ready self-adjustment to their changes.

"He should not be deemed thoroughly healthy who is made better or worse, more or less fit for work, by every change of weather or of food; nor he who, in order that he may do his work, is bound to exact rules of living. It is good to observe rules, and to many they are absolutely necessary; but it is better to need very few besides those of moderation and cleanliness, and, observing these, to be able and willing to live and work hard in the widest variations of food, air, clothing, and all the other sustenances of life.

"And this, which is a sign of the best personal health, is essential to the best national health. For in a great nation, distributed among its people, there should be powers suited to the greatest possible variety of work. No form or depth of knowledge should be beyond the attainment of some among them; no art should be beyond its reach; it should be excellent in every form of work. And, that its various powers may have free exercise and influence in the world, it must have, besides, distributed among its people, abilities to live healthily wherever work must be or can be done.

"Herein is the essential bond between health and education. I do not know whether health or knowledge contributes most to the prosperity of a nation; but no nation can prosper which does not equally promote both; they should be deemed twin forces, for either of them without the other has only half the power for good that it should have."

This ideal of the healthy man as one equally and proportionally developed in all directions, and not as being overdeveloped in some direction at the expense of other parts of the system, is to be carefully kept in sight, that mere muscular hypertrophy be not regarded as strength nor nervous excitability as mental ability.

Thus far we may yield ourselves to the contagious enthusiasm inspired by an eloquent portrayal of the legitimate results of preventive medicine and of the cultivation of self control. But we must not forget that many years and lives were spent in the fruitless search for the philosopher's stone and the fountain of youth, and the present epidemic of cholera extending and developing itself in France, with its attendant unreasoning panics, shows only too clearly how far the civilized world is from the position which existing knowledge demands that it should occupy.

Perhaps the demonstration of the weak spots in the world's armor against disease will lead all the quicker to the wished-for result.

SPAYING COWS AND PURE MILK.

The question of securing pure milk at a moderate price is at once so important and so difficult a one, especially in large cities, that any suggestions offering a reasonable probability for simplifying it are likely to attract attention and enforce consideration in proportion to their merits.

A paper read last winter by Mr. L. F. Abbott before a Section of the Suffolk District Medical Society, in Boston, and published in this Journal, page 317, on The Milk Supply of Boston, and the Benefit to be Derived from Spaying Cows, has evidently attracted a good many readers who have been struck with the writer's account of his own experience, and with the conclusions which he draws.

As a rule due credit is given Mr. Abbott for his experiments, though a recent article on Ovariotomy in Cows, in a London medical contemporary, scarcely alludes to the source whence such information as is therein given was evidently taken. Mr. Abbott not being a medical man we are none the less desirous that he should be accorded such recognition as his zeal and intelligence in this matter merit, whether the spaying of cows shall or shall not eventually prove a solution to some extent of the milk problem.

We are glad that the article in question has attracted attention in England as well as in this country, for the problem of milk supply is certainly no nearer a satisfactory solution in London than in New York or Boston, and we may hope to receive material aid from the efforts of our professional brethren there who are earnestly laboring in the same direction. The forthcoming report of a committee appointed at the same meeting before which the paper above alluded to was read will shortly be made public. This committee has been holding meetings for some months past, and has handed in a preliminary report to be followed later by further communications on the same subject. The work of the committee has been arduous, and its investigations have extended over the eastern portion of the State of Massachusetts. It is hoped that the final report and recommendations may have the effect, in connection with a more thorough system of inspection and analysis, of improving the quality of the milk supplied to the towns of that State, beginning with Boston.

OUR BOARDS OF HEALTH AND THE STATE DEPARTMENT ON CHOLERA.

By way of precaution against the introduction and spread of cholera the State Board of Health of New York has issued a long memorandum, a copy of which has been sent to every local Health Board in the State. The history of former invasions of the disease warrants the belief that its reappearance here is probable, and some account is given of the outbreaks that occurred in this country in 1865, 1866, 1867, and 1873. In every country where the contagium exists it has ceased to be repropagated beyond the sanitary lines which separate the cleansed, drained, and ventilated premises and well-conditioned inhabitants from the filthy, or where polluted food and water and harmful beverages prepare the system for the fatal operation of the poison. For cholera to be diffused from continent to continent it must have as factors for its cultivation a centre of pollution for its cradle, a ship for its transport, and a number of towns prepared for its reception and development. Now, before the exotic infection has come, it is advised — as was urged in our editorial of July 3d — that all local Boards of Health and all householders should lose no time in enforcing such thorough scavenging and cleansing, such cleaning of sewers, drains, and ditches, and such ventilating, drying, lime-washing, and disinfecting of cellars and all damp and unclean places that if cholera comes its infective germs shall find no soil or foul surface in which to propagate epidemically. After describing the manner of the development and spread of the contagion the memorandum of the New York Board concludes by urging more specifically the duty of taking such sanitary precautions as will prevent such a tendency.

The brunt of the work of guarding against an entrance of cholera must naturally devolve upon the boards of health of our Atlantic States and sea-board cities, but the inland States have learned from the last European epidemic of small-pox that home precautions are far from superfluous. The Illinois Board with its customary energy has issued through its secretary, Dr. Rauch, a circular which has been sent to the mayors or presidents of village boards of 644 cities, villages, and towns throughout that State. From this sensible circular we make the following extracts, which are also entirely consonant with our editorial of July 3d, whose warning was, as subsequent events show, not premature: —

> "It is entirely possible that we may escape a visitation of Asiatic cholera this year, although there is yet plenty of time for the disease to reach our shores before cold weather. But even if there were no danger from this source, it should be remembered that everything which is done in the direction of sanitary improvement benefits the general health, reduces the amount of sickness, and lessens the death-rate. An obvious duty, therefore, rests at all times, but more urgently at present, upon those charged with the administration of public health affairs, to take such steps as may be necessary to remedy any defects in the existing sanitary status.
>
> "To this end a general inspection of the entire territory under your jurisdiction should be made forthwith, and all nuisances or other conditions injurious to the public health which may be disclosed by such inspection should be promptly abated. Especial attention should be paid to, First, The condition of the water supply. Second, The disposition of night-soil, garbage, and sewage. Third, The cleansing of streets, alleys, and other public places. Fourth, The supervision of food supplies, and of market-places, slaughter-houses, and similar establishments. Fifth, The general sanitation of every house and its surroundings.

. . . .

"It is desired that this work of inspection and remedying of evils and defects be begun at the earliest practicable moment, and a preliminary report be made to this office covering, in a general way, the existing sanitary condition, and the measures adopted and enforced for its improvement."

Secretary Frelinghuysen has, by cable, instructed the consular officers at London, Liverpool, Marseilles, Havre, Bordeaux, Bremen, and Hamburg to at once appoint competent physicians to inspect all vessels and passengers departing for the United States from those ports. The consuls are instructed to refuse clean bills of health in all cases except upon the recommendation of the sanitary inspector that such bills be given; and to report by cable any case of infectious or contagious disease known to exist on board of a vessel at the time of her departure for the United States. This course is adopted in order that the health officers in our ports may have timely warning of approaching danger, and be prepared to take such measures as shall prevent the scourge from gaining a foot-hold in this country, and is one in support of which international coöperation was sought by the abortive Congress called at Washington in January, 1881.

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MEDICAL NOTES.

— His Excellency the Governor of this Commonwealth makes his visits upon the State institutions unexpected and unannounced. On a recent visit to the Danvers Lunatic Hospital he walked in at a rear gate communicating with the servants' quarters early in the morning and had made a pretty extensive investigation before he met the head official of the institution. We believe that an inspection of Tewksbury was made in the same simple fashion, and though no time was given for shuffling tanned human skins and other unpleasant objects out of sight, yet the condition of things there as well as at Danvers met with approval. The good Haroun Al Raschid found he could learn what was going on in his dominion fully as well when he went about in the dress of a citizen as in his official state, and investigating committees and governors sometimes do well to follow his example.

— The approach of the hay fever season suggests mention of some of the remedies which have recently been claimed as moderately successful. Dr. W. T. Phillips recommends belladonna, which he found successful last year (*British Medical Journal*, July 14, 1883). In the same journal (June 7th, page 1090) he now gives the dose as one and a quarter minim of the succus every hour till relieved (thirty minims to three ounces of water). For coryza, Dr. G. E. Dobson recommends (*Lancet*, May 31st, page 978) the inhalation of the vapor of camphor and steam, the vapor being made to come in contact with the outer surface of the face surrounding the nose by means of a paper cone placed with the narrow end downwards in a vessel containing hot water and a drachm of coarsely powdered or shredded camphor. If this is continued ten or twenty minutes at a time, and repeated three or four times in as many hours, a cure is usually effected.

— The *London Medical Record* quotes from the *Russkaia Meditz* Dr. Prokop Popoff as stating that in more than three hundred cases of acute and chronic rheumatic coryza he used, with great success, the following simple plan of treatment: Twice daily (in the morning on rising, and at night on going to bed) for two days the patients are ordered to wash their legs from the sole up to the knee with ice-cold water, and to subsequently rub the washed parts with a dry towel or a piece of rough linen or cloth until a vivid redness and feeling of warmth appears. The whole procedure takes not more than five minutes. No other measures or precautions are required. A striking improvement follows already on the next day; in fact, the improvement is usually so great that many patients content themselves only with one day's treatment, regarding themselves as cured.

— We learn from one of our English exchanges that one of the latest additions to the Health Exhibition is an anthropometrical laboratory, which has been organized by Mr. Francis Galton, and has been fitted with a set of instruments for the measurement of certain personal facts. A small fee will be charged for admission, and in return for this the visitors will be furnished with a pamphlet, explanatory of the objects of anthropometry, and a carefully filled-up schedule, of which a duplicate will be kept for statistical purposes. This record will contain name (or initials) age, sex, profession, color of hair and eyes, place of birth and residence, height (standing and sitting), weight, chest capacity, as measured by a spirometer, strength of squeeze and pulse, swiftness of blow, acuity of sight and hearing, and the conditions of the color sense.

NEW YORK.

— In a case of death from the eating of raw ham, which occurred recently at Arietta, in Hamilton County, and which has been investigated by a committee of the State Board of Health, the muscular tissue of the patient has been found to be swarming with trichinæ.

— Dr. Cyrus Edson, chief of the second sanitary division, has presented to the New York Board of Health a report embodying the results of analyses made by Dr. Elwyn Waller of the water from nine artesian wells in the city, which, with one exception, are used by manufacturers of soda and mineral waters, and which vary in depth from thirty to one hundred and sixty-nine feet. The water taken from seven of these wells is pronounced bad and unwholesome, and from two others is characterized as doubtful. The report continues: "Owing to the geological formation of the island the water in many of the wells, however deep, is the drainage of the district closely adjacent to where the well is sunk. The importance of compelling the manufacturers to use pure and wholesome water is manifest when it is remembered how frequently mineral and carbonated waters are prescribed by physicians for invalids and persons in delicate health who are most liable to contract disease.

— State Comptroller Chapin has appointed Prof.

Charles S. Sargent, of Harvard, upon the committee to investigate and report upon the system of forest preservation in the Adirondacks.

Miscellany.

THE NATIONAL VALUE OF PUBLIC HEALTH.

Sir James Paget, in his address delivered at the inauguration of the juries of the International Health Exhibition, presented in a striking manner some of the losses arising from ill health, apart from and in addition to the cases of death. We make room for the following extracts: —

"I think, then, that we cannot escape from the reasons to believe that we lose in England and Wales, every year, in consequence of sickness, 20,000,000 of weeks' work; or, say, as much work as 20,000,000 of healthy people would do in a week.

"The number is not easily grasped by the mind. It is equal to about one fortieth part of the work done in each year by the whole population between fifteen and sixty-five years old. Or, try to think of it in money. Rather more than half of it is lost by those whom the Registrar-General names the domestic, the agricultural, and the industrial classes. These are rather more than seven millions and a half in number, and they lose about 11,000,000 of weeks; say, for easy reckoning, at a pound a week; and here is a loss of £11,000,000 sterling from what should be the annual wealth of the country. For the other classes, who are estimated as losing the other 9,000,000 weeks' work, it would be hard and unfair to make a guess in any known coin; for these include our great merchants, our judges and lawyers and medical men, our statesmen and chief legislators; they include our poets and writers of all kinds, musicians, painters, and philosophers; and our princes, who certainly do more for the wealth and welfare of the country than can be told in money. . . .

"Take, for example, such a disease as typhoid fever — that which Mr. Huxley has rightly called the scourge and the disgrace of our country. It has of late destroyed in England and Wales, among persons in the working time of life, nearly 4000 in the year. Its mortality is about fifteen per cent.; so that if, in any year, 4000 die of it, about 23,000 recover from it. Of these the average length of illness is, on the authority of Dr. Broadbent, about ten weeks. Here, therefore, from one disease alone, and that preventable, we have an annual loss of 230,000 weeks' work, without reckoning what is lost with those who die. And the same may be said of nearly all the diseases that are most prominent in the bills of mortality. The record of deaths, sad as it is, tells but a small part of the losses of happiness and welfare that are due to sickness. It is as if, in a great war, we should have a regular return of the numbers killed, but none of the numbers wounded, though these, more than the killed, may determine the issue of the war. . . .

"But, some may ask, can these things be prevented? Are they not inevitable consequences of the manner of life in which we choose or are compelled to live? No; certainly they are not. No one who lives among the sick can doubt that a very large proportion of the sickness and the loss of work which he sees might have been prevented; or can doubt that, in every succeeding generation, a larger proportion still may be averted, if only men will strive that it may be so.

"Let me enumerate some of the chief sources of the waste, as they appear to one's self in practice.

"Of the infectious fevers, small-pox might be rendered nearly harmless by complete and careful vaccination. Typhus and typhoid, scarlet fever and measles, might, with proper guards against infection, be confined within very narrow limits. So, probably, might whooping-cough and diphtheria.

"Of the special diseases of artisans there are very few of which the causes might not be almost wholly set aside. Of the accidents to which they are especially liable the greater part, by far, are due to carelessness.

"Of the diseases due to bad food and mere filth; to intemperance; to immorality; in so far as these are self-induced, they might, by self-control and virtue, be excluded. And with these scrofula, rickets, scurvy, and all the wide-spread defects related to them, might be greatly diminished.

"It can only be a guess — but I am sure it is not a reckless one — if I say, that of all the losses of work of which I have spoken, of all the millions of weeks sadly spent and sadly wasted, a fourth part might have been saved, and that henceforth, if people will have it so, a still larger proportion may be saved. . . .

"We may become the more sure of what may be done by looking at what has been done already. Let me show some of it; it will be a relief to see something of the brighter side of this picture.

"In a remarkable paper lately read before the Statistical Society Dr. Longstaff says: 'One of the most striking facts of the day, from the statistician's point of view, is the remarkably low death-rate that has prevailed in this country during the last eight years.' In these years the annual death-rate has been less than in the previous eight years in the proportion of two deaths to every 1000 persons living. The average number of deaths has been 50,000 less in the last than in the previous eight years. Doubtless many things have contributed to this grand result, and it is not possible to say how much is due to each of them; but it would be unreasonable to doubt that the chief good influence has been in all the improved means for the care of health which recent years have produced. This is made nearly certain by the fact that the largest gains of life have been in the diminution of the deaths from fever, and of the deaths in children under fifteen years old, for these are the very classes on which good sanitary measures would have most influence.

"The annual number of deaths from typhus, typhoid, and the unnamed fevers has been about 11,000 less than it was about twenty years ago. The annual number of deaths of children under five years old has been about 22,000 less than it was; and that of children between five and fifteen has been upwards of 8000 less.

"These are large results, and though they tell of only deaths, yet they bear on the chief subject I have brought before you, — the working power of the nation: for, however much we might assign to improved methods of medical treatment of fever, yet the diminished number of deaths means a very large diminution in the total number of cases. The deaths during the working years of life were 6500 less; and, this being so, we may hold that, if the average mortality was say, twenty-five per cent., the diminution in the total number of cases must have been at least 25,000; and if we may believe, as before, that each of these involved ten weeks of sickness, we have, in these fevers alone, a clear saving of 185,000 weeks' work in every year. . . .

“ It is said, whether as fact or fable, that the pursuit of science and of all the higher learning followed on the first exercise of the humanity which spared the lives of sick and weakly children; for that these children being allowed to live, though unfit for war or self-maintenance, became thinkers and inventors. But science and art are not dependent upon invalids; minds are not the more free or the better now for having to work in feeble bodies; each nation needs for its full international influence both health and knowledge, and such various and variable health, that there should be few places on earth or water in which some of its people cannot live, and multiply, and be prosperous.

“ If, therefore, we or any other people are to continue ambitious for the extension of that higher mental power of which we boast, or for the success of the bold spirit of enterprise with which we seek to replenish the earth and subdue it; if we desire that the lessons of Christianity and of true civilization should be spread over the world, we must strive for an abundance of this national health, tough, pliant, and elastic, ready and fit for any good work anywhere.”

CHOLERA AND SANITARY NEGLECT AT TOULON.

The outbreak of cholera at Toulon, says *The Lancet*, will surprise no one who is at all acquainted with the barbaric condition, so far as sanitation is concerned, of this, the French Portsmouth. When the cholera last visited France this town suffered most severely, but the warning was of no avail. It is said, on credible authority, that the death register if examined will reveal a surprising number of fatal cases of typhoid fever among strangers visiting the town, while among the native population this fever is of comparatively rare occurrence. The latter, it is maintained, must be inoculated by the foul atmosphere if it fails to kill during infancy; but friends and visitors coming from more wholesome districts at once fall victims to this fever if they are imprudent enough to remain a little while at Toulon. Military experience confirms this theory. So long ago as March 26, 1881, it was reported that Dr. Galliott, of the Marines, had received a gold medal from the French Government for an essay on typhoid fever at Toulon. The facts revealed, however, were of so alarming a nature that the Government absolutely refused to communicate to any one the contents of this report; and, while awarding the gold medal to Dr. Galliott, enjoined upon him the strictest secrecy. In spite of this injunction, the main points were ascertained, from which it appeared that at the barracks of the Mourillon, holding some two thousand soldiers, about a thousand cases of illness had occurred in the course of twelve months. Of these half were fully developed cases of typhoid fever, while the others, though more doubtful, were also for the most part clearly attributable to bad hygiene. The volunteers for one year's service, being younger men, were the principal victims; and, with the soldiers as with the civil population, those who had come from distant and healthy districts were the chief sufferers, while the natives of Toulon escaped. Now, the barracks of the Mourillon are only inhabited by old and inured soldiers; the younger men are sent to the fortresses on the surrounding mountains and islands. Still nothing has been done to improve the general sanitary condition of the town. The public has a just cause of complaint, for the authorities, having suppressed information, have rendered themselves alone responsible. In their own interests they should have taken measures in time, instead of allowing Toulon to become a menace to the health of Europe.

THE RELATION BETWEEN SCARLATINA AND DIPHTHERIA.

The *British Medical Journal* (April 12th) remarks editorially: —

“ The evidence of close relationship in origin and pathology of these diseases is rapidly accumulating. In some cases, barring mistakes in diagnosis, it seems that one develops from exposure to the other. In a recent epidemic at Sutton in-Ashfield they existed side by side. Some of the cases affected had a red eruption, followed by a desquamation of the skin and renal dropsy; others had no rash, but were followed by paralysis. Two cases of what appeared to be scarlatina occurred in an isolated group of cottages; from these contagion was carried to another family, and two children died, one of ‘scarlatina maligna,’ one of ‘diphtheria.’

“ In some cases the first patient in a family attacked had vomiting, sudden accession of fever, and a red rash; while others, a week or two later, had no rash, but white patches in the throat, and, in one or two instances, subsequent paralysis of the pharyngeal muscles. One case, beginning apparently as diphtheria, with white patches in the throat, developed on the third or fourth day the scarlatinal rash, which was followed by anasarca, from which he died. In another family, on the other hand, four members had typical scarlet fever in November; in January one of these, and one who escaped, had typical diphtheria.

“ At Whitstable and Dunmow, after diphtheria had been prevailing three months, scarlatina appeared. After existing together for a time diphtheria subsided, while scarlatina became more prevalent and more fatal. After five or six months this diminished, and diphtheria again made its appearance. The diagnosis between the diseases was very often impossible.

“ The most striking instance mentioned by the writer of the connection between the diseases is the following: A child who had contracted scarlet fever at service came to her home, — one of two isolated cottages. She was convalescent, and pains had been taken to disinfect her clothing and her person. Eight days later her sister was taken ill, and died in two days of ‘malignant sore throat.’ On the following day three more were attacked with the same disease; one died in two, one in three, and one in ten days. In the last case there was a petechial eruption. It was called ‘diphtheria.’ The physician in attendance considered the other cases as belonging to this category. A child in the adjoining cottage was taken, ten days after the return of the girl above mentioned, with a sore throat, developed a well-marked scarlet-fever rash on the sixth day, which was followed by desquamation on chest, arms, and legs. Four other children in this family escaped, but a woman who lived some distance away, who came to nurse the children, took diphtheria, and died on the fourth day, while sitting in her chair. The conclusion reached is, that though scarlatina generally originates from personal contagion, and though typical diphtheria often has a purely local origin, especially from sewer emanations, both diseases are due to an infection which in all cases attacks the throat, from which it is mainly propagated. In passing from person to person it may be so modified as to cause in one instance characteristic scarlatina, in another typical diphtheria, in a third a mongrel affection which it is difficult to refer to either, or to identify by any other name than that of a bad sore throat, and which is, in fact, a connecting link between the two diseases."

REPORTED MORTALITY FOR THE WEEK ENDING JULY 5, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Measles.
New York	1,340,114	929	571	42.05	8.77	31.14	3.21	3.38
Philadelphia	927,995	394	203	28.25	12.25	16.25	3.25	.75
Brooklyn	644,526	372	245	51.62	9.86	43.08	1.74	.48
Chicago	632,100	329	217	35.40	8.40	23.40	2.10	4 20
Boston	423,800	143	49	20.27	15.38	11.88	3.49	—
Baltimore	408,520	227	153	43.12	9.68	37.84	1.76	1.32
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	179	84	17.40	12.43	8.47	—	1.13
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	97	41	23 69	16.48	19.57	—	—
Pittsburg	180,000	112	78	48.06	7.12	37.38	3.56	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	45	10	13.33	15.55	6.66	2.22	—
New Haven	62,882	22	—	—	13.62	—	—	—
Nashville	54,400	20	6	40.00	10.00	25.00	5.00	—
Charleston	52,286	30	11	20.00	13.33	13.33	—	—
Lowell	71,447	16	6	25.00	—	12.50	—	—
Worcester	69,442	19	11	26.30	5 26	5.26	10.52	—
Fall River	62,674	21	12	28.56	—	9.52	—	4.76
Cambridge	60,995	18	5	5.55	16.66	—	—	—
Lawrence	45,516	18	6	—	11.11	—	—	—
Lynn	44,895	8	3	—	25 00	—	—	—
Springfield	38,090	10	3	20.00	20.00	10.00	10 00	—
Somerville	31,350	7	3	57.12	14.28	28.56	14.28	—
Holyoke	30,515	15	12	17.77	13.33	20.00	—	—
New Bedford	30,144	11	2	9.09	27.27	—	—	—
Salem	29,503	14	4	—	7.14	—	—	—
Chelsea	24,347	5	2	—	—	—	—	—
Taunton	22,693	7	2	14.28	—	—	—	—
Gloucester	21,400	5	3	—	20.00	—	—	—
Haverhill	20,905	12	4	—	8 33	—	—	—
Newton	19,421	6	0	33.33	16.66	—	—	—
Brockton	18,323	6	2	—	16.66	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	1	25.00	25.00	25.00	—	—
Fitchburg	13,433	5	3	—	20.00	—	—	—
Massachusetts towns	375,830	52	25	19.20	20.34	20.34	—	—

Deaths reported 3168 (no reports from St. Louis, Cincinnati, Buffalo, and Milwaukee): under five years of age, 1777; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 1107, diarrhœal diseases 796, consumption 325, lung diseases 182, diphtheria and croup 76, measles 61, scarlet fever 44, whooping-cough 31, malarial fevers 29, cerebro-spinal meningitis 26, typhoid fever 24, small-pox nine, erysipelas eight, puerperal fever three. From *scarlet fever*, New York 13, Philadelphia eight, Brooklyn six, Chicago five, Boston three, District of Columbia, Pittsburg, and Providence two each, Lowell, Newton, and Westborough one each. From *whooping-cough*, New York 12, Chicago five, New Orleans three, Philadelphia, Brooklyn, Boston, and District of Columbia two each, Pittsburg, Somerville, and Hyde Park one each. From *malarial fevers*, New York and New Orleans nine each, Brooklyn seven, Chicago two, Philadelphia and Nashville one each. From *cerebro-spinal meningitis*, Philadelphia 10, New York and Fall River three each, Charleston and Worcester two each, Chicago, Lowell, Lawrence, Holyoke, Taunton, and Newton one each. From *typhoid fever*, Philadelphia eight, Chicago four, Baltimore three, New York and Boston two each, New Orleans, Nashville, Cambridge, and Marblehead one each. From *small-pox*, New Orleans eight, Philadelphia one. From *erysipelas*, New York and Chicago two each, Philadelphia, Brooklyn, Baltimore, and New Bedford one each. From *puerperal fever*, Philadelphia, Brooklyn, and Baltimore one each.

In 103 cities and towns of Massachusetts, with an estimated population of 1,388,574 (estimated population of the State 1,955,104), the total death-rate for the week was 15.35 against 15.41 and 15.00 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending June 21st, the death-rate was 18.7. Deaths reported 3133: acute diseases of the respiratory organs (London) 227, measles 148, whooping-cough 116, diarrhœa 55, small-pox (London 41, Liverpool 11, Sheffield four, Cardiff, Sunderland, Hull, and Manchester one each) 60, fever 38, diphtheria 11. The death-rates ranged from 11.3 in Derby to 26.6 in Liverpool; Birmingham 17.2; Blackburn 20.8; Bradford 19.7; Leeds 20.1; Leicester 15.7; London 17.8; Manchester 23.4; Nottingham 15.8; Sheffield 17.9. In Edinburgh 19.7; Glasgow 24.6; Dublin 27.1.

The meteorological record for the week ending July 5th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
June–July, 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 29	30.137	73	89	58	68	42	81	63	W	W	SW	8	7	11	C	C	C	—	—
Mon., 30	30.014	74	89	62	74	45	92	70	W	SW	SW	10	12	10	C	C	C	—	—
Tues., 1	29.828	75	85	66	90	65	93	82	SW	SW	SW	9	11	8	O	F	O	—	—
Wed., 2	29.775	78	90	67	92	61	81	78	SW	SW	W	6	10	10	O	C	O	—	—
Thurs., 3	29.963	71	80	67	66	62	84	70	N	SE	NE	9	10	1	F	C	C	—	—
Fri., 4	30.019	65	73	60	71	72	100	81	E	E	E	3	9	8	C	C	R	—	—
Sat., 5	29.815	72	80	61	100	69	100	89	S	SW	S	9	13	7	R	C	R	—	—
Mean, the Week.	29.936	73	83	63				76										13.00	0.84

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, APRIL 1, 1884, TO JUNE 30, 1884.

Bailhache, P. H., surgeon. Detailed as chairman of Board to examine candidate for appointment into the Revenue Marine Service. May 17, 1884.

Vansant, John, surgeon. To proceed to Empire City, Oreg., as inspector. April 2, 1884.

Hutton, W. H. H., surgeon. Granted leave of absence for twenty-five days. May 14 and June 9, 1884.

Miller, T. W., surgeon. Granted leave of absence to attend the meeting of the American Medical Association. May 1, 1884.

To proceed to Pittsburg, Penn., Ashtabula, Ohio, Buffalo, N. Y., and Detroit, Mich., as inspector. May 10, 1884.

Wyman, Walter, surgeon. To proceed to Crisfield, Md., as inspector. April 11, 1884.

Detailed to represent the Marine Hospital Service as delegate to the American Medical Association. April 17, 1884.

Detailed as president of Board for physical examination of candidates for appointment as cadets in the Revenue Marine Service. May 20, 1884.

To examine cadet-graduates Revenue Marine Service as to physical qualifications. May 31, 1884.

Detailed as member of Commission to inspect United States buildings at quarantine station on the Delaware River. June 16, 1884.

Austin, H. W., surgeon. Granted leave of absence to attend the meeting of the American Medical Association. May 2, 1884.

Gassaway, J. M., surgeon. When relieved by Passed Assistant Surgeon Mead to proceed to Portland, Maine, and assume charge of the service. April 16, 1884.

Granted leave of absence for thirty days. May 28, 1884.

Stoner, G. W., passed assistant surgeon. When relieved by Surgeon Gassaway to proceed to Cairo, Ill., and assume charge of the service. April 16, 1884.

When relieved by Surgeon Gassaway to report in person to the surgeon-general. June 20, 1884.

Lewis, Fairfax, passed assistant surgeon. Granted leave of absence for twenty-one days. June 19, 1884.

Mead, F. W., passed assistant surgeon. When relieved by Assistant Surgeon Devan to proceed to Philadelphia, Penn., and assume charge of the service. April 16, 1884.

Detailed as recorder of Board for physical examination of candidates for appointment as cadets in the Revenue Marine Service. May 20, 1884.

Carter, H. R., passed assistant surgeon. To inspect unserviceable property at the San Francisco Hospital. May 24, 1884.

Wheeler, W. A., passed assistant surgeon. To inspect unserviceable property at the Chicago Hospital. May 24, 1884.

Benson, J. A., passed assistant surgeon. Granted leave of absence for thirty days. April 14, 1884.

When relieved by Passed Assistant Surgeon Stoner to report to him for temporary duty. May 19, 1884.

Banks, C. E., passed assistant surgeon. Detailed as member of Board to examine physically candidate for appointment into the Revenue Marine Service. May 17, 1884.

To inspect unserviceable property at Baltimore, Md., New York, N. Y., and Boston, Mass. May 26 and June 2, 1884.

Bennett, P. H., assistant surgeon. Granted leave of absence for twenty days. June 28, 1884.

Devan, S. C., assistant surgeon. To proceed to Port Townsend, W. T., relieve Passed Assistant Surgeon Mead, and assume charge of the service. April 14, 1884.

Urquhart, F. M., assistant surgeon. Granted leave of absence for thirty days. May 22, 1884.

Yemans, H. W., assistant surgeon. To report to Captain M. A. Healey for duty as medical officer during cruise of revenue cutter Corwin. April 16, 1884.

Glennan, A. H., assistant surgeon. To proceed to Mobile, Ala., for temporary duty during sickness of Passed Assistant Surgeon Goldsborough. June 17, 1884.

APPOINTMENT.

Brooks, Stephen D., M. D., of Massachusetts, having passed the examination required by the Regulations, was appointed an assistant surgeon by the Secretary of the Treasury, May 15, 1884.

(Dr. Brooks had previously served as an acting assistant surgeon from March, 1883, to May, 1884.)

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM JULY 4, 1884, TO JULY 11, 1884.

Birmingham, H. P., first lieutenant and assistant surgeon. From Fort Bayard, N. M., to Fort Bliss, Texas. Paragraph 3, S. O. 137, headquarters Department of Missouri, July 3, 1884.

PROMOTIONS TO DATE FROM JULY 2, 1884.

Perin, Glover, to be assistant surgeon-general, with rank of colonel.

Smith, Andrew K., to be surgeon, with rank of lieutenant-colonel.

Middleton, Passmore, to be surgeon, with rank of major.

PROMOTIONS.

To be assistant surgeons with the rank of captain, after five years' service, in accordance with the Act of Congress of June 23, 1874: —

Kane, John J., assistant surgeon, June 3, 1884.
Banister, John M., assistant surgeon, June 3, 1884.
Appel, Aaron H., assistant surgeon, June 3, 1884.
Rickard, Charles, assistant surgeon, June 3, 1884.
Carter, W. Fitzhugh, assistant surgeon, June 3, 1884.

LIST OF OFFICIAL CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JULY 12, 1884.

Lumsden, G. P., passed assistant surgeon. Ordered to U. S. S. Wyandotte.

Persons, R. C., passed assistant surgeon. Detached from the Wyandotte and placed on waiting orders.

Address.

THE PHYSICIAN A POPULAR EDUCATOR.[1]

THE ANNUAL DISCOURSE BEFORE THE MASSACHUSETTS MEDICAL SOCIETY, JUNE 11, 1884.

BY JOHN CROWELL, M. D., OF HAVERHILL.

Said Hippocrates, two thousand years ago, "a dry soil is essential to health." Yet Professor Chandler declares that not one house in a hundred in New York has a properly constructed cellar, which, he contends, explains the large proportion of deaths from consumption, and the prevalence of rheumatism in that metropolis. Sewer connections are usually made with tile drains, which are rarely tight, and hence they seriously pollute the soil. These cellars are crowded with all kinds of domestic rubbish, and often we find open water-closets for the servants in close proximity to the air box which feeds the heating apparatus. How many refrigerators have their drip-pipes connected directly with the house-drain! How often are cisterns and water-tanks exposed to like pollution! How often are the spaces behind the wood-work of basins, sinks, and other fixtures foul with dampness, mould, and the accumulation of filth! All the leading cities of the country are guilty of the grossest neglect in the simplest details of domestic drainage and sanitary appliance. We hear the same reports from Brooklyn, Philadelphia, Chicago, and San Francisco.

In our own metropolis of Boston these defects are painfully apparent. Recent reports assure us that many fine residences in the Back Bay region are deficient in sanitary safeguards. Hundreds of houses are built upon piles in made ground. In the process of settling, which may continue for years, the drains become dislocated, and this permits sewage to saturate the foundation and sub-soil. "I have known," writes a standard authority,[2] "seventy-eight cart-loads of earth polluted in this way to be taken from under a building in the city of Boston." Official reports tell us that of three hundred and fifty-one houses examined in Boston in 1878 fifty-five per cent. of the drains were imperfect.

In Chicago, out of seventy-five houses where diphtheria occurred, only four were found in a sanitary condition; and in St. Louis, Health Officer Moore reported, in 1879, that there was probably not a single house with perfect drainage, while in a vast majority every sanitary rule was violated.

Not long since a successful business man invited his family physician to visit and inspect his new dwelling-house built on the outskirts of a suburban city. The house was a "Queen Anne cottage," of the most approved pattern, picturesque in quaint gables and odd porches, and rich in the glow of color from tinted wall and painted glass. The hand of the artist was everywhere apparent, and each adornment suggested a home of refinement and taste. After admiring all these elements of beauty, the medical friend was practical enough to inquire as to the disposal of sewage and the appliances for ventilation and heating. The owner of this "gem of a cottage" was quite oblivious on these points. They had been left to the plumber and the mason, with no personal or official oversight. It was found, upon examination, that the house sewage flowed directly into a cess-pool situated in close vicinity to the house, and unprotected by any trap. The water-closets were supplied by pipes coming from the cistern containing the water used for culinary purposes, and the cellar was damp from the defective drainage of the clay bottom; and neither bath-room nor water-closet had any adequate means of ventilation. The satisfied owner was appalled when told that his beautiful home contained the germs of disease and death, and the good physician only regretted that his unwelcome detection had not been more timely.

How invaluable may be the suggestions and advice of the members of this Society in the location and the construction of dwellings, school-houses, and factories. In a large factory in a neighboring city in this State the water-closets furnished for the operatives on each floor were unprotected by traps, and, as there was no official inspection of the building, the fact was unknown to the owner of the establishment until an epidemic among the operatives directed the attention of the resident physicians to the sanitary condition of the premises.

Since the passage of the Act of 1877, authorizing the establishment of local Boards of Health in the larger towns of the Commonwealth, there has been a marked improvement in those localities that have availed themselves of the wise provisions of the statute. And physicians have rendered a noble work of self-sacrifice in organizing such boards and consenting to remain in official position until a good working system could be secured.

But many of our communities have not yet established such boards, and the smaller towns cannot have the advantages of a complete organization. It is here that the physician can render most efficient work by personal instruction to his neighbors in feasible methods of water supply, in local drainage, in household cleanliness, and in those minor sanitary details which pertain to the order and the decencies of life.

To what kind of places do we send our patients in the summer months for the tonic influences of the blessed air from mountain or sea? Are we careful to inspect the premises and acquaint ourselves with the sanitary conditions of these resorts? How often are they deficient in the simplest rules of cleanliness, with privy, pig-sty, and well in convenient proximity to each other, while frequently, especially in the farm-houses, the dark and unventilated cellars are reeking with the odors of decaying cabbage leaves and musty cider barrels. At a favorite sea-side resort, last summer, typhoid fever made its appearance in one of the "cottages," when it was found that the victims had been drinking water from a well percolated and poisoned by sewage from a defective drain-pipe.

Typhoid dysentery often appears at the old farm-houses to which we send invalids, and we find too late the stagnant pools of sink water and the damp and filthy cellar. These vicious conditions will be remedied when we lift up the warning voice and declare that no patronage shall be given to any resort, however popular, that does not comply with the wholesome and simple rules of sanitary science.

Is the question, "What do we eat," too trivial to arrest the attention of the physician? The people of New England are far behind the rest of the civilized world in the practical accomplishments of the culinary art. In the bustle and hurry of our busy population but little attention has been given to the sanitary conditions of cooking, and there is much of truth in the assertion that a French cook will make a nutritious dinner from the remnants of food that we consign to the waste barrel. How rarely do we find good bread, even in families where there is abundance of provisions. How fondly do we cling to the conventional pie and doughnut, as if they were chief among the inalienable rights inherited from the fathers. We smile at the astonished Frenchman who exclaimed, "What a people, a hundred religions and only one gravy!" And yet is there not a sound philosophical principle involved in this ejaculation so far as the gravy is concerned? Most of our methods of cooking seem contrived to destroy rather than to conserve the nutritious elements of the animal fibre, the albumen, the gelatine, and the fibrine. We have much to learn, not only from the French, but also from the Scandinavians, as to the methods of preparing food that shall be palatable, nutritious, and easily digestible.

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[1] Continued from page 50.

[2] Charles F. Wingate. Unsanitary Houses of the Rich, North American Review, August, 1883.

When that intelligent observer, M. Taine, was visiting England, and inquiring into the methods of domestic life, he asked his host, "How do you cook vegetables in England?" "Cook them!" was the astonished reply, "why we *boil* them, how else *should* we cook them?"

In this connection there is an important class of the community demanding our attention. I refer to the laborers and operatives in our large towns, who labor on the public works and in the factories. Many of these hard-working people are in the habit of "carrying their dinner," which is of course eaten cold, and the contents of these little tin pails and baskets are richer in their variety than in nutrition. No wonder that we have been called a race of dyspeptics. He will be a benefactor to his generation, as well as "put money in his purse," who will devise a simple method of soup distribution among the operatives who depend upon this cheerless method of dining. With large tin cans, transported on hand-carts, hot soup could easily be distributed by dexterous hands among the shops and factories, and for a few cents a comforting and sustaining meal could thus be furnished.

How often do we trace the sallow, attenuated look, the languid eye, and the feeble, inelastic step of many who seek our advice to the lack of proper food at the proper time! How frequently are we obliged to attribute the complicated train of female diseases to the miserable methods of living in cheap boarding-houses, combined with the constant demands of manual labor!

We need more of chemistry as applied to cooking. The public must be instructed in simple methods of preparing food, so that the nutritious elements will be retained; and what better service can the practical chemist render than to prepare a convenient hand book for popular use containing plain directions upon this vital subject? The philanthropist would substantially advance such benevolent work by offering a prize for the best treatise on practical cooking for general distribution among cooks of every grade, from the elaborate culinary establishments of the homes of wealth, from the fashionable saloon, hotel, and eating-house, down to the humble kitchen of the frugal housewife.

What kind of places do many of our business men occupy as offices, where they make the money spent in the elegant houses where dwell the pets and the idols of home? Too often these counting houses and offices are found in dark, narrow streets, and located in a basement, full of the stifling odors from ill-ventilated warerooms and cellars. Here are found clerks working by gas-light in mid-day, and the result is seen in the sunken eye and the sallow look and the shrunken muscle. Many such places exist in this goodly city, and the laws of mercy cry out for the protection of those who are forced to occupy them.

In the *Conduct of the Sick Room* the services of the physician as teacher are of the first importance. It is here where ignorance will reign supremely, and with fatal sway, unless the firm and intelligent hand of authority interferes in behalf of the helpless and patient sufferers. In the furnishing of the room, in the disposition of air and sunlight and artificial heat; in matters of cleanliness in the clothing and in the necessary appurtenances, and above all in the *nursing*, the vigilant eye and the guiding genius of the medical attendant are among the essential elements in the successful treatment of disease.

In private practice as well as in hospitals the physician should seek to have the furnishing of the sick room very simple, with as little of drapery and heavy carpeting as possible, and he should endeavor to secure ventilation and a proper adjustment of light by such contrivance as his ingenuity can suggest. The popular prejudice against air and sunlight has not yet faded from the face of the earth, and often the attendant will exclude both of these vital elements, as if they were the cause rather than the antidote of disease. In the regulation of artificial heat a good thermometer in the sick room is all important, and its registration should be insisted upon by the physician, and *his* standard of cleanliness in the care of the clothing and the vessels of the room should be often held up as a guide, and, if needful, as a terror, to the presiding genius.

It must be confessed that the average nurse, as found in our country towns and villages, is not the ideal guardian angel of camps and of hospitals, whose fairy shadow, as she flits along the corridors, falls like a benediction upon the helpless sufferers. The country physician has to deal with different material, and oftentimes his greatest embarrassment in the treatment of disease arises from the ignorance or duplicity of the nurse. In the larger towns and cities, and especially in the metropolis, this difficulty has been effectually met and overcome by the training of nurses in the hospitals, and a noble army of helpers is now in the process of this discipline, whose intelligent labors will add to the success of medical treatment wherever they are available.

But in the towns where hospitals do not exist the trained nurse is almost unknown, except in the most highly favored families. This vital want can be effectually met by the physicians of any given locality in the establishment of normal classes for the instruction of all women desiring the office of nurse, the physicians acting as teachers, under a system simple and elastic in its operation. In these classes instruction should be given in those essential duties of the sick room which ought to come within the province of every attendant deserving the name of nurse. The basis of such instruction and its practical working are most admirably and succinctly set forth by Professor Jacobi in an address delivered a year ago before the Mt. Sinai Training School for Nurses.[1] He says: —

> "May I tell you what a good trained nurse may teach, and can teach? How to recognize a fever, how to compare the local temperatures of the several parts of the body, and how to equalize them; she knows that ever so many feeble children might have been saved if but the feet and legs had not been allowed to get cold; how to bathe, when, and when to stop; how to regulate the position of the head, — I remember quite well the case of inflammatory delirium which would always be relieved by propping up the head, — how to treat intelligently an attack of fainting; how to render cow's milk digestible by repeated boiling, or lime-water, or table-salt, or farinaceous admixtures; how to feed in case of diarrhœa; how to refuse food in case of vomiting; how to apply and when to remove cold to the head; how to ventilate a room without draught; and a thousand other things. She will also use her knowledge and influence in weaning the public of nostrums, concerning which hardly anything is known except what you have to pay for the promises of the label. She will break the public of the indiscriminate use of quinia, with its dangers possibly for life; cure you of the tendency of making the diagnosis of malaria the scapegoat of every unfinished or impossible diagnosis; she will teach you that the frequent and reckless domestic use of chlorate of potassium leads to many a case of ailment, to chronic poisoning, possibly in the shape of Bright's disease, or to acute poisoning, with unavoidable death. These are but very few of the things she can do, and but a little of the knowledge she cannot but distribute."

We might add to this enumeration the ability to meet the many emergencies incident to the sick room. How to arrest a post-partum hæmorrhage, how to tie the umbilical cord, how to assist in administering anæsthetics in puerperal convulsions, and, above all, how to prepare the nourishment ordered by the physician.

Ask the ordinary nurse how she makes that popular decoction known as beef tea, or how she prepares the artificial food that many infants are doomed to feed upon, and we shall find a lack of method and uniformity almost ludicrous. Here is where the training hand of the physician should be felt, and by actual object-teaching should he give the necessary instruction.

In those families where the limitations of poverty forbid the luxury of a nurse the physician can do a timely service by the enforcement of a few simple rules for the relief of the suffering patient, and oftentimes he can introduce a system of attendance easily comprehended and followed. But what shall he do when he is confronted by the abodes of

"Poverty, hunger, and dirt"?

— the haunts of idleness, shiftlessness, and drunkenness; where the wretched offspring of disease and crime huddle together in the helplessness of want! It is here that he must assume the part of the philanthropist, and stoop down, and with pitying hands minister to God's suffering poor.

And can he not do more than this? Can he not, by his influence among the more favored classes, assist in the establishment of a *system of ministration* that shall result in lifting up these wretched sons of want, so that the coming generation, at least, can have some appreciation of the decencies of industry and of cleanliness. It is a noble part of the ministry peculiar to our profession to be able to inspire hope, and confidence, and an honest industry among the descendants of families that for generations have sat in the "dark by-places," with no aspiration and no purpose. And in this way something effectual can be accomplished towards arresting the frightful mortality among the children of the poor.

A noble army of women is doing a benevolent work in relieving the *immediate* wants of these poor sufferers. But in the broader and more radical work of instituting a system of distribution that shall look to a *reformation*, the physician, by his intimate knowledge of the causes of poverty and suffering, must act an important part as adviser and educator. To him, in a special sense, belongs the duty of suggesting to charitable bodies plans of operation that shall secure those practical results so essential to the substantial success of free and generous giving.

The Ethics of this Society, in their relation to a certain class of medical practitioners, are grossly misapprehended by the public. People can readily understand why we can have no affiliation with the vulgar charlatan or the arrant quack, but they do not as easily comprehend our attitude towards another class, composed largely of men of culture and high social position; men who, perhaps, were educated in the same schools and colleges, and who seem in all respects to be peers with the Fellows of this honored Society. Representatives of other professions have not been slow in their strictures, and we have been charged with bigotry, narrowness, and jealousy because of our position in this relation.

Much of this criticism arises from the ignorance of the popular mind as to the causes that compel an adherence to the fundamental principle, that the practice of medicine has a basis as broad and liberal as science itself, and therefore it cannot be limited in its universal scope by any system based upon an *exclusive dogma*, and depending for its success upon the charm of a "distinctive appellation."

We might explain to all such critics, and without any compromise of professional dignity or of self-respect, that, from the very nature of things, these exclusive practitioners are the victims of their own environment; that, by the narrowing process of their own theory, they shut themselves outside the generous fellowship of liberal thinking, and take refuge within the walls that they have built. Is this the way that "star-eyed science" conducts her votaries? Is she exclusive? Has she secrets locked up and hidden from the search of universal investigation? Is it not time that the epithets "regular," "old school," "allopath," popular nicknames coined by the opposers of science, were discarded from our vocabulary and ignored forever? We desire no other title than the simple, homely name of physician, a term broad enough to embrace all that is desirable or possible in the art of healing; that recognizes every hint or suggestion of a liberal or intelligent experience; that receives into its vocabulary the nomenclature of the honest, patient investigator, and accepts new theories, even at the sacrifice of those long cherished, but no longer practical, methods of the past.

Not long since a member of this Society was entertaining a company of clergymen around his hospitable board, when the conversation turned upon that phase of our ethics relating to the discipline of certain members. "Why is it," said a leading divine to his host on this occasion, "that your Society pursues such a severe and illiberal course toward members who differ from you in methods of practice?" The genial doctor explained that the course pursued was based upon the same principle as that which governs all social compacts. "What would you do with a member of your religious body who denied the fundamental elements of your doctrinal statement, who assumed another and distinctive title based upon a speculation? and more than all that, who assisted in organizing and supporting a system whose principles were in direct opposition to those held vital to your existence?" "Do with him?" said the good minister, with commendable zeal, "We'd have him disciplined, and if he did n't repent and recant we'd cut him off!" "That is somewhat like our position," was the quiet and convincing reply.

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[1] Address delivered at the first commencement of the Mount Sinai Training School for Nurses, May 12, 1883. By Abraham Jacobi, M. D.

A gentleman of my acquaintance, in high position in the legal profession, whose sick daughter was attended by a homœopathic physician, was highly incensed when a member of this Society declined a consultation. The judge, who could adjust a knotty point of law, failed to discern the ethical relations of this case, and the only difference that he could see between the two practitioners was that one was far more liberal and elastic in his practical methods than his conservative neighbor. He subsequently learned, however, that the cause of refusal was not based upon any narrow or selfish ground, that it did not depend upon the administration of large doses or small doses, nor upon the *belief* in any particular dogma. The fault was in the assumption of a title and the formation of an organization "distinct from, and opposed to, the medical profession."

Why not distinctly emphasize the statement, so that he that runs may read and understand, that the medical profession has no limitations except such as are made by science itself; that anywhere and everywhere a welcome is extended to all who comply with the benign and rational conditions of membership; that a profession based upon bigotry, narrowness, or illiberality cannot exist under the searching light of the nineteenth century?

Prof. Austin Flint, in his admirable digest of the Medical Ethics of the American Medical Association, uses the following language upon this important topic: "The true ground for refusing fellowship in consultations, as in other respects, is a name and an organization distinct from, and opposed to, the medical profession. Whenever practitioners assume a distinctive appellation, thereby assuming to represent an essentially distinct system of practice, taking an attitude of antagonism to the 'regular' profession, seeking popular favor on the ground that they belong to a 'new school,' based on truth and productive of good, whereas the 'regular' profession belongs to an 'old school,' based on error and productive of harm, how can there be fellowship either in consultations or in other respects? If they who thus assume an attitude of antagonism to the medical profession conscientiously hold to the distinctive tenets which, as they profess, are the ground for their antagonism, how can they consistently desire to meet members of the latter in consultation, and, with opposing views of therapeutics, how could such consultations accomplish 'the sole object in view,' namely, 'the good of the patient?'" And he adds these terse words, which possess a significant meaning: "If, as is asserted, homœopathy has practically been abandoned by most of those who practice under this name, or so modified that the modes of treatment in cases of disease are not essentially different from those of the 'regular' profession, why retain the separate organization and the name, which imply to the public a radical therapeutic distinction? If the assertion be true, the name and the organization being retained, professional fellowship is rendered thereby immoral on the ground of complicity in a fraud upon the public."[1]

(*To be concluded.*)

Original Articles.

THE PLASTER-POSTERIOR SPLINT IN THE TREATMENT OF FRACTURES OF THE LEG.[2]

BY GEORGE W. GAY, M. D., OF BOSTON.

The ideal dressing for a broken leg must be simple, comfortable, cheap, readily obtained, easily applied and removed, and must allow a frequent inspection of the limb without disturbing the patient. It must be applicable to all cases; capable of correcting any and all deformities, and of retaining the fragments in the desired position for an indefinite length of time; not liable to produce abrasions or other mischief; and once properly adjusted it should require little attention during the progress of the case.

Such an appliance has never, to my knowledge, been brought to the notice of the profession, but the one that seems to combine more of the desirable qualities than any other is the plaster-posterior splint, which has now been in constant use at the City Hospital for several years, and which has become a standard method of treatment in that institution.

The splint is made of sheet wadding, a coarse muslin or crinoline, and plaster of Paris. It may be applied as follows: The leg is washed and dried and enveloped in the cotton, which has been torn into strips about four inches wide, sewn together, and made into rolls like an ordinary bandage. Enough should be used to protect the bony processes and tendo-Achillis from pressure.

A single layer of the gauze large enough to extend from the toes to above the knee is to be placed beneath the limb, closely wrapped about it, and cut so as to completely surround it, with the exception of a space about an inch wide on the anterior aspect. This piece serves as a pattern by which the other layers, six or eight in all, are to be made. The muslin is to be slashed on each side opposite the point of the heel to allow the foot-piece to be brought to a right angle without forming clumsy folds. Other slashes may be required to make the dressing fit snugly and smoothly, and to prevent wrinkles.

Fresh plaster of Paris mixed with warm water to the consistency of cream is now to be thoroughly rubbed into each layer of the gauze, and the whole applied to the limb at once, moulded closely and carefully to it, and firmly secured with a common bandage. The fragments are to be held in their proper place until the splint has become sufficiently firm to prevent displacement, which with good plaster is not over fifteen or twenty minutes. In some cases this object may be accomplished by means of sand bags or pillows. In a few hours the outer bandage may be removed, the cotton wadding cut open with scissors, and the appliance is complete, and may be worn with comfort for several weeks.

A certain amount of judgment and tact is required to use this dressing satisfactorily, but no more than is necessary in the treatment of fractures of the leg by any other method. A little experience will enable any one to become familiar with the practical details of applying this bandage, and the field of its usefulness will be found to increase in proportion to one's familiarity with it.

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[1] Medical Ethics and Etiquette, page 47.

[2] Read before the Massachusetts Medical Society, June 10, 1884, and recommended for publication by the Society.

Particular attention is called to a few points in adjusting this plaster case. The greatest pains should be taken to hold the fragments in their proper position until the plaster sets, otherwise they may get displaced, when a new bandage will be required, or a deformity will be the result. The foot should be placed at nearly a right angle to the leg, especially if the fracture is at, or near, the ankle-joint. Little padding is required except about the heel and malleoli. Care should be taken that no wrinkles or folds be allowed to press upon the limb. The splint should reach the metatarso-phalangeal articulation below, and, as a rule, should extend above the knee, particularly in children, to prevent twisting of the fragments in their long axis, or, in other words, to hold the foot in its natural relation to the knee. It should embrace about three fourths of the circumference of the limb in order to give the desired support, and to retain itself in position.

This dressing is especially adapted to cases of simple fractures of the tibia, or of the tibia and fibula, which are not attended with serious injury to the soft parts, and in which no great amount of force is required to maintain the fragments in their proper place. It is very convenient in the treatment of these injuries in children. Applied under ether it is firm and solid before the patient awakes, and does not require frequent tinkering during recovery, as do many other appliances. The advantages of a dressing which does away with the pain and fright so commonly attending the ordinary treatment of fractures in children cannot be too highly appreciated.

Certain cases of compound fracture of the leg can also be satisfactorily treated with the plaster tray, if the soft tissues are not too extensively injured, and if the wounds be so situated that they can be exposed through apertures in the splint for purposes of cleanliness and local applications. For this class of injuries the bandage may be strengthened with strips of hoop iron, lined with oiled silk, and kept in position by means of straps with buckles.

Properly applied to the above-mentioned classes of injury the plaster-posterior splint is comfortable and efficient; it is self-retaining; it holds the fragments firmly in position; it allows the patient to be moved, or to move himself without danger of disturbing the fracture; it permits the parts to be readily examined; being opened throughout its entire length the bandage accommodates itself to the swelling of the limb without danger of strangulation; it can be applied immediately after the accident, there being no necessity for waiting until the inflammatory stage has subsided; it can be removed and readjusted with ease, and can be worn indefinitely.

The same rule in regard to opiates obtains here, as in all fractures, namely, they should never be given until the physician is reasonably certain that the dressings are doing no harm.

Contrary to the teaching of some authorities, the writer believes in frequent examinations of broken limbs until the fragments are so closely joined that they cannot be easily displaced. It must be a very exceptional case in which union is prevented by too much manipulation. Broken ribs and collar bones, though necessarily subjected to constant motion, almost always unite well. So do fractures complicated with delirium tremens, or excessive restlessness, or insubordination, in which the parts often sustain great violence.

If the physician would avoid deformed limbs, splint sores, and lawsuits, he must, by personal examination, keep himself constantly informed as to the position of the broken bones and the condition of the soft parts, even at the expense of considerable discomfort to the patient. Temporary pain caused in this manner is of little importance compared to the life-long mental and physical distress which may result from an unnecessary deformity.

The susceptibility to pain differs so greatly in individuals that it is not safe to rely wholly upon their sensations in determining the compression of a bandage. I once saw a case of gangrene of the foot, the result of a tight bandage, in which there was never any suffering. The only safety lies in watching the circulation of the toes, and in making careful examinations of the limb, being guided to a certain extent by the sensations of the patient. It is to be remembered that some persons with a fracture will always complain of pain, whatever treatment is followed. As these patients generally eat and sleep well, and remain in good condition, opiates are to be given sparingly, if at all.

The position of the fragments incased in the apparatus under consideration can frequently be determined by simply sliding the fingers along inside the splint without removing it. But to thoroughly examine the parts the tray must be forcibly sprung open and the leg carefully lifted out.

As plaster of Paris is brittle and not elastic, frequent removals of the dressing tend to weaken it. Whenever it becomes loose from this cause, or from wasting of the limb, it may be tightened with straps, or a new one may be applied. In many instances one bandage is sufficient for the entire treatment.

It is not necessary to weary you with details of cases which have been treated by the above method. Suffice it to say that not infrequently this dressing is applied to fractures of the leg at the City Hospital within twenty-four hours of the accident, and not disturbed until the fragments are firmly united and the recovery is complete.

The results obtained with this method of treatment are probably no better than those following the use of side splints, fracture boxes, etc.; but there is a great saving of time and labor to the surgeon. There is not that necessity for a frequent readjusting of splints and bandages, which is so essential with most other appliances.

The writer wishes it to be distinctly understood that this dressing is not adapted to all varieties of fracture of the leg. For example, some cases of Pott's fracture accompanied by marked eversion of foot, requiring strong pressure to restore and retain it in its proper position, can perhaps be better treated by other methods. So likewise may those bad cases of oblique fracture of the tibia, the fragments of which override each other to a great extent. Severe contusions of the soft parts should not be subjected to pressure until all danger of ulceration and sloughing has passed. The presence of blebs or blisters, however, does not necessarily preclude the use of this dressing, as they may often be treated through an opening in the plaster.

It has always seemed to me that those physicians who permit their patients to move about on crutches a few days after an immovable bandage of any kind has been applied to a recent fracture of the lower extremity allow their enthusiasm to get the better of their judgment. The complications liable to occur during the repair of broken bones are so numerous, and at times so insidious, and suits at law for malpractice are so common, that in my opinion no adult should be allowed to move about until there is fair union of the tibia and fibula, which usually requires from four to six weeks, and very little weight should be put upon the limb for some time longer. There can be no doubt that deformity occasionally takes place in these cases from the patient's getting up too soon, while the union is green, thereby allowing the fragments to gradually yield under the weight of the body.

Those cases of fracture of the lower end of the fibula and rupture of the deltoid or internal lateral ligament of the ankle, accompanied with an outward dislocation of the foot, are often very difficult to manage, and require a longer confinement than any other simple fracture of the leg, three or four months being necessary in some instances to insure sufficient repair to prevent future deformity. In some of these cases it is impossible to avoid a little eversion of the foot, whatever may have been the treatment and however long it may have been continued. The writer has seen a recurrence of the dislocation after three months' confinement. He has also seen two or three cases in which the inner malleolus had been exposed by ulceration due to a return of the deformity, after a fair union had apparently taken place. He would never permit a person weighing one hundred and fifty pounds to bear his weight upon a Pott's fracture under three months, and the greater the weight the longer should be the period of rest.

A different line of treatment, however, is called for in some cases of fracture of the shaft of the long bones, more especially of the femur. When the union is imperfect at the end of three months or thereabouts, nothing does so much good as to incase the limb in an immovable bandage and get the patient up on crutches. The local irritation which results from this practice tends to excite the reparative process to that degree that the fragments become firmly united within a comparatively short time.

In conclusion allow me to say, that while I do not think the plaster-posterior splint is adapted to all fractures of the leg, yet in the classes of cases specified in this paper I most heartily recommend it, hoping that a fair trial will convince some surgeons, as it has the writer, that the dressing combines more good qualities and fewer bad ones than any of the common appliances in use at the present time.

[A practical demonstration of the plaster posterior splint was made before the Society by Dr. R A. Kingman, of Boston, who perfected and brought it into use in this vicinity while he was house surgeon at the City Hospital in 1881. The efficiency and popularity of the splint are largely due to Dr. Kingman's skill and ingenuity.]

— One eighth of a drop of croton oil in pill three times a day is DaCosta's treatment for saturnine constipation.

REPORT ON LARYNGOLOGY AND RHINOLOGY.

BY FRANKLIN H. HOOPER, M. D.

PARALYSIS OF INDIVIDUAL FIBRES OF THE RECURRENT LARYNGEAL NERVE.[1]

In Nos. 46–49 of the *Berliner klinische Wochenschrift*, Dr. Felix Semon, of St. Thomas's Hospital, has communicated an exhaustive paper on the proclivity of the abductor fibres of the recurrent laryngeal nerve to succumb earlier than the adductor fibres, or even exclusively, in all forms of organic disease or injury, central or peripheral, acute or chronic, which concern the motor nerves of the larynx. The general validity of this law he first stated in the *Archives of Laryngology*, July, 1881. In the papers now before us there are notes of fifty-eight carefully observed cases, with twenty-one necropsies, all of which are in strict accord with the statements Dr. Semon has made. Many of these cases have been under the author's own observation; the remainder have been reported by men of the highest reputation, and, so far, no well-authenticated case has been brought forward which would invalidate his conclusions. The undoubted occurrence of transitory and varying isolated paralysis of the abductors, which, Dr. Semon has always contended, is characteristic of functional disorder of the motor nerves of the larynx in cases of soft lymphatic goitre, is only seemingly contradictory to his teaching, as these paralyses can be explained on the theory of transitory anæmia of certain regions of the brain. The occurrence of an isolated paralysis of the abductors from central causes can only be understood on the assumption that the nucleus of the spinal accessory nerve consists of strictly differentiated ganglionic cells; and the author points out that the proclivity of the laryngeal abductors to succumb to organic disease is not a pathological curiosity, but, as Ferrier has shown in reference to the abductors and extensors of the body, a part of a general law. In conclusion, the author lays great stress on the diagnostic importance of this proclivity. He shows, practically as well as theoretically, that, in pure unilateral paralysis of an abductor, there is no alteration either in voice or respiration, so that, unless a laryngoscopic examination is carried out as a matter of routine in all cases of evident or suspected organic disease of the brain, neck, or thorax, an early and sometimes the only symptom may escape notice; and he claims, under these circumstances, for the laryngoscope the position occupied by the ophthalmoscope in the diagnosis of renal and cerebral disease. If, as it would appear from this careful and exhaustive paper, the foregoing statements are unexceptional, there can, indeed, be no doubt of the extreme importance of this fact in anatomical and physiological as well as in diagnostic respects.

APSITHYRIA.

Some years ago Dr. Solis Cohen, of Philadelphia, reported, under the title of apsithyria, several cases in which there was complete inability to whisper, as well as aphasia, a condition to be carefully distinguished from that in which the inability to whisper is only apparent, and in which, on placing the ear close to the patient's mouth, or by using an ear-trumpet, a more or less feeble whisper can be detected. The author has recently returned to the subject in a paper in the *Philadelphia Medical and Surgical Reporter* of November 10 and 17, 1883, and records another case of this rare affection. An unmarried lady, aged forty, was seen on November 22, 1881. For fifteen months her voice and whispering power had been absolutely lost, the double infirmity compelling her to resort to tablet and pencil as her only means of personal communication. In February, 1879, she had suffered from pneumonia, which had left her aphasic; for about eighteen months she had been able to talk in a whisper, but not since. Laryngoscopic inspection revealed paralysis of the arytenoid muscle, and of both lateral crico-arytenoids. The patient was debilitated, dispirited, languid, and hypersensitive; also very deaf. The treatment consisted in the internal administration of sulphate of strychnine in gradually increasing doses, and in daily topical applications of electricity to the paralyzed muscles of the larynx, to some of the voluntary muscles of respiration, to the muscles of articulation, and to the region traversed by the pneumogastric nerves in the neck. In three weeks the ability to whisper was restored to such a degree that the tablets were given away, and have not been used since. At the end of about two months her voice began to improve, but would only reappear for a short time. After several relapses it was finally restored permanently.

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[1] British Medical Journal, December 8, 1883.

Apsithyria is usually found in females, but the author has seen it twice in the opposite sex. Once it occurred in a male religious fanatic, aged about forty, in whom aphasia and apsithyria had been complete for several months. One application of the interrupted current to the vocal cords cured the aphasia and apsithyria at once. The case was evidently hysterical. And once in a man aged above thirty years, who was not at all hysterical, and in whom the aphasia accompanying the apsithyria was due to paresis of the arytenoid muscles. This patient recovered under a tonic and electric treatment. In all cases which the author has seen the ability to whisper was last lost and first regained. The aphasia with which apsithyria is associated is always, according to the author, due to a functional paresis, and is not myopathic in origin. The apsithyria is apparently paretic too, he thinks, but where the seat of the paresis is is uncertain. The author suggests that it is in the muscle of the diaphragm. It is not in the other muscles of involuntary respiration, for their functions exhibit no evidence of impairment; nor is it in the muscles of the tongue and lips, for voluntary control over these muscles is sufficiently well maintained. Voluntary expiration can usually, according to the author, be effected; but the expiratory current cannot be emitted with the force sufficient to make a sound. These patients seem to make an effort to whisper, consciously and conscientiously, but they fail.

THE PERI-TRACHEO-LARYNGEAL GANGLIONS.[1]

The authors of this interesting article consider that the importance which these lymphatic glands play in causing certain vocal and respiratory functional troubles of the larynx entitle them to a more detailed description than they have received in the works on anatomy. The name of peri-tracheo-laryngeal glands is given to designate those glands which are situated in the cervical region, between the inferior and posterior portion of the larynx, trachea, and œsophagus. They are in the immediate vicinity of the recurrent nerve, and are separated from the vertebral column and pre-vertebral muscles by an abundant and loose cellular tissue. This study is founded upon twenty dissections, both normal and pathological, and the following are the more important points established: These glands, following the course of the recurrent nerve, form a chain, and are arranged generally in three groups: —

(*a.*) The inferior group, the largest and the most constant, is continuous with the mediastinal glands.

(*b.*) The middle group, less constant than the preceding, is composed of glands so small that they may escape notice.

(*c.*) The superior group, situated near the inferior and posterior part of the larynx, is perhaps less constant than the middle group, and composed also of very small glands.

The three groups may unite and form a continuous chain. Occasionally one of the superior groups is absent. In tuberculous, cancerous, and possibly syphilitic subjects, they may become greatly hypertrophied. The symptoms arising from compression of the nerves by these glands are due either to paralysis of the vocal bands or to spasm of the glottis.

THE CLINICAL SIGNIFICANCE OF THE ACUTE SUBCHORDAL SWELLING AND THE ORIGIN OF THE CROUPY COUGH IN LARYNGITIS.[2]

Any point which will serve to make clearer the vexed consideration and classification of the various diseases characterized by hoarseness, dyspnœa, and barking cough in children is worthy of attention. Dr. Karl Dehio, the assistant of Dr. C. Rauchfuss, in an article made interesting in great part by the cases detailed, believes that he has demonstrated an ætiological factor which has not yet received much attention. Rauchfuss was the first to draw attention to the swelling of the membrane below the vocal cords as the cause of the stenosis in the laryngitis in children. Türck had made mention of such swelling in 1866, but no attention had been paid to it. Burow reported a case in 1877, and in Ziemssen's work this case, with two from Rauchfuss and two from personal observation, was described under the head of Laryngitis Hypoglottica Acuta Gravis.

Dehio's task has been to connect clinical symptoms with laryngoscopic appearances. From the large material of Rauchfuss's clinic he has made a series of laryngoscopic examinations in all cases of acute laryngitis where it was possible. He found well-marked subchordal swelling in cases of (*a*) simple *barking* cough. (*b.*) Barking cough, dyspnœa, but no loss of voice, all much less marked in four hours, and about well in twenty-four hours, showing how rapidly the swelling may disappear. Vocal cords not affected. (*c.*) The same symptoms coming on very rapidly in a younger child, accompanied with great dyspnœa and all the symptoms of false croup. Examination showed the same subchordal swelling, but here in the narrow larynx causing more nearly complete obstruction. (*d.*) Slight general laryngitis, with barking cough, and not much change of voice. (*e.*) Acute catarrhal laryngitis, with barking cough, but no change of voice or alteration in appearance of edges of cords. (*f.*) Acute laryngitis complicating morbilli, and accompanied by barking cough and larynx stenosis. (*g.*) Laryngitis subchordalis with protracted course, and resulting in subacute laryngitis.

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[1] Étude anatomique et pathologique des Ganglions Péri-trachéo-laryngiens. Par le Dr. Gouguenheim et M. Leval-Picquecheff. Annales des Maladies de l'Oreille, du Orynx, etc, Mars, 1884.

[2] Dehio. Jahrbch. f. Kindhlkde, xx. B., 3 H.

It may be seen from these few selections from the author's many cases that his subchordal swelling plays an important rôle in many of the laryngeal affections of children. The swelling is the puffing out of the inflammatory, œdematous infiltration of the submucous tissue, which in exactly this region is looser and richer in interstitial spaces than in any other part of the larynx. When the swelling existed alone, and was not great enough to close the larynx, the only constant symptom was the barking cough. When the larynx was closed this was accompanied by the symptoms of stenosis. These two may be regarded as the clinical manifestations of laryngitis subchordalis acuta. The cough was present in every case where the swelling was found, and in one case the mirror showed clearly that at the instant of coughing, the cords being widely separated these subchordal swellings were themselves thrown into vibration, thereby producing the barking tone.

The author believes that the seat of acutely arising laryngeal stenosis is in the subchordal region, and the real barking cough to be pathognomonic of subchordal swelling.[1]

CATARRHAL LARYNGITIS.[2]

Jonathan Hutchinson, F. R. S., etc., in the course of an address on Collective Investigation of Disease, made the following remarks: I do not think that enough is known about catarrhal laryngitis. It appears to me to be a very definite affection, in minor forms tolerably common, but in its severe ones rare. It is, in a certain way, quite distinct from croup, being entirely non-membranous. It seems to me to be more common in adults, or in those past middle life, than in others. There is a tradition that Washington died of it. Acute œdema of the larynx is scarcely a suitable name for it, since it may be produced by a variety of causes, whereas the malady to which I desire to call attention is always due to exposure to cold, and always obeys the law of true catarrhal affections in passing off completely and rapidly if the patient survive. In almost all the fatal cases which I chance to remember the cold was caught by going to church, and all were in men past middle life. In one, a gentleman of fifty-five, who but one year before had insured his life for a very large sum, being apparently in excellent health, died on a Wednesday, having caught his cold on the previous Sunday evening. In this case the death was in spite of laryngotomy, and it is possible there was pneumonia also. In the last which I have seen, and the one which has made the greatest impression on my mind, the patient, a gentleman of fifty years, attended an evening service in cold, wet weather, complained of his throat immediately afterwards, had paroxysms of extreme difficulty of breathing, and died in one of them, within forty hours of his having joined in the duties of the choir. So distinctly paroxysmal had been his dyspnœa, and so complete the remissions, that he died in his clothes, not having gone to bed. This feature of complete temporary relief had led his medical attendant into the mistake of telegraphing for me to do tracheotomy instead of at once doing it himself. The patient in the end died before either of us could get there. We were allowed to examine the body within an hour of death, and found the larynx and adjacent parts in a state of extreme congestion, with much œdema, but without a trace of membrane. I by no means insinuate that catarrhal laryngitis has been wholly neglected in systematic works, but I feel sure, from much conversation with those of large experience, that collective investigation would be likely to bring out its features much more definitely, and to add an important chapter to the clinical history of catarrhal ailments in general.

SORE THROAT IN CHILDREN.

Dr. Ashby, in the *Practitioner*, December, 1883, contributes an able article on the necessity of examining the fauces in children suffering from the different acute specific fevers. The more important forms of inflammation of the throat in children are classified under four heads: (1) simple catarrhal tonsillitis; (2) scarlatinal tonsillitis; (3) pseudo-diphtheritic tonsillitis; (4) diphtheria. In diphtheria the characteristic appearances are usually well marked about the pharynx, but there are some points which aid one greatly in deciding whether the attack is diphtheria or not. Amongst these a swelling of the cervical glands with cellulitis, or perhaps a fetid discharge from the nose, is a point strongly in favor of diphtheria. Again, the pulse is weak, the temperature is not high as a rule, the urine is loaded with albumen, and there is no rash to make one confound the attack with scarlatina. In diphtheria the onset is insidious, in scarlet fever it is sudden, and is nearly always accompanied by vomiting, often by diarrhœa. In simple catarrhal tonsillitis the onset is sudden, and the temperature rises the first evening to about 103° F., the tonsils are equally swollen, and in a few hours yellow spots make their appearance, owing to the retention of the secretion in the crypts. There is no true ulceration of the tonsils, nor sloughing of the soft palate, nor cellulitis around the cervical glands. The pseudo-diphtheritic form often resembles true diphtheria very closely, but the cervical glands are not swollen, and there is no albumen in the urine.

(*To be concluded.*)

Hospital Practice and Clinical Memoranda.

DR. J. COLLINS WARREN'S NEW OPERATION FOR RUPTURE OF THE PERINÆUM THROUGH THE SPHINCTER.

BY FRANK K. PADDOCK, M. D., PITTSFIELD.

On the 2d of March last Dr. A. M. Smith, of Pittsfield, invited me to see one of his patients with him, and consider the feasibility of performing an operation for lacerated perinæum.

The patient was thirty years of age. She had given birth to two children. The first was delivered with instruments four years previously, and did not live. The rupture occurred during this first confinement, and ever afterward she had no control of the movements of her bowels, and complained of dragging pains through her back and hips and difficulty in walking.

The second child was ten months of age, and in good health, there having been about three years between the first and second confinement.

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[1] American Journal of Obstetrics, December, 1883.

[2] British Medical Journal, November 3, 1883.

[3] Arch. für Path. Anat. und Phys. und für klin. Med.

On examination, found the perinæum and sphincter ani torn entirely through; the recto-vaginal septum was obliterated for the distance of an inch and a half above the anus.

I advised the operation, and the patient wisely concluded to have it done at "the House of Mercy" (the Pittsfield Cottage Hospital), where she could receive the care and attention of Miss Field, the skilled nurse and matron of that institution.

I performed the operation recommended by Dr. J. Collins Warren, which consists of dissecting a flap from the posterior vaginal wall and the sides of the perineal rent, and turning this flap downward, so that the vaginal mucous membrane becomes the anterior wall of the lower part of the rectum and anus.

Six silver wire sutures were introduced and twisted. The upper one was passed through the vaginal mucous membrane, so as to draw it down into close contact with the anterior portion of the wound.

The sphincter ani was well stretched before introducing the first suture, and it closed around the flap with very little tension.

The catamenia appeared on the third day after the operation, and lasted three days.

The sutures were removed on the twelfth day, and the bowels were moved by an enema on the fourteenth. On the twenty-first day a thorough examination was made, and the wound was found united throughout, and the patient was allowed to sit up. A recent examination found the sphincter and perinæum entirely restored, the uterus in its normal position, and the movements of the bowels perfectly natural in every way.

The treatment subsequent to the operation was that usually observed; the urine was drawn for sixteen days, and the vaginal douche used four times daily.

The diet consisted entirely of beef juice and coffee, for two weeks; milk was not allowed. The first movement of the bowels on the fourteenth day was as soft as an infant's.

There was very slight rise in temperature on the third day, 100½° F. Only one dose of one fourth of a grain of morphia was given shortly after the operation.

The regular catamenial period occurred one week before the operation. The recurrence the third day after the operation was undoubtedly induced. That portion of the flap which protruded from the anus sloughed.

New Instruments.

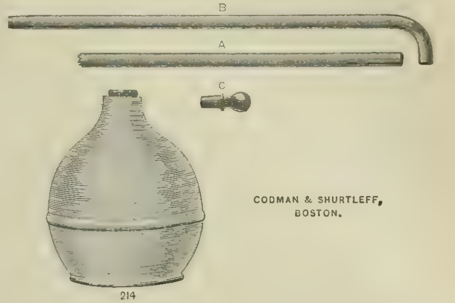
A NEW POWDER BLOWER.

BY WALTER J. OTIS, M. D.

I WISH to call attention to Codman & Shurtleff's modification of the powder blower which I exhibited at a recent medical meeting.

The instrument here figured consists of a soft-rubber bulb, to which can be attached hard-rubber tubes (A, B) of various lengths and shapes. The bulb is flattened at one end, so that it will stand upright, and is provided with a small stopper (C), to prevent the entrance of air as well as the escape of the powder when not in use. Powder may be introduced into the bulb either through a small funnel or by suction.

The instrument is manipulated by the thumb, placing the tube between the first and second fingers; or if desired, the powder can be shaken out. This will be found a useful and handy means of insufflation in such localities as the mouth, vagina, or rectum; a separate bulb, properly labeled, being kept for each powder.



Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

ADJOURNED SPECIAL MEETING.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

MAY 21, 1884.

Meeting called to order at eight P. M., DR. R. T. EDES in the chair.

The SECRETARY read a communication which he had received from the Boston Society of Arts, inviting this Society to attend a meeting of that body at the Massachusetts Institute of Technology to listen to a description of the system of heating and ventilation which has been adopted in the New Building of the Institute, and which possesses many points of interest, some of which are novel.

The CHAIRMAN then introduced the subject for this meeting, which was the continuation of the discussion upon the

EPURATION OF SEWAGE BY IRRIGATION AND AGRICULTURE,

the first discussion of which took place April 30th, and is reported in the JOURNAL, vol. cx., page 609.

MR. ELIOT C. CLARKE was first called on, and spoke as follows: "Much has been said lately of the successful disposal of sewage at Pullman, Ill., by land irrigation. It affords almost the only instance in which it is claimed that pecuniary profit has attended such a method of disposal. I have recently visited this sewage farm, and the result of my observations there may be interesting to the Society.

"Land irrigation was adopted at Pullman, not with the hope of profit, but from necessity, there being no other practicable means of getting rid of the sewage except at enormous expense. House sewage only, of which there is a daily supply of about 200,000 gallons, is disposed of by irrigation. Rain and water used for mechanical purposes are not mixed with the sewage proper but are discharged into Calumet Lake.

"The whole sewage farm consists of 1500 acres of flat prairie, situated within two miles, or less, of the town. Of this area, however, only 150 acres were used last year in purifying and utilizing the sewage, the remainder being held for future use, or cultivated without the application of sewage. The soil is a rich loam underlaid by sand. The portion to which sewage is applied is all underdrained by pipes about six feet below the surface. About ten acres are prepared as filter beds, being more carefully underdrained than the rest, and this tract disposes, by filtration, of the sewage at such times as the crops need none or would be injured by it.

"The crops to which sewage is furnished are, chiefly, celery, cauliflower, cabbage, and other kinds of garden produce which flourish with a copious supply of water. The sewage is only applied to them at such times and in such quantities as is beneficial, principally in the morning and evening, during dry weather. Some crops, as potatoes, never receive any sewage, since it is found to injure them. The superintendent, Mr. Martin, thinks he gets earlier and better vegetables than he would from land that was not irrigated. He also believes (without special opportunities for comparison) that the crops do better with sewage than they would if simply irrigated with pure water, that is, that the sewage acts somewhat as a manure. It is evident, however, that it does not act as other manures do, because he finds that it injures the land to apply sewage to it longer than for one season. After one season's application the sewage should be omitted for a year and the land, instead, enriched with barn-yard manure.

"The profit last year from sale of crops grown on that portion of the farm irrigated with sewage was about $5000. The superintendent thinks that, had it not been for early frosts, the profit would have been $7000. In calculating this gain, however, no charge was made for rent of the land or for interest on the cost of draining and otherwise preparing it, or for the machinery and other plant necessary to raise and convey the sewage to the farm, or for fuel and attendance on the pumping engines. These items would have largely exceeded the calculated profit, so that had it been possible to have discharged the sewage by gravity into some neighboring body of water it would have been much cheaper to do so.

"Under the circumstances the result is very satisfactory. The town gets rid of its sewage without creating any nuisance. No trouble has been experienced in winter. During very cold weather an inch or so of ice forms on the surface of the filter beds, but the ground beneath remains open and the sewage soaks away. Thus the primary object of the farm, which is to get rid of the sewage at all times, is satisfactorily accomplished, and, in addition, the land is cultivated, and the value of the crops produced exceeds the cost of cultivation.

"While the result at Pullman is encouraging for those towns which are compelled to purify their sewage on land there is nothing in it to commend sewage farming to towns which can discharge into water without doing any harm thereby. The conditions for sewage farming would rarely be so favorable as they are at Pullman. At that place a comparatively small amount of sewage is to be disposed of, and close at hand is available an abundance of cheap but rich farming land, perfectly flat, and with soil especially adapted to the purpose.

"In Boston the territory south of Charles River furnishes, in dry weather, one hundred times as much sewage as Pullman. If the same ratio between acreage and sewage were preserved, Boston would need a farm of 15,000 acres, an area as large as the city proper, South Boston, Dorchester, Roxbury, Brookline, and Brighton. It is needless to say that no such area suitable for the purpose can be found within accessible distance.

"The sewage of Pullman is about three times as dilute as Boston sewage, but otherwise appears to be the same material. It is allowed to flow on to the land each morning and evening unless rains occur, when it is not used so frequently.

"The effluent water is clear and free from smell or taste, and fish are found at the outlet of the filter beds, which is considered possible only in pure water. At the opening of the sewers there is a perceptible odor, but it is the smell of fresh sewage, and not that of decay or decomposition. The superintendent of the farm resides at a short distance from the filter beds, and suffers no inconvenience from their proximity to his dwelling, and his family have never been afflicted with any disorder attributable to that cause. The centre of the farm is between one and two miles from the centre of the city."

Dr. Faxon stated that he had listened with much satisfaction to the discussion, but that one element existed in American sewage which was not found in that of any European system. The sewage of every American city is loaded with tons of grease, which materially interferes with its utilization in the same manner as is followed in other countries. The greasy contamination forms a solid crust in the upper layers of the soil, which the roots of plants cannot penetrate. The Pullman farm is far from representing the actual results of such a system in its more extended adoption. The sewage from Boston is at present discharged into tidewater, but the nuisance of sewage pollution is not removed. A certain portion of Boston sewage comes to the shores of Quincy Bay, and is already creating a nuisance along the beach in that vicinity. From the windows of the Sailors' Home at that place can be seen a layer of sewage many acres in extent upon the surface of the water between that point and the neighboring islands. As summer approaches the sludge becomes more abundant, and is thrown up on the shore, where its stench becomes intolerable. Some other method than the present must ultimately be adopted for the disposal of the sewage of Boston.

If an engineer were requested to designate a perfect system of sewerage it is quite impossible to say what method would be recommended, but at present, everything taken into consideration, filtration seems to be the most available method known.

In reply to Dr. Faxon Mr. Clarke said: "This is the first intimation I have had that the Sewage Works at Moon Island create any nuisance or are likely to. Those who live on the island experience no discomfort. I have seen some sludge about the outlet, and there are places on the Works where one can get the odor of sewage. That was to be expected. The sewage which is discharged at Moon Island formerly emptied at fifty outlets in Boston, and made fifty nuisances close to residences, places of business, hospitals, bath-houses, etc. It has not been changed to cologne water by being diverted to Moon Island. But I do not believe that any nuisance will be created there which can possibly affect any one not living on the island.

" Although a little of the sewage may deposit near the outlet, almost all of it goes out of the harbor. It follows an unvarying course between Long and Rainsford Islands, and none of it ever turns into Quincy Bay. Its outward course can be distinctly traced for about a mile, but at a little greater distance from the outlet the dilution with salt water is so great that all trace of the sewage is lost."

Dr. Marcy inquired of Dr. Faxon the reason why he believed the fatty matter of sewage caused the soil to mass together and thus, as stated, prevent penetration by the rootlets of plants. Dr. Marcy questioned if this could really be true, since the fatty materials of sewage are chiefly animal, and it is well known that these rapidly and easily undergo fermentation and decomposition, setting free the fatty acids at ordinary temperatures. Thus these compounds are taken to pieces by the action of the bacteria and fitted to serve as plant food. Dr. Marcy inquired as to the filtrative power of the soils as shown in the experiments of Dr. Faxon and at the Woman's Prison, saying we must bear in mind that for about six months of the year in our latitude there is very little vegetation, and provision must be made for winter sewage. Contrary to the usual belief, sand makes a most unreliable filter.

Mr. Edward S. Philbrick, C. E., spoke as follows: "The subject under discussion is a very broad one, and I shall therefore limit myself to the question of applying the sewage of *Boston* to irrigate the soil. While not wishing to be understood as opposing the system of irrigation by sewage in general, and while recognizing the importance of making strenuous efforts to prevent the pollution of water supply by a reckless discharge of sewage into natural water courses,[1] I will refer to some of the obstacles which tend to render sewage irrigation a difficult plan for this city.

" The money value of the solid and dissolved ingredients of sewage has been urged by many persons who have investigated the subject. Many skilled investigators have devoted their attention to this question, particularly in Europe, within the past ten years, and we have much information from that source as well as from the experiments made by European towns in the disposal of their sewage by irrigation.

" But the money value of the ingredients of sewage is by no means the only question of importance in the consideration of its disposal. It has often been found in developing mines that the number of pounds of copper or silver in a ton of ore, as determined in the laboratory by assay, is but a poor guide in deciding upon the value of the ore or the mine. We must also know what it costs to stamp, wash, and smelt the ore and refine the metal that exists in that ore before its commercial value can be established. So in the disposal of sewage by irrigation it has often been found impossible to recoup the cost of the process by the products of the farm. The disposal of the sewage in some *innocent* way is necessary to the welfare of the community, so that for sanitary reasons such a course may often be the very best, though no source of profit, simply because it is the cheapest way of getting rid of a dangerous material; but it should not be regarded as likely to be *profitable* as a commercial undertaking, except under the most favorable circumstances.

"The difficulties met with are such as these: Plants that are useful as farming products do not tolerate a constant saturation of the soil they grow in. Therefore a sufficiently large area of soil must be treated to allow of applying the sewage on alternate fields, so that one may be receiving it while it is soaking away on the other. Even then we find that the plants which need a copious supply during a certain stage of their growth need much less at other stages when approaching maturity. We find, too, that the crops which are benefited by a large quantity of fluids in a dry month would be destroyed if an equal amount were put on the land in a rainy month. Now since the flow of sewage from any city is likely to be rather more copious in a rainy period than in a dry one, even though pains may be taken to exclude the rainfall from the sewers, the crops are often drowned with sewage at one time while getting barely enough to supply their wants at another. For this reason those sewage farms have been most successful where the farmer was not obliged to take the *whole flow*, but merely what he desired from time to time.[2]

" In order to make sewage irrigation successful the land must be located favorably, must not be too steep in its declivities, and must be had at low rates of cost, that is, consistent with prices paid for other farm lands. Such a surface is not easily found near Boston.

" However great the advantages of irrigation may be to certain crops, it is not so applicable to hoed crops as to the grasses, for the reason that irrigation puddles the surfaces, which unless very sandy cakes and hardens when drying, requiring frequent hoeing to pulverize the soil. Therefore it has been found that Italian rye grass is the best crop for sewage irrigation. But this is a crop which is poorly adapted to our climate and is of little value except for soiling cattle. Moreover we have in this climate at least six months of every year when no such crop can be grown, while the flow of sewage is continuous during the year."

Mr. Desmond FitzGerald, C. E., said that the improved system of sewerage for the city of Boston was so designed that if it should ever be found desirable to utilize the sewage, it could be done, but that in the present experience of dealing with as large a quantity of refuse water as that now supplied by Boston, and considering its highly diluted state, it would be a great waste of money to attempt any scheme of utilization. In regard to inland towns situated on the borders of water-sheds used for sources of water supply, the case was, however, far different. Here very small amounts of sewage had to be dealt with, and there was little doubt in his mind that some scheme either of filtration or irrigation could be successfully applied. The speaker did not intend to use the word success in a pecuniary but in a sanitary sense.

Mr. FitzGerald proceeded to describe the actual condition at the present time of the several sources of supply of the city of Boston, and of his attempts to preserve the purity of the same. He showed that the time had now arrived when some principle of action must be assumed. Either the brooks must be given up to the towns for common sewers or the towns must be made to take care of their sewerage in a proper manner.

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[1] It seems to me that Dr. Barnes has informed himself chiefly by *reading*, and that his reading has embraced only one side of a question which has been attended with a very warm *partisan* discussion in England lately. I hope its discussion here may be more deliberate and of a broader character. One thing is certain in my mind, namely, that it is a *local* question very largely, and that *patent systems* are no more likely to be widely applicable in our profession than in your own, and for similar reasons.

[2] The success of the Gennevilliers sewage farms, as I am informed, is attributable to this fact, that the delivery of sewage to the farmer was at his option and not obligatory. Such a system can never be a reliable source of relief to a town so long as any considerable portion of its sewage flow is liable to be left undisposed of in a wet day.

The speaker went on to show that the brooks are now used for drainage only by those people who happen to own land on the margins, while the neighbors immediately adjoining have to provide for their sewage by emptying their cesspools, etc., and the hardship and injustice of this is not denied. Mr. FitzGerald described the works at Sherborne, which are sub-surface irrigation combined with intermittent downward filtration. He said the works had been very much misrepresented, and that while no filtration system removed the chlorine, yet the effluent water was clear and inoffensive to the eye or smell, and practically the filthy condition of the sewage is very materially improved. The speaker agreed with the statements made by Mr. Ernest W. Bowditch at the last meeting, that no cast-iron rule could be made to suit all cases, but that as the circumstances and situation of every town were different, so a study would have to be made of each case and that system adopted which best suited its peculiarities.

DR. JOHN G. BLAKE remarked that, looking at the subject from the health stand-point alone, it was becoming every day more necessary that some solution of the sewage question must be attempted if the health of communities as affected by their water supply was to be considered. What is wanted to hasten the solution of the subject is a law compelling towns bordering on rivers, ponds, and lakes to make some other disposition of their drainage than to allow it to run into these as receptacles. Up to the present time it has been impossible to convict offenders, but during the past winter a law, more stringent in character and free from the defects in previously existing laws, was passed, and under it, action to punish offenders will soon be commenced and pushed vigorously. From what had been said on the subject Dr. Blake is inclined to think that irrigation might prove itself very well adapted for small country communities without any regular system of drainage. The question of profit might well be left for later discussion, and the only point deserving consideration was the disposal of their sewage at the least expense and in such manner as to prevent its becoming a source of injury to themselves and others. Inasmuch as eighty cities and towns are moving to supply themselves with water, the importance of this subject had become very much magnified, and action looking to a remedy must soon be taken.

DR. BARNES, in closing, said: If the theories advanced in opposition to the employment of irrigation and agriculture for the epuration of sewage had not been used in Europe, and finally overcome by actual experience, one would hardly feel like continuing to advocate this system for Massachusetts. My enthusiasm, however, does not carry me so far as to suggest even a possibility of the abandonment of Boston's system of intercepting sewerage, notwithstanding the probability of its polluting the lower harbor and producing an unsanitary condition similar to that of the upper harbor, and an annoyance to the people living on the south shore, for before this condition is reached it may fairly be anticipated that irrigation and agriculture will have proved here, as in Europe, an economical and practical method of epuration. The sewer can then be extended to the main land and discharged on the soil.

"It will not be possible, however, to connect any territory adjacent to Boston with this system without constructing an additional tunnel under Dorchester Bay." This is the language of one of Boston's officials a few weeks since before a committee of the Legislature. Filtration has, in numerous instances in Europe, accomplished complete clarification of sewage, and yet the analyses show the effluent water to contain from one half to six sevenths of the original amount of polluting matter. Colonel Waring's system of filtration at the Women's Prison accomplishes all that is possible, and yet the analyses show the result to be far from satisfactory. Pasteur and Shloesing, with others, sign a report to the Parisian government in which is stated, "The system of epuration by soil is the only one yet demonstrated to be a success. The discharge should be intermittent, and with methodical rotation, and the doses should be determined by analyses of the effluent water."

At Dantzic is encountered a mean winter temperature about that of our own. Irrigation is continued throughout the year with quite as much success in epuration in winter as in summer, and at all times without offense.

The "winter basins" at Breslau are not a part of the system advocated, as they involve the stagnation of sewage.

"The rosy coloring" of the Gennevilliers farms was not my own painting, but the translation of a report by a commission appointed by the city government of Paris, to whom, it seems to me, ought to be accorded the credit of knowing the facts, particularly as the report was unanimously signed. These gentlemen say "the increase in valuation and population at Gennevilliers is due to farmers coming from other parts of France to share in the general prosperity." Durand-Claye says "the population of Gennevilliers has increased thirty-four per cent. in five years by the arrival of numerous cultivators." M. Joly says of the Gennevilliers farms: "The question, scientific and practical, is absolutely solved." And Dr. Loiseau, at the Geneva Congress, in 1882, said "the benefits derived from these farms are indisputable from every point of view."

I was amazed at the statement that no person knew the cost of the Gennevilliers farms, as I have in my library an official document of Paris pretending to give every item of expense from the first experiment at Clichy, in 1867 and 1868, down to 1882, including lawsuits and large indemnities paid for an unfortunate experiment.

In regard to the city of Pullman making arrangements to pump the sewage into the lake I have the following letter from the superintendent of the farm: —

RIVERDALE, COOK COUNTY, ILL., *May* 9, 1884.

DEAR SIR, — If any such arrangements as you speak of in yours of 6th inst are being made I have no knowledge of the fact. The sewage is thoroughly purified by filtration, creating neither offensive odor nor nuisance of any kind.

The farm, last year, paid over six per cent profit on the money invested ($80,000), and we hope this year to do even better. Consequently there exists no necessity for any such change as you speak of.

Very respectfully, E. T MARTIN, *Superintendent.*

HENRY J. BARNES, M. D., BOSTON, MASS.

It should be mentioned here that downward intermittent filtration is a valuable auxiliary to sewage farming. I. Bailey Denton has written considerable upon this branch of the subject. I regret not knowing the history of the Pullman farm, as I should like to pay a proper tribute to the pioneer of this system in America.

The unprofitable results of sewage farming have been dwelt on by most of the opponents of the system, forgetting that it is a question of sanitation and not of making money, and if raising vegetables contributes in any degree to lessening expenses it takes precedence in a financial point of view of all others, as they make no return for the original outlay except the almost universal offense they create.[1]

It has been a long and costly struggle to demonstrate the fact that sewage can be epurated by irrigation and agriculture. Every conceivable danger has been predicted. And many are the unfortunate and disastrous experiments which can be cited as swelling the cost above the possibility of many of the farms earning interest on the plant. To obtain an act of Parliament authorizing the establishment of a sewage farm often requires the expenditure of £10,000. Litigation and land damages, another large amount, for land is very dear in England. The heavy clay soil demands a large expenditure for drainage. But notwithstanding these obstacles the number of farms has rapidly increased, until now there are at least two hundred.

The Royal Commissions recommend the enactment of a general law authorizing farms of this character.

In 1876 Messrs. Chesbrough, Lane, and Dr. Folsom, Commissioners reporting on the sewerage of Boston, say "the Edinburgh farms are profitable." One of the commissions appointed by the Parisian government declare the sewage farms at Gennevilliers profitable, and use this as one of the arguments in support of their recommendation to the city to purchase the State lands in the forest of St. Germain. The owner of the farm at Leamington (which, by the way, has not been leveled) as well as the superintendent of the farm, claim a good profit after paying the city $2250 per year for delivering 1,000,000 gallons each day at the highest point of the farm.

Mr. Aird could not have lost a large amount of money in his contract to take the sewage of Dantzic, for some years later he made a similar contract with the city of Breslau. But it ought not to be required of the friends of this system to show profit until at least one system is devised capable of competition with this in producing satisfactory epuration.

The enormous dilution of sewage in this country is mentioned as an objection. By analyses the amount of organic matter in the sewage of American and European cities varies but a trifle. Boston consumes more water per capita than Paris. But the latter city dilutes her sewage equal to that of our own by a lavish use of water in washing the streets each morning. And the estimate of three barrels of water to the discharge of one individual here does not include the organic matter constantly discharged from sink drains or the street washings. Durand-Claye, the celebrated French engineer, to whom the world owes a debt of gratitude for demonstrating the possibility of epuration by this method, says, "It is desirable and necessary that there should be a great dilution by water in order to insure rapid transit."[2]

The soil does not clog where systematic irrigation is practiced. The thin skin of impervious deposit, when dried, shrinks, cracks, and breaks up, the organic matter decays, and the soil is more pervious than where irrigation is not employed. Reservoirs of deposit are used to eliminate the coarse particles, as their decay on the surface would cause an offensive odor.

It is highly probable that the failure mentioned as resulting from an impervious deposit where "sewage was pumped on a garden," was due to puddling. And that it is an unnecessary accompaniment to irrigation is proved by the employment of this system at Buntzlau on fifteen hectares for over two and a half centuries, and at Edinburgh for over two centuries, without diminishing the permeability of the soil.

As to the impossibility of obtaining suitable soil of sufficient area in Massachusetts for the general employment of this system, the success which has attended the efforts of the English in finding it in their thickly populated island is an answer. Our forests could be utilized with little expense, and next to Italian rye grass the trees would prove the best absorbers of filth. A few acres of willows at Windsor take care of the sewage of twelve thousand people.

I recall but one other objection, the comparatively large rain-fall here, forty to fifty inches per year. At Gennevilliers 312 inches of water is sent on the land each year, and this "without making it damp or marshy since the establishment of subsoil drainage." And I know of two farms in my native town, in Worcester County, where irrigation with brook water has been practiced with advantage. Our average rainfall is a little larger than that of Great Britain, where it is from forty to forty-five inches per annum, but the yearly average humidity (between eighty and eighty-six) is nearer the point of saturation there than here, where it is about seventy. Dr. Frankland considers the vapor in the atmosphere of England as "reducing the temperature from fifteen to twenty-five degrees;" and Tyndall remarks that "the abundance of atmospheric vapor hinders the radiation of heat at night in England." The protracted droughts which are so common in this country are unknown in England, where vegetation never suffers for want of moisture. I am indebted to Dr. Bullard for facts and figures on this branch of the question, which enable me to say with positiveness that the meteorological conditions of our climate, with the possible exception of winter temperature, are far superior to those of England for the employment of irrigation and agriculture.

To-day I only ask that before building a metropolitan sewer for the eastern part of the State to discharge in tide-water, and thus repeat the now demonstrated errors of London, Brighton, and Torquay, irrigation and agriculture may be tried, on a limited scale, by some one having faith in the success, as we might ultimately desire to reverse the current of the sewage of the metropolitan district.

A large proportion of our rural population have gardens attached to their houses. I would discourage the use of cess-pools and recommend the use of these lands for the disposal of sink water. I am informed that Dr. Jewett, of Northborough, has for many years employed this system, and I have practiced it myself for ten years with complete satisfaction.[1]

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[1] It would hardly seem necessary to affirm before a scientific body of men that clarification is not purification, or that no system of epuration of sewage is satisfactory which by analysis shows quite as much pollution in the effluent as in the influent water. (See analysis of the sewage of the Women's Prison.) As to the average rain-fall of Great Britain the figures quoted were obtained in the office of the United States Signal Service and from Professor Niles. But as it is more a question of average humidity which determines the evaporating power, a few inches more or less of rain-fall per year is of little consequence.

[2] Babut du Maris quotes Dr. Carpenter as saying "the more dilute the better."

Victor Hugo, in Les Miserables, describing the sewerage of Paris more than twenty years ago, makes a vivid picture of our systems at the present time. He writes as follows: —

"*The Earth Impoverished by the Sea.* Paris throws twenty-five millions a year into the sea. And this without metaphor. How, and in what manner? Day and night. With what object? Without any object. With what thought? Without thinking. For what return? For nothing. By means of what organ? By means of its intestine. What is its intestine? Its sewer. . . . Science, after long experiment, now knows that the most fertilizing and the most effective of manures is that of man. The Chinese, we must say to our shame, knew it before us. No Chinese peasant, Eckeberg tells us, goes to the city without carrying back, at the two ends of his bamboo, two buckets full of what we call filth. Thanks to human fertilization, the earth in China is still as young as in the days of Abraham. Chinese wheat yields a hundred and twenty fold. There is no guano comparable in fertility to the detritus of a capital. A great city is the most powerful of stercoraries. To employ the city to enrich the plains would be a sure success. If our gold is filth, on the other hand our filth is gold. What is done with this filth, gold? It is swept into the abyss. We fit our convoys of ships, at great expense, to gather up at the south pole the droppings of petrels and penguins, and the incalculable elements of wealth which we have under our own hands we send to the sea. All the human and animal manure which the world loses, restored to the land instead of being thrown into the water, would suffice to nourish the world.

"These heaps of garbage at the corners of the stone blocks, these tumbrils of mire jolting through the streets at night, these horrid scavengers' carts, these fetid streams of subterranean slime which the pavement hides from you, do you know what all this is? It is the flowering meadow, it is the green grass. It is marjoram and thyme and sage, it is game, it is cattle, it is the satisfied low of huge oxen at evening, it is perfumed hay, it is golden corn, it is bread on your table, it is warm blood in your veins, it is health, it is joy, it is life. . . .

"Statistics show that France alone makes a liquidation of a hundred million every year into the Atlantic Ocean from the mouths of her rivers. . . . The cleverness of man is such that he prefers to throw this hundred million into the gutter. It is the very substance of the people which is carried away, here drop by drop, there in floods by the wretched vomiting of our sewers into the rivers, and the gigantic collection of our rivers into the ocean. Each hiccough of our cloaca costs us a thousand francs. From this follows two results: The land impoverished and the water infected. Hunger rising from the furrow, and disease arising from the river. . . .

"A system of elementary drainage, as simple as the lungs of a man, and which is already in full operation in several villages in England, would suffice to bring into our cities the pure water of the fields, and send back into our fields the rich water of the cities, and this easy see-saw, the simplest in the world, would retain in our possession the hundred million thrown away.

"The present system does harm in endeavoring to do good. The intention is laudable, the result lamentable."

On motion of DR. HENRY I. BOWDITCH, it was

Voted, "That the thanks of this Society be tendered to the scientific gentlemen, not members of our body, who have contributed so much to our instruction and to the great interest of these meetings."

Adjourned at eleven o'clock.

PHILADELPHIA CLINICAL SOCIETY.

G. BELTON MASSEY, M. D., RECORDING SECRETARY.

JUNE 27, 1884. The President, DR. HENRY BEATES, JR., in the chair.

DR. G. BELTON MASSEY read a paper on

TRAUMATIC SCIATICA AND ITS RELATION TO HIP INJURIES.

Details of six cases were related, in the majority of which the sciatica had been overlooked, while attention was directed to a search for osseous injury. In the first case he was called in consultation to see an aged gentleman who had fallen on an icy spot of pavement eleven days previously. In falling he struck heavily on the left hip, and it was with difficulty that he arose and walked home, a distance of four and a half blocks. His family doctor, a prominent physician and an expert diagnostician, when called in searched diligently for fracture, but could find none, notwithstanding the evident helplessness of the limb and the attacks of excruciating pain that was made worse by movement. At the time the reader was called in the physician had about concluded that the pain must be imaginary.

On examination the absence of any kind of fracture was apparent. The patient could lift the limb but a few inches from the bed. He was suffering from continuous and severe pain, felt most at points corresponding to the sacro-iliac notch of the affected side — the rear of the head of the fibula, and the rear of the external malleolus. The pain was aggravated by any movement, but especially by flexion of the thigh and extension of the leg. It was clearly a case of sciatica caused by contusion of the nerve in falling.

At the request of the medical attendant the reader of the paper joined him in the care of the case, and applied the continuous descending galvanic current to the affected nerve, ending each sitting with a series of muscle-contracting interruptions of the current, great gentleness being required at first to avoid aggravating the pain temporarily. Good effect was manifest after the first visit, and eleven applications sufficed to establish a complete cure, recent careful inspection failing to detect either awkwardness of gait or atrophy of the posterior muscles.

CASE II. was that of a German woman, aged seventy-three. On the 15th of January, 1883, she fell on the ice, fracturing the neck of the femur outside the capsular ligament. After being totally neglected for two weeks, a member of the family asked the reader of the paper to take charge of the case. He found the limb one and one quarter inches shorter than its fellow, and greatly everted. At the seat of injury the great trochanter was lost in an abundant deposit of callus. No crepitus could be found. Great pain existed throughout the distribution of the large sciatic nerve, being especially felt in the peroneal and posterior tibial branches. Considering the age of the patient, and the attempt at union already made by unaided nature, it was deemed unwise to interfere with the broken bone, so remedial efforts were entirely directed towards the relief of the sciatica. A series of blisters were directed; chloroform injections made; various stimulating and anodyne liniments applied, together with the internal administration of opiates and sedatives, but he felt bound to say the case seemed slowly to improve without being affected by any of these remedies. Electricity was not used, as the patient was too far from the office to make it possible to apply it with sufficient frequency, and the friends declined to have her removed to a hospital. The pain continued over a year in gradually decreasing severity, and though the patient has now been able to walk with crutches for some months there is much atrophy of the muscles supplied by this nerve.

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[1] [illegible]

The remaining four cases were selected from the large number of cases of sciatica treated by the writer at the electric clinics of the Orthopædic Hospital and Infirmary for Nervous Diseases.

Case III. A healthy hod carrier was sent from Dr. Wharton Sinkler's clinic November 16, 1881. Seven weeks before, while carrying his usual burden up a ladder, the right foot slipped on a stick and threw the thigh into extreme flexion. He immediately felt an acute pain at the point of emergence of the sciatic and following that nerve down the thigh into the peroneal. It was sharp and pricking in character and had remained continuously present since the accident, being worse at night. He was unable to walk more than a block at a time, and presented a gait markedly characteristic of sciatica. No atrophy was found. He was placed upon static electricity, positive sparks being drawn from the painful points and course of the nerve. After the fifth application it is noted that he was much better; after the twelfth that he walked three miles to the hospital, and after the twenty-second application he was discharged cured.

Case IV. A carpenter, aged sixty-eight, was sent from Dr. Sinkler's clinic September 29, 1880. A healthy man; eight months before admission he fell on the ice, striking the right hip. He was compelled to remain in bed six weeks, suffering from pain in the region of the small and great sciatics. His physician was uncertain whether fracture was present or not. On examination, the gluteal and flexor muscles of right leg were found much atrophied. He complained of great pain in the course of right sciatic to knee, and also in the distribution of the external peroneal. At times felt some pain in left leg. He was placed on the constant galvanic current thrice weekly. At the end of forty-two applications he is noted as entirely well.

Case V. A man, aged forty, was sent from Dr. S. Weir Mitchell's clinic May 6, 1881. Four months before he had fallen and dislocated his right hip. This was reduced shortly afterwards and he remained in hospital eleven weeks, during which time, and up to his appearance at the clinic, he suffered from much pain throughout the sciatic distribution of that side. There was considerable atrophy of the buttock and limb — a difference of one and a quarter inches being found six inches below the trochanters. He was placed upon five grain doses of potass. iodide and the constant current thrice weekly. After thirty-five applications of the battery and considerable quantities of the iodide it was found that the pain had ceased but that some atrophy remained.

Case VI. A porter, aged thirty-nine, was sent from Dr. Mitchell's clinic June 30, 1881. Fifteen months before he had been crushed between a platform and a moving car, fracturing the pelvis on the right side. At his first appearance at the clinic some crepitus was still present, and there was two inches shortening of the right leg. He complained of much pain in the region of the sciatic nerve of the right side, which was increased by motion and exercise. He had been blistered and was taking five grain doses of the iodide when sent to the electrical clinic. After twelve applications of galvanism, with some benefit, the summer vacation compelled a discontinuance, and he did not reappear in the autumn.

The obvious conclusions to be drawn from these cases were stated as follows: —

(1.) Surgeons called to cases of hip contusion or suspected fracture should not fail to search for evidences of injury to the delicate nervous structures here situated.

(2.) If such evidences of nerve injury are found, prompt and energetic measures of relief are indicated, the importance of which is emphasized by the complete and rapid recovery of the two cases which were treated early.

(3.) Of the four remaining cases one was distinctly benefited and two cured by more or less long-continued (one to five months) galvanic treatment. The fourth did not receive galvanic treatment, and was fully a year in duration.

Dr. E. E. Montgomery inquired how many cells had been used in the treatment. He thought that, considering the usual obstinacy of the class to which the cases related belonged, due to the inflammation of the sheath of the nerve, the treatment had been satisfactory.

Dr. L. Brewer Hall related the details of a case similar to those described, which had been caused in a lady by a fall from horseback, alighting on the seat. The pelvis was fractured and a long continued sciatica supervened.

Dr. Massey, in closing the discussion, said that the number of cells used varied from twenty or thirty to fifty, the kind being the gravity cell, which, owing to great internal resistance and the nature of the elements used, did not furnish as much current per cell as the zinc and carbon batteries charged with acid. The number used was largely regulated by the varying resistance of the skins of different individuals, some skins permitting a free flow of the current while others presented an almost insurmountable obstacle. It is to be regretted that the inventors have not as yet presented us with an instrument that will conveniently inform the operator of the true amount of electricity passing at a given moment. An approximation, however, to accurate dosage, may be made by including a galvanometer in the circuit, or even by observing the sensations of the patient. Since the date of these cases he had used the static form of electricity in many cases of ordinary sciatica, and found it at times equally efficacious as galvanism as well as more convenient.

FISSURED NIPPLES.

DR. DE BOIS called attention to the value of *bals. Peru* as an application for *fissured nipples.* It should be applied after nursing about four times daily.

DR. HALL, on behalf of the Committee on Microscopy, presented an improved clinical microscope, which combined all the features of a clinical with those of an ordinary table stand.

Recent Literature.

Wharton and Stillé's Medical Jurisprudence. Fourth Edition. Volume II. Poisons. Edited by ROBERT AMORY, A. B., M. D., and EDWARD S. WOOD, A. M., M. D. Philadelphia: Kay & Brother. 1884.

Excellent evidence of the revival of interest in medico-legal studies is found in the publication, during the past few years, of new books and of new editions of older works relating to forensic medicine in all its branches. Medical jurisprudence having for its aim the application of all departments of medicine to the needs of the law, it is absolutely necessary that the text-books and treatises upon the subject should be revised sufficiently often to recognize and represent the great advances in medical science which every one acknowledges. Perhaps no chapter of legal medicine stands in greater need of this frequent revision than that of toxicology. Not only is the practical art of chemical analysis a fine example of constant progress, but the fruitful labors of those who make physiological chemistry and micro-chemistry a special study should not be disregarded. Therefore it is a pleasure to announce that a new edition of Wharton and Stillé's great work, worthy successor of Beck's well-known treatise, has been prepared, and that the subject of toxicology, which in the last edition occupied a portion only of one of the volumes, along with the topics of wounds, signs of death, pregnancy, abortion, infanticide, identity, and rape, has been admirably elaborated by its former author, Dr. Amory, with the assistance of the accomplished professor of chemistry in the Havard Medical School, so that it fills an independent volume, containing more pages than the entire book of which, in 1873, the study of poisons formed a part.

The changes which the new edition shows are mainly in the nature of needed additions. Thus new poisons, such as carbolic acid, chlorate of potassium, gelsemium, physostigma, aniline, nitro-glycerine, and the nitrites of amyl and ethyl, are discussed, and new analytical methods as, for example, Dragendorff's process for the isolation of organic principles, and Stas's treatment of organic mixtures, are given in full detail. At the end of the book a very useful compilation of illustrative cases of poisoning is printed, which, though not inclusive of all the most important examples of toxicology in recent years, is ample to serve its purpose. Among these are to be found concise notes of the Lamson case (aconitine), the Major case (strychnine), the Bocarmé case (nicotine), with others quite as instructive. It is gratifying to our local pride to observe that the transactions of the Massachusetts Medico-Legal Society have received appreciative recognition from the authors. A conspicuous instance of this is found in the reproduction of the article on alcohol, read before the Society by Dr. Sabine.

In the matter of definition and classification of poisons the new volume does not depart materially from the former editions, but some changes are to be observed in the descriptive terms used, and in the distribution of individual poisons to their appropriate class. Thus in the new edition we have "non-metallic" and "septic" divisions of the irritant class instead of the "metalloidal" and "animal" divisions of 1873. Under the head "Narcotics" of the new edition are discussed chloral hydrate and belladonna, previously classed as "miscellaneous," while hydrocyanic acid, which was "narcotic" in 1873, is now found with nux vomica, aniline, aconite, and lobelia under the head "Miscellaneous." Doubtless the classification adopted by the authors is more to be commended for its convenience than for its exactness.

This volume is not, and does not pretend to be, a complete and exhaustive treatise on toxicology; but as a safe and sufficient guide upon the matters to which it relates, representing the latest advances in toxicological science, it should have a place in the library of every one who has any interest in the theory and practice of legal medicine. D.

TREATMENT OF OPHTHALMIC MIGRAINE.

FÉRÉ writes on this subject in *Le Progrès Médical* (June 7th), as follows: —

Migraine is generally considered by those who suffer from it a disease whose treatment is hopeless. These patients become accustomed to their suffering and rarely resort to the physician. There is, however, a form of migraine, the ophthalmic, characterized by the existence of a scintillating or hemianopic scotoma, a suborbital pain, nausea, and vomiting, which deserves more attention. This migraine, indeed, instead of showing itself in this relatively benign form, may be accompanied by other phenomena such as aphasia, monoplegia, hemiplegia, and partial epilepsy. Moreover, these phenomena after having been for a long time transitory may become established as a permanent state, making the victims true invalids. Among these collateral phenomena capable of becoming permanent, aphasia is one of the most frequent. The complications of aphasia may also in some cases be present. M. Charcot recently showed at his clinic such a patient, in whom was a combination of word-deafness and blindness, of agraphia and logoplegia.

Ophthalmic migraine, at least in its complicated forms, should not be considered a benign affection. It has, on the contrary, a grave prognosis, since by a repetition of attacks it may induce a serious infirmity. Hence M. Charcot insists in such cases on the employment of active treatment. In a certain number of cases he succeeded in lessening the frequency and gravity of the attacks by the use of bromides which he employed as in the treatment of epilepsy. This method consists in giving bromide of potassium (or preferably a mixture of bromides of potassium, sodium, and ammonium) in increasing doses for three or four weeks, then returning to a dose equal to or a little larger than that at the time of beginning, according to the result obtained, and so continuing. By this mode of administration it is aimed to avoid the accidents of bromine accumulation.

It must be remembered that this treatment has a chance of success only when the symptoms are not the result of material lesion, as happens, for instance, at the onset of general paralysis.

Medical and Surgical Journal.

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HEALTH OF THE CITY OF BOSTON, 1883-84.

The twelfth annual report of the Boston Board of Health will, under existing circumstances, be consulted with more than usual interest by those having a direct stake in the general health and sanitary condition of the city, and this year even those dwelling without the urban limits have an immediate interest in the condition of all our sea-board towns. The Boston Board of Health in the present report makes a good showing for this city, and one calculated to reassure those who read it.

Up to May 1st there had been no occasion for alarm on account of any of the prevailing diseases, and the city had not been visited by any epidemic. The total number of deaths from all causes for the year was 9740; the estimated population in May, 1883, was 427,940; the actual death-rate was 21.91 per thousand. The percentage of deaths from preventable causes to the total mortality was 26.19, a decrease of 1.42 when compared with the previous ten years. There has been an unusual prevalence of scarlet fever and diphtheria, and the previous recommendation is strongly emphasized that sufficient hospital room be added to the City Hospital for the proper care and isolation of every case of contagious disease like diphtheria, scarlet fever, and measles as soon as settled that it cannot be properly isolated at home; only with such accommodations can these diseases be successfully combated and their mortality reduced. There has been only one death from small-pox, showing what may be accomplished by vaccination and isolation; in the last ten years there have been only twenty-five deaths from this disease, while in the single year preceding there were 302 deaths. That year, however, was one of epidemic. The percentages of deaths under five years to the total mortality was 37.23, against 35.03 the previous year, the average for ten previous years being 40.

In regard to sewerage, the report reminds the city that there is still much to be done in order to reach and drain the territory that was included in the original plan for improvement, and says: —

"The town of Brookline, the Brighton District, a portion of the North End, a large portion of South Boston, and the Dorchester District are now discharging sewage into shallow water or upon the flats, and thus perpetuating nuisances which ought to be speedily corrected by a large extension of sewers. The full capacity of the new sewer is not yet utilized, and will not be when the places named are served. There are also many places in Roxbury and West Roxbury well built up and served with water from the public pipes, but without public sewers or any adequate means of getting rid of so large a quantity of sewage. No better expenditure of money can be made than by extending the sewers to relieve these places."

Muddy Brook is still a source of distress to the abutters, to the Board who still superintend it, and of possible danger to the city. It is hoped the time is near when it will pass under the control of the Park Commissioners.

The question of Metropolitan Sewerage is forcibly and justly commented on as follows: —

"It is now five years since we began recommending a metropolitan system of sewerage for the cities and towns on the north side of Charles River and in the Mystic River Valley. The scheme has, from time to time, been favored by nearly all parties concerned. It has been sanctioned or recommended by several Governors, and by a commission of experts appointed by the Governor to consider and report upon the subject. There seems to be no reasonable doubt about the urgent need of this great sanitary measure, but there is a lack of interest in pressing its merits before the Legislature.

"The people of Cambridge, Somerville, Charlestown, Watertown, Arlington, Medford, Malden, Chelsea, and East Boston have great cause to move in this matter, for already the streams and flats to which their sewage has so long been directed are in a condition requiring immediate attention. It should be borne in mind that however bad the nuisance may be to-day it will be much worse at the end of five or six years, — the time which would be required for building the needed sewers.

"The Board would respectfully suggest that our city is vitally interested in the abatement and prevention of this nuisance, and ought to be the foremost in an effort to remedy the evil. The Legislature, at its present session, passed a bill providing for the appointment, by the Governor, of five persons to act as a commission to consider and report a plan for sewering the metropolitan district, and we trust that there will be a strong concurrent action of the cities and towns interested to bring about this great public improvement."

The number of houses ordered to be vacated during the year was sixty-six. Of these only eight were actually vacated, the owners of the others having complied with the conditions of the notice.

The whole number of prosecutions for violations of the laws and regulations pertaining to the public health during the past year was ten. There were eight prosecutions for scattering salt upon the horse-railroad tracks, in all of which convictions were had, and fines and costs imposed to the amount of $135. The sum total of all costs and fines imposed in all prosecutions during the year was $161.05.

The public baths required an appropriation of $15,000, and were patronized by 815,358 bathers, of whom 634,418 were men and boys, and 180,940 women and girls.

The reports of the City Physician and of the Port Physician show an uneventful year.

AN OVERCROWDED PROFESSION.

The Rev. T. T. Munger has written for the *New York Independent* an article intended to dissuade young men from entering the medical profession, and advocating the choice of the clerical profession instead. This article gives a very sombre view of the situation as far as young doctors are concerned, while telling some important truths which juveniles of both sexes contemplating medicine as a calling would do well to ponder. Dr. Munger (our reverend is a D. D.) says truly that, as a rule, professional men do not acquire wealth. The only hope that they can properly cherish is that of securing a living. Presupposing, then, intellectual fitness, moral earnestness, devotion to humanity, and all else that enters into a good minister or physician, the former is far surer of earning a living than the latter. In other words, the ministry is the better profession of the two, even from a worldly point of view. The medical profession seems to Dr. Munger (and he is right) to be overcrowded, and to such a degree that it no longer promises support to those who enter it. A few years ago, says the writer, there was in New York City one physician to 1500 of the population. According to the average ratio of the sick to the well — twenty in 1000 — this gave about thirty patients to each physician. But as a part of these were paupers, and a part went without treatment, or used quack medicines, the physician could rely on only fifteen to twenty paying patients provided they had been evenly distributed. To-day, however, there is in the United States one physician to every 650 persons; in the State of New York one to every 600; in New York City one to every 550. Thus the ratio of the sick to the well offers to the physician throughout the whole country only about ten possible patients, a part of whom go without treatment, and a part pay nothing. As a matter of fact the number of paying patients to each physician is from six to eight, but the older and more noted practitioners get the greater part of those, and so leave the new-comers with nothing to do, which is actually the case. Figures and experience go hand in hand in confirmation. "A young man," continues Dr. Munger, "who now enters the profession of medicine simply invokes poverty and want, and (what is worse) he defeats the end of his training by not exercising it. It may be noble and spirited to brave poverty, but nothing can justify a choice that necessitates idleness. There are, of course, exceptions springing out of wealth, family influence, good luck, and special talent, conditions on which few can count. The young physician, let him go where he will, — to New York or Dakota, — must contend with older and well established physicians for a living to be got from seven or eight sick people. His chances are about the same as picking up lost purses in the street, and his only hope is in praying, with Gil Blas, 'By the blessing of God may there be much sickness in this place!' It is unnecessary to picture the results of this overcrowding, — the degradation of mind and character that grows out of extreme poverty, the weary waiting, the heart-ache and heart-break, the defeat of purpose, the despair, the loss of skill, the dissipation sought to kill the sorrow, the unprofessional spirit and conduct induced by the struggle to gain a foot-hold. These common and increasing results are dangerous also to society. The hungry lawyer is to be feared, but Heaven save us from the hungry doctor! It is hard to understand why intelligent, forecasting young men should choose this profession in its present state."

The reverend writer has well presented the dark side of the picture. The swarms of young men (and young women) that are about to invade the numerous medical schools, north, south, east, west, with their arduous curriculum, might well pause before setting forth on this so perilous career. Are they prepared — impelled by an unconquerable love for this difficult and discouraging profession, perhaps also by a consciousness of eminent fitness — to meet the issue so well stated by Dr. Munger?

Such deliberation is especially proper on the part of those who contemplate exercising the profession as a livelihood, and who possess no resources on which to fall back for a series of years during the patient waiting for patrons.

There may be "room in the upper story," but there is no lack of eager, hungry, able competitors for the vacant space that is there.

Whether those who may draw back disheartened, having weighed well all the facts as above stated, shall accept Dr. Munger's advice and enter the ministry doubtless depends on certain important conditions which we need not insist upon here.

MEDICAL NOTES.

— Cholera, as was to be expected, is more active than last week at Toulon and Marseilles. Cases are also reported at Arles, Lyons, Paris, Madrid, and Vienna. A steamer had arrived in the Mersey from Marseilles, on board which two deaths from cholera occurred during the voyage.

— As possibly the previous notice in the Journal may have escaped the attention of many, we would state that a list of physicians of the Suffolk District Medical Society who remain in Boston during the summer will be kept for the benefit of the public at the Medical Library, and those who have neglected to send their addresses, office hours, etc., can do so by addressing Dr. Edwin H. Brigham, Assistant Librarian, Medical Library, 19 Boylston Place.

— Dr. Jelly, of this city, who was assaulted and shot by an insane patient a few days ago, is, we are happy to learn, recovering, and it is hoped that no untoward results will permanently remain.

— The Journal heartily sympathizes with every effort to secure greater precision and elegance of style among writers upon medical subjects. It is doubtless true that, either from ignorance or carelessness, or both, many contributors to our journals present in their communications lamentable infractions of the rules of English syntax, and such errors will in spite of editorial care creep into the pages of the best periodicals. It cannot, however, but be regarded as a little unfortunate that one of our valued metropolitan contemporaries in an editorial article upon this subject uses the two following expressions: "No, not quite that bad," and "Some — almost every — writer speaks of a case," etc. If these phrases are intended to serve as "horrid examples," it might perhaps be as well to indicate that fact in some way.

— Mr. Benjamin Clarke has contributed an article to the *Pall Mall Gazette* on the subject of Penny Dinners for School Children. The experiment has been tried in London of distributing penny dinners to children attending elementary schools, and it has proved in the highest degree successful and satisfactory. The children largely availed themselves of the opportunity thus afforded them of obtaining a cheap and at the same time a good substantial dinner, which was distributed three times a week, with a daily average of 185. A total of 1663 dinners realized, at a penny each, £6 18*s.* 7*d.*, while the cost was £7 6*s.* 10*d.*, showing a loss of only 8*s.* 3*d.*, a loss which Mr. Clarke believes may be turned into a profit with more experience, but which he says need not deter any one from making the experiment. The experiment is likely to be largely tried both in London and the provinces.

— A correspondent of the *British Medical Journal* furnishes an interesting contribution to the much-discussed question as to the possibility of inducing anæsthesia during sleep. He writes: "Some years ago I was consulted by the parents of an excessively nervous girl, seven years of age, who was suffering from hypermetropia and double convergent squint. The agitation of the child and consequent distress of the parents at the idea of any surgical interference were so great that I thought it would be better to operate during sleep, and, after dismissing the patient with some reassuring remarks, arranged that this should be done the same night. Accordingly, about ten o'clock, when the child was fast asleep, I administered chloroform without disturbing her, and performed the operation on both eyes, replacing her in bed while still insensible. The anæsthetic sleep gradually merged into the natural sleep, which had never been broken; there was no vomiting, and the child did not wake until the following morning at the usual hour. There was no pain, and her alarm on finding that her eyeballs were bloodshot, when looking in the glass, was allayed by suggesting that she had caught cold. She made an excellent recovery. The deformity was quite removed, and she never suspected that she had undergone any operation at all."

— The Scyllæ and Charybdes between which the doctor has to steer his professional bark as he sails under the varying breezes of public opinion are thus feelingly pointed out by the *Hebrew Standard:* —

"If he visits a few of his patients when they are well, it is to get his dinner; and if he does not do so, it is because he cares more for the fleece than the flock. If he goes to synagogue regularly, it is because he has nothing else to do; if he does n't go, it is because he has no respect for the Sabbath nor religion. If he speaks reverently of Judaism, he is a hypocrite; if he does n't, he is a materialist. If he dresses neatly, he is proud; if he does not, he is wanting in self-respect. If his wife does not visit you, she is 'stuck up;' if she does, she is fishing for patients for her husband. If he has a good turnout, he is extravagant; if he uses a poor one on the score of economy, he is deficient in necessary pride. If he does not write a prescription for every trifling ailment, he is careless; if he does, 'he deluges one with medicine.' If he makes parties, it is to soft-soap the people to get their money; if he does not make them, he is afraid of a *cent.* If his horse is fat it is because he has nothing to do; if he is lean, it is because he is n't taken care of. If he drives fast, it is to make people believe that somebody is very sick; if he drives slowly, he has no interest in the welfare of his patients. If the patient recovers, it is owing to the good nursing he received; if he dies, 'the doctor did not understand his sickness.' If he talks much, 'we don't like a doctor to tell everything he knows,' or 'he is altogether too familiar;' if he does n't talk, '*we like to see a doctor sociable.*' If he says anything about politics, 'he had better let it alone;' if he does n't say anything about it, 'we like to see a man show his colors.' If he does not come immediately when sent for, 'he takes things too easy;' if he sends in his bill, 'he is in a terrible hurry for his money.' If he visits his patients every day, it is to run up a bill; if he does n't, it is unjustifiable negligence. If he orders the same medicine, it does no good; if he changes the prescription, he is in league with the druggist. If he uses any of the popular remedies of the day, it is to cater to the whims and prejudices of the people to fill his pockets; if he does n't use them, it is from professional selfishness. If he is in the habit of having frequent consultations, it is because he knows nothing; if he objects to having them, on the ground that he understands his own business, 'he is afraid of exposing his ignorance to his own superiors.' *If he gets pay for one half his services* he deserves to be canonized. Who would n't be an M. D.?"

— At the meeting of the American Medical Association held at Washington in May last an Amendment to Regulation II. was adopted which provides that membership in the Association shall be obtainable by any member of a State or county medical society recognized by the Association upon application indorsed by the president and secretary of said society, and shall be retained so long as he shall remain in good standing in his local society, and shall pay his annual dues to the Association.

— A homœopathic physician of Washington, Dr. Pearson by name, at a meeting of the Hahnemannian Society of Washington, according to a report in a journal of that complexion, styled homœopathic physicians who do not follow the Hahnemannian system of therapeutics "half-breeds." In his reply to a toast given at the banquet given the Hahnemannian Society he said the charge is false that homœopathists give as crude doses as other physicians and send their prescriptions to druggists to be filled, and added: "Any physician who does this is a hypocrite, and a disgrace to the name of homœopathy. They (*i. e.*, homœopaths?) repudiate and discard such a prescriber, and while they could tolerate an allopathic physician who honestly practiced what he preached they felt nothing but contempt for the mongrel or half-breed who would 'steal the livery of heaven to serve the devil in.'" The aptness of this quotation is quite delicious.

— A man having fallen in an epileptic fit lately, in the region of the Five Points, three policemen, we learn from a contemporary, bound him with cords to an awning-post, gagged him, and stood over him with drawn clubs ready to administer promptly to any symptoms of hydrophobia that he might show on recovering consciousness, they having been told that the man had been bitten by a dog.

— "Doctor, I want you to do something for me. My nerves are shattered completely. I am not able to eat anything, and I sleep very little at night. What would you advise me to do?"

"What has brought about this condition?"

"Drinking too much, I'm afraid."

"Well, I would advise you to give up drinking."

"H'm, that idea never occurred to me. What's your charge for the advice?"

"Nothing."

"Nothing? I'm much obliged to you, doctor. Let's go and take something." — *New York Sun.*

— A candidate for license to practice medicine in North Carolina (and by the way an unsuccessful candidate) when asked "Who discovered vaccination?" replied "Virchcow." — *N. C. Med. Jour.*

NEW YORK.

— During the week ending July 12th the summer corps of sanitary inspectors visited 4504 houses and 24,099 families; 811 cases of sickness were found, and of these 365, nearly all of which occurred in children, were of diarrhœal trouble; 70 cases of contagious disease were discovered. The following special instructions have been issued to the corps by the sanitary superintendent: "All cases of contagious disease discovered, whether the patients are under treatment or not, are to be immediately reported to this bureau, giving name, age, and residence of the patient. The duties of this service are not limited to tenement-houses, but extend to all dwellings occupied by the poor, and in view of the possible advent of cholera special attention should be paid to shanty neighborhoods in unsewered portions of the city, where excreta are deposited in shallow vaults or upon the surface of the ground, and where the water supply is from springs or surface wells. All such places which require disinfection must be at once reported to this bureau."

— James Reilly, a performer with snakes, was bitten on the hand by a large rattlesnake over five feet in length, at High Bridge, in the upper part of the city, on the 14th of July, and died the following day at the Ninety-ninth Street Hospital, to which he was taken in an ambulance shortly after the receipt of the injury. As soon as he was bitten the man had applied his lips to the wound and exerted all the suction of which he was capable, and had then partaken very freely of whiskey. At the hospital he was treated mainly with hypodermic injections of ammonia and whiskey, but it does not appear that even at first a ligature was applied about the arm or that the question of amputation, which is frequently resorted to under similar circumstances by surgeons in India, was entertained. On the 16th Dr. Messonier, deputy coroner, made the autopsy in the presence of a number of physicians at the morgue. He found more or less congestion of all the tissues of the right arm (the hand of which had been bitten) and of the right side. No part of the left side was congested, but all the thoracic and abdominal viscera were. The heart was pale and flabby, and the blood in it, as well as in the arteries and veins, was perfectly fluid. The cause of death, on the certificate made out by Dr. Messonier, was stated to be "Syncope from septicæmic gases entering the right auricle of the heart. Septicæmia caused by a bite on the right hand from a poisonous rattlesnake."

Miscellany.

THE SEEN AND THE UNSEEN.

A SONNET BY THE LATE DR. R. D. JOYCE.

THERE was recently put into our hands a sonnet by the late Dr. Robert Dwyer Joyce, written by him on the fly-leaf of a copy of his poems which he was about to present to one of his friends. The sonnet was impromptu, and not intended for publication, but it is a pleasure to give publicity to so charming a bit of verse. It presents a pleasing picture, and undoubtedly a true one, of the mental life of the gifted but erratic author, who was accustomed to compose his poems as he walked the streets. Exactly as it stands, the sonnet applies probably to few others of the profession, for few physicians can claim familiarity with the glorious hill of poesy, but we believe that the individuals among us who lead two lives are common enough to make the little sonnet something more than poetic phrensy. Most children are known to have a world of their own, the product of their own brains from material furnished in part by their own imagination, in part by the nursery classics, in which they take refuge when the real world proves unkind, or time hangs heavy on their hands, and something of the kind is true of a smaller number of grown-up children. Unfortunately their unseen world does not always take on so pleasant a form as the poet's magic town. It is too often the country of the Might Have Been, whose inhabitants spend their time in calculating how far they would have journeyed had they never dallied by the way, and whose willows and myrtles have rooted out the asphodel.

We can but envy the happy disposition which could lift the soul above earthly troubles, and leave vain regrets for duller mortals.

SONNET.

I live two lives: one full of all unrest,
One full of heavenly joys of heart and brain.
In one I walk around mid grief and pain,
And hear the deep sighs of the saddest breast
And groanings of the stricken ones, and see
The sad pale face of death and misery.
The poor man's load of grief, the rich man's frown,
And the fell leer of sin, till I am sad:—

In one I wander through a magic town,
Paven with pearls and in sweet garlands clad
From the bright meads of asphodel that crown
The glorious Hill of poesy, — the glad,
The green, delightful hill whose cliffs of gold
Each day with eyes of rapture I behold.

Robert Dwyer Joyce.

◆

THE RISKS OF CORROSIVE SUBLIMATE INJECTIONS.

The unfavorable cases are beginning to be reported of the use of corrosive sublimate, as what we know of idiosyncrasy leads us to expect in the use of any powerful remedy. In *Schmidt's Jahrbücher* (Bd. 202, No. 4) some such instances are related. Professor Stadfeldt, of Copenhagen, while admitting its efficacy in most cases, is yet evidently somewhat afraid of it, especially as intrusted to midwives during labor. In the puerperal state he used it with excellent results in six consecutive cases, but in the seventh the effect was as follows: The patient, a twenty-three year old primipara, had a retained placenta, which required artificial removal. Uterus and vagina were at once washed out with carbolic solution. Four days after there was a chill, with temperature of 39° C. The next day a solution (1–1500) of corrosive sublimate was injected. After about 300 to 400 grammes of the solution had run out the patient suddenly complained of headache and difficult breathing. Her replies were somewhat uncertain, but consciousness was undisturbed. Some pains came on in the hypogastrium; the whole lower abdomen was tender, but not swollen. After a time a profuse sweating came on, and the pains ceased. There were heaviness, giddiness; stools thin; tenesmus; urine highly albuminous; no fever; temperature subnormal. In course of the next day the most important symptoms were vomiting, thin stools, with tenesmus, great thirst, and headache. The fifth day after the use of the injection the urine stopped, the consciousness became clouded, and the patient died quietly on the next.

Of course the cause of death was not at once certain, but an autopsy showed no peritonitis. Numerous ulcerations were found in the large intestine. The kidneys were much altered. Mercury could be detected in no organ. Stadfeldt considered it a case of death from mercurial poisoning.

Other instances are also cited. We make room for one other. A woman was operated upon for prolapsus of the vagina and rectum. During the operation, which lasted one hour and a half, the flaps were washed from time to time with a 1–1000 solution of sublimate. The next day the vagina and anus were washed with the same solution, which was also injected into the rectum. On the sixth day the patient complained of great pain in the mouth. The gums were seen to be inflamed. There was much salivation. The use of the sublimate was stopped, and vigorous treatment directed to the mouth, after which the symptoms vanished in a few days.

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THE VALUE OF SINGLE SYMPTOMS IN THE DIAGNOSIS OF MANY DISEASES OF CHILDHOOD.

The *Medical and Surgical Reporter*, July 12th, reproduces editorially the substance of a paper by Dr. L. M. Politzer, for many years Director of the Public Hospital for Children in Vienna, which was recently published in *Deutsche Med. Zeit.*, May 19, 1884. The symptoms principally considered are the following:—

(1.) *If the cry of children has a decided nasal sound*, we should always look for a retro-pharyngeal abscess. Whenever the cry of a child has this peculiar nasal or guttural sound, we should never omit touching the posterior wall of the pharynx with our finger; if the abscess is present we feel the tense, fluctuating swelling so characteristic of retro-pharyngeal abscess.

(2.) *A noisy expiration, which is greatly prolonged (ten to fifteen times), while inspiration is normal, and no other disturbance of breathing, no dyspnœa whatever exists*, is a sure sign of chorea major, and the same can be said of a greatly prolonged, very loud, and forcible expiration, sounding like bellowing. This symptom of bellowing (brüllend) expiration has a typical character; it may happen for many weeks daily at one and the same hour, recurring every seven to ten seconds, and it usually consists of a single prolonged and forced expiration, or of a single expiratory roar. For months sometimes this symptom is the only sign of chorea major. It is easily cured by large doses of quinine, but is very prone to relapse and to be accompanied by other symptoms of chorea major.

(3.) *The symptom of high-thoracic, continually sighing inspiration* indicates the beginning of debility and paralysis of the heart. Ere cyanosis or paleness of the face, a weak, thread-like pulse, and coldness of the face, of the nose, and of the extremities develop themselves, this symptom makes its appearance. Contrary to stenotic respiration, as observed in croup, pneumonia, and œdema of the glottis, this sighing inspiration is not characterized by forced contractions of the diaphragm, and is not of abnormal type, but is accompanied by a laborious rise and fall of the thorax and jugulum, and instead of a stenotic noise by continuous sighing and moaning. No matter how the paralysis of the heart may be produced,—whether by so-called heart-poisons, as quinine, salicylic acid, pilocarpin, and digitalis, or otherwise, the symptom just described is pathognomonic of the disease, and whenever met with precautionary measures to combat the threatening palsy of the heart should be at once resorted to.

In some cases of acute fatty degeneration of the heart the same symptom has been observed.

(4.) *Expiration, decidedly diaphragmatic, and accompanied by a whistling sound of high pitch*, denotes bronchial asthma. A similar symptom is also met with in croup; but here it is associated with stenotic, forcible inspiration. The same is observed in capillary bronchitis; but the noisy breathing through the nose, the rapid development of pulmonary emphysema, the sudden appearance and disappearance of intense dyspnœa, and the fact of the latter and the whistling remitting during deep sleep, will prevent error.

(5.) *The existence of noticeable pauses between the end of each expiration and the beginning of the next inspiration* indicates severe catarrh of the larynx, and proves the absence of croup.

In consequence of the enormous aspiration of air in croup, inspiration and expiration follow each other immediately, while in laryngeal catarrh a pause takes place between the two acts, as the physician can convince himself by bringing his ear near the mouth of the patient, or by carefully watching the diaphragm and the jugulum, both of which are at rest during a pause.

(6.) *So-called stridulous expiration*, if present at birth and continuing day and night with rare interruptions of ten or fifteen minutes' duration, and usually considered by anxious mothers and the uninitiated a dangerous and ominous symptom, has neither diagnostic nor any other importance, being perfectly innocent, and generally ceasing of its own account after the lapse of a few months.

Then there are certain symptoms enabling us early to recognize various *diseases of the brain* in children: —

(1.) *A remarkable drowsiness, not accompanied by fever or any other symptom, and continuing for a longer time (one to three days)*, often precedes basilar meningitis.

Vomiting, fixed pain in the head, even a slow, irregular pulse, have not the same great significance as this sleepiness, as they may also happen in other maladies. Certainly, stress must be laid upon the absence of fever, for many infectious diseases begin in children with a peculiar drowsiness, always associated, however, with more or less high fever.

(2.) *Prominent anterior fontanelle*, if decidedly reaching above the level of the surrounding parts, and if tense and of such a resistance as not to yield under pressure, proves the presence of an exudation within the cranium, or an increase of the contents of the latter, and is met with in purulent meningitis of the convexity, in cerebro-spinal meningitis of the epidemic variety, in acute, essential, and chronic hydrocephalus (here tense, but not necessarily very prominent), in great tumors, in echinococci, in acute œdema of the brain, and in intermeningeal apoplexy. In simple congestion, in acute hyperæmia of the brain, the anterior fontanelle always is soft and depressible. If the fontanelle is very prominent, almost cuneated and unyielding, without the least trace of pulsation, the diagnosis of apoplexy of the new-born, and a large intermeningeal extravasation of blood, can be made with certainty.

(3.) *Remarkably slow motion and long fixation of the bulbi with a vague look into vacancy, accompanied by a peculiar, slow opening and closing of the eyelids*, is a sign of beginning basilar meningitis.

Next, *peculiarities of the cry* of children aid us in the diagnosis.

(1.) *Violent, loud, penetrating crying, lasting two or three minutes, accompanied by great anxiety, as expressed in the face, and setting in almost typically, one to one and a half hours after the child has fallen asleep*, is a symptom of nightmare, and easily cured by quinine, which, in the dose of five to eight grains, should be administered one or two hours before retiring.

(2.) *Periodical crying, lasting five to ten minutes, and happening several times in the day, but occasionally only at night*, draws the attention to spasm of the bladder, if colic or dyspepsia is not present, and is cured by an emulsion of lycopodium, with or without belladonna.

(3.) *Frequent crying during defecation, dread of the act, and decided opposition of the child to going to stool*, indicate the existence of fissure of the anus. Constipation should be avoided in such cases, and zinc-ointment, with belladonna, locally applied.

(4.) *Violent, very painful, and nearly continuous crying, with restless throwing of the head from side to side* on the pillow, and frequent grasping of the head by the hands, are generally indicative of otalgia and otitis media and externa.

(5.) *Crying, lasting days and weeks, greatly increased on touching or moving the extremities*, accompanied by continuous, enormous perspiration and fever, denotes the presence of acute general rachitis, while the same symptom, without the sweating, but with decided emaciation, proves the existence of hereditary syphilis, and that the case is hopeless.

Of a great number of other symptoms we will mention but the following, as they are of more common occurrence and of greater importance.

When children are remarkably weak and little inclined to moving about after apparently innocent complaints of very short duration, *spinal infantile paralysis* may be expected. The least disturbance of hearing after acute diseases must be carefully inquired into, as it might be caused by *circumscribed meningitis* at the base of the fourth ventricle. Depression of psychical activity in small children after grave infectious diseases frequently forms the commencement of *acquired idiocy*; here strychnine has been proven by experience an invaluable remedy. Ossification of the bones of the cranium postponed longer than normal denotes beginning *rachitis*. An anxious, stiff action in walking, sitting, rising, etc., and pain expressed in the face of children, who do not yet walk, when they are lifted or laid down, are met with in the commencement of *spondylitis*. When children with a very large, closed cranium for weeks vomit everything they eat, we have the proof that acute hydrocephalus is being added to the former chronic disease.

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OVULATION, COITION, AND IMPREGNATION.

Dr. H. J. Garrigues furnishes to the *Journal of Obstetrics* (May) an abstract from an article by Dr. P. L. Panum, Professor of Physiology at the University of Copenhagen, in the *Nordiskt Med. Archiv*, vol. xiv., No. 29, which is a contribution to our knowledge of the relation between menstruation and ovulation and the vitality of the spermatozoids in the female genital tract. He says himself that the whole number of exactly observed cases are yet much too small to determine whether the impregnated ovum, as a rule, was detached at the last menstruation or at the time when the next menstruation should have occurred; but in his case he proves that the latter condition obtained.

A married lady in the higher walks of society, forty-three years old, had borne seven children, the last two and one half years ago, and had had two abortions in the third month, one and two years before the present one. Since then, she had had no sexual intercourse except once, namely, on the 10th of April, 1882. The last menstruation had been present from the 3d to the 5th of the same month. On the 8th of June she had again an abortion. Menstruation had been regular up to April, except that it had come three times with an interval of only fourteen days, the last time on April the 3d.

Dr. Panum argues that during the first two or three months the development of the fœtus is so regular that every week has its own signs. That, in the present case, it corresponded to the fifth week. The antero-posterior diameter of the head was four millimetres. By the development of a median and two lateral frontal processes the nasal fossæ had been transformed into grooved canals. The median frontal process showed in the centre a small shallow notch. Under the eye appeared on either side the upper maxillary process, and it rested on the lower edge of the lateral frontal process without reaching the median frontal process. The inferior maxillary processes protruded further than the superior maxillary processes, and touched one another in the median line. The oral fissure, starting from the oral orifice under the median frontal process, extended between the superior and inferior maxillary process below the whole of the eye. The fissure-shaped foundation of the outer ear had an entirely horizontal position. Otherwise, the visceral clefts were closed; but as remnants of the three anterior visceral arches, three corresponding rounded folds were still visible on the neck. The caudal extremity was distinct, and rolled inward with a sharp curvature. The extremities showed the beginning bend of the knee and the elbow. The distance from the vertex to the caudal extremity was eleven millimetres. The heart and the large arteries contained bright-colored blood, and the whole fœtus was so well preserved that there could be no doubt that it had lived until near the time the abortion occurred.

It is evident from the period of development of the fœtus that it could not have been formed in an ovum detached at the last menstruation, which occurred more than two months before the abortion took place, but that it must be referred to the next monthly ovulation, at which no flow appeared, and which, according to the development of the fœtus, must have taken place in the beginning of May, four weeks after the last menstrual discharge, and about three weeks after the single connection. During all this time the semen must have been preserved in the female genitals in such a condition as to retain its fertilizing power. It is probably kept in the upper end of the Fallopian tube, which is developed so as to form a *receptaculum seminis*.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 12, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Measles.
New York	1,340,114	955	600	45.78	9.03	36.86	1.99	2.42
Philadelphia	927,995	475	264	27·93	9.87	21.00	1.26	1.26
Brooklyn	644,526	414	266	47.76	11.28	39.12	1.68	5.04
Chicago	632,100	300	277	54.12	3.33	39.60	4.33	6.93
Boston	423,800	168	71	22.08	22.08	11.73	2.07	—
Baltimore	408,520	216	132	41.40	9.20	34.50	2.76	.46
St. Louis	400,000	179	113	47.31	7.98	33.06	2.28	1.14
Cincinnati	272,400	110	61	37.27	10.91	28.18	.91	.91
New Orleans	234,000	164	70	20.74	10.37	10.98	1.22	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	94	45	26 50	18.02	22.26	—	—
Pittsburg	180,000	80	16	50.00	2.50	32.50	5.00	5.00
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	32	13	28.17	21.91	21.91	3.13	—
New Haven	62,882	50	28	40.00	16.00	38.00	2.00	—
Nashville	54,400	25	10	24.00	24.00	16.00	—	—
Charleston	52,286	39	17	20.48	15.39	12.80	—	—
Lowell	71,447	39	14	17.92	12.80	12.80	—	—
Worcester	69,442	28	15	49.74	15 85	24.99	17 85	—
Fall River	62,674	42	27	52.36	4.76	40.46	—	2.38
Cambridge	60,995	18	8	16.66	5.55	5.55	5 55	—
Lawrence	45,516	15	8	33.33	11.11	33.33	—	—
Lynn	44,895	11	1	—	27.27	—	—	—
Springfield	38,090	13	7	30.76	38.45	30.76	—	—
Somerville	31,350	9	5	11.11	—	—	—	—
Holyoke	30,515	18	16	77.77	5.55	72.22	5.55	—
New Bedford	30,144	3	2	—	—	—	—	—
Salem	29,503	11	4	—	18.18	—	—	—
Chelsea	24,347	7	0	14.28	14.28	14.28	—	—
Taunton	22,693	5	1	—	—	—	—	—
Gloucester	21,400	4	1	25.00	25.00	—	25.00	—
Haverhill	20,905	4	1	—	—	—	—	—
Newton	19,421	6	1	33.33	16.66	16.66	—	—
Brockton	18,323	9	2	44.44	33.33	11.11	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	0	0	—	—	—	—	—
Fitchburg	13,433	4	1	50.00	—	50.00	—	—
Massachusetts towns	358,366	61	24	24.60	18.04	22.96	1.64	—

Deaths reported 3608 (no reports from Buffalo and Milwaukee): under five years of age, 2121; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, diarrhœal diseases, and fevers) 1394, diarrhœal diseases 1076, consumption 374, lung diseases 207, diphtheria and croup 72, measles 63, whooping-cough 50, scarlet fever 43, typhoid fever 38, malarial fevers 35, cerebro-spinal meningitis 11, puerperal fever eight, small-pox four, erysipelas four. From *scarlet fever*, New York 14, Chicago six, Philadelphia five, Brooklyn and St. Louis four each, Boston, Cincinnati, and Pittsburg two each, New Orleans, District of Columbia, Lowell, and Somerville, one each. From *typhoid fever*, Philadelphia nine, St. Louis six, New York and Chicago four each, Brooklyn, Boston, Baltimore, and Cincinnati two each, District of Columbia, Pittsburg, Providence, Nashville, Charleston, Lowell, and Newton one each. From *malarial fevers*, Brooklyn nine, New Orleans eight, St. Louis seven, New York five, Baltimore and Charleston two each, Philadelphia and Nashville one each. From *cerebro-spinal meningitis*, New York, Chicago, Cincinnati, Worcester, and Fall River two each, Brockton one. From *puerperal fever*, Fall River two, Brooklyn, Chicago, Boston, St. Louis, and New Orleans one each. From *small-pox*, New Orleans three, Philadelphia one. From *erysipelas*, New York and Philadelphia two each.

Cases reported in Boston: scarlet fever 47, typhoid fever 25, and diphtheria 12.

In 107 cities and towns of Massachusetts, with an estimated population of 1,385,681 (estimated population of the State 1,955,104), the total death-rate for the week was 17.88 against 15.35 and 15.41 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending June 30th, the death-rate was 19.2. Deaths reported 3230: acute diseases of the respiratory organs (London) 218, measles 144, whooping-cough 122, diarrhœa 90, scarlet fever 50, fevers 42, diphtheria 27, small-pox (London 29, Liverpool five, Sunderland two, Manchester, Sheffield, and Cardiff one each) 39. The death-rates ranged from 11.5 in Brighton to 26.1 in Liverpool; Birkenhead 17.2; Birmingham 19.2; Blackburn 23.6; Leeds 20.1; Leicester 16.5; London 19.1; Manchester 22.1; Nottingham 20.1; Sheffield 16.7; Sunderland 23.3. In Edinburgh 15.7; Glasgow 23.3; Dublin 28.2.

For the week ending June 21st, in the Swiss towns, there were 29 deaths from consumption, lung diseases 15, diarrhœal diseases 12, typhoid fever nine, diphtheria and croup four, scarlet fever two, whooping-cough one. The death-rates were, at Geneva 17.3; Zurich 3.9; Basle 21.4; Berne 10.1.

For the week ending June 28th, in the Swiss towns, there were 29 deaths from consumption, typhoid fever 19, diarrhœal diseases 14, lung diseases 13, diphtheria and croup three, whooping-cough two. The death-rates were, at Geneva 13.2; Zurich 11.8; Basle 20.1; Berne 12.2.

The meteorological record for the week ending July 12th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
July, 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11 23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 6	29.742	72	82.5	67	90	67	79	79	W	SW	SW	6	12	7	O	O	O	—	—
Mon., 7	29.870	68	79	63	75	62	72	70	W	SE	NW	10	11	2	F	F	O	—	—
Tues., 8	29.859	62	69	60	88	93	100	94	NE	E	NE	3	5	3	O	O	O	—	—
Wed., 9	29.670	67	77	59	92	60	92	81	N	NW	E	8	8	2	O	O	O	—	—
Thurs., 10	29.764	71	82	60	74	46	76	65	W	W	W	9	13	10	F	F	C	—	—
Fri., 11	29.899	74	86	59	66	41	92	66	W	SW	SW	7	10	6	C	C	F	—	—
Sat., 12	29.781	72	85	58	90	67	90	82	SW	SW	NW	6	11	5	F	F	O	—	—
Mean, the Week.	29.798	69.4	80.2	61				76.7										10.26	0.77

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM JULY 12, 1884, TO JULY 18, 1884.

CLEMENTS, B. A., major and surgeon. Also directed to relieve Surgeon J. P. Wright of his duties as Acting Medical Director, Department of the Missouri. Paragraph 1, S. O. 138, headquarters Department of Missouri, July 8, 1884.

MCELDERRY, HENRY, captain and assistant surgeon. From Department of the Platte to Department of the East. Paragraph 12, S. O. 165, A. G. O., July 16, 1884.

EWEN, CLARENCE, captain and assistant surgeon. Assigned to duty as post surgeon, Fort Sidney, Neb. Paragraph 8, S. O. 58, headquarters Department of Platte, July 11, 1884.

ELBREY, F. W., captain and assistant surgeon. Leave of absence still further extended six months on surgeon's certificate of disability. Paragraph 6, S. O. 161, A. G. O., July 12, 1884.

WAKEMAN, WILLIAM J., first lieutenant and assistant surgeon. Relieved from duty at Fort D. A. Russell, Wyo., and assigned to duty as post surgeon, Fort Washakie, Wyo., relieving Assistant Surgeon Norton Strong. Paragraph 9, S. O. 58, headquarters Department of Platte, July 11, 1884.

APPOINTMENT.

CHARLES B. EWING to be assistant surgeon, with the rank of first lieutenant, July 5, 1884, vice Middleton, promoted. Memo., A. G. O., July 14, 1884.

LIST OF OFFICIAL CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING JULY 19, 1884.

GIHON, A. L., medical director, ordered as member of Board of Inspection.

PERSONS, R. C., passed assistant surgeon, ordered to U. S. S. Saratoga.

SEIGFRIED, C. A., passed assistant surgeon, detached from U. S. S. Saratoga, ordered to Naval Hospital, Brooklyn.

SAYRE, T. S., assistant surgeon, ordered to U. S. S. Independence.

BOOKS AND PAMPHLETS RECEIVED. — Notes on the Opium Habit. By Asa P. Meylert, M. D. Second Edition. New York: G. P. Putnam's Sons. 1884.

The Objects of Dermatological Classification, with Especial Reference to Auspitz's System. By Edw. Bennet Bronson, M. D. (Reprint.) New York: William Wood & Co.

Disease in Cattle, Kansas and Illinois. Letter from the Secretary of the Treasury. Public Document.

Quarterly Report of the Chief of the Bureau of Statistics, Treasury Department, Relative to the Imports, Exports, Immigration and Navigation of the United States for the Three Months ending September 30, 1883. No. 1.

Same. No. 2. For the Three Months ended December 31, 1883.

Address.

THE PHYSICIAN A POPULAR EDUCATOR.[1]

THE ANNUAL DISCOURSE BEFORE THE MASSACHUSETTS MEDICAL SOCIETY, JUNE 11, 1884.

BY JOHN CROWELL, M. D., OF HAVERHILL.

The attitude of the public in regard to the management of *Contagious* and *Infectious Diseases* is often at fault, and it is here where the timely interference of the physician is of vital moment.

Notwithstanding the rules and restrictions of Boards of Health, the grossest carelessness prevails, and exposure to diseases accounted contagious is encouraged by this easy-going negligence. Take, for instance, that much dreaded malady, diphtheria. Dr. Elisha Harris, of New York, in his report of the investigations made by him of the epidemic that occurred in Vermont in 1879, makes the following practical suggestions: —

"No other disease in our Northern States has been more generally regarded as unpreventable, and none more capricious and fatally obstinate in its mode of prevalence, than diphtheria. Its apparently, and very probably, sporadic origin in numerous instances; its invasion of the most salubrious as well as the most insalubrious quarters; its variable malignancy, and its rapid fatality in numerous cases wherever it prevails, have furnished ample occasions for the unsettled opinions and sanitary regulations which prevail in regard to this destructive malady. Medical men no longer reject the conclusion which experience has taught concerning the personally contagious attribute of diphtheria; but as this attribute is variable in its intensity in different cases and on different occasions, apparently, sanitary precautions and regulations adopted to extinguish or wholly control the virus of this disease are only occasionally applied and enforced."[2]

This condition of things in relation to this disease, so carefully and so cautiously stated by high authority, has resulted in a deplorable looseness among all classes. Because the contagion of diphtheria differs from that of other well-known diseases in the character of inception and development, the public mind becomes indifferent to the suggestions of sanitary authorities, and in many localities we find an almost open defiance to all precautions. There is often no system of isolation during the prevalence of an epidemic; there is gross neglect in the use of such disinfectants as are sanctioned by the best authorities; there is but little attention paid to the cleansing of houses, bedding, and clothing; and, worse than all, there is a reckless disregard for the safety of the living in the disposal of the bodies of those who have fallen victims of the disease. Numerous instances could be cited where public funerals have been held, and the body of the dead child, bedecked with floral emblems in an open casket, has been followed to the grave by a procession of school children. This dangerous expression of sentiment finds encouragement too often by clergymen, teachers, and even parents, especially when the victim of the malady is a favorite child and very generally beloved. People need wholesome rules from the physician in the conduct of this disease, and, in the absence of local sanitary authority, his word must be potent in its explicitness, and with a savor of authority in its practical application.

There is another question growing out of contagious diseases that is engrossing no little attention. I refer to *Vaccination.*

The public mind is somewhat divided as to the efficacy of vaccination as a preventive or modifier of small-pox, and also as to the danger attending the operation in transmitting certain loathsome diseases, more to be dreaded than the pest against which the prophylactic treatment is directed. In every little community, in every rural school district, there will be found men who will rebel at any attempt at compulsory vaccination, and oftentimes family feuds and bitter personal strife are the disagreeable results of an order for a general protection during a visitation of small-pox. Certain newspaper writers keep up the controversy, and sometimes a member of our profession widens the breach by the authority of his assertions, or by the sophistry that lurks in isolated statistics, and in the glamour of semi-professional nomenclature.

We frankly admit that the process of vaccination has been subjected to abuse, and that grave evils have resulted from the carelessness of the operator; for vaccination, like every other operation on the human body, demands care and skill in its performance. The evils of pyæmia and syphilis, which have ensued in certain cases, have been due either to the use of a foul lancet, or of lymph, which, from remaining too long in the vesicle, had begun to decay, or from employing lymph mixed with the blood of a diseased subject. The evils of vaccination, then, can be easily avoided, and the remedies are very simple, — a clean lancet, and pure lymph unmixed with blood or any other secretion. And since such ample facilities are afforded to procure virus from the cow, there need be no fear on the ground of vaccino-syphilitic inoculation.

And yet compulsory vaccination meets with stout opposition at home and abroad. The law in England demands that all children shall be vaccinated within four calendar months of birth; but this provision is so imperfectly fulfilled that, according to official reports, "the public defences against small-pox are in great part insufficient and delusive.[3] During the last session of the British Parliament the whole matter of compulsory vaccination came before the House of Commons by a resolution introduced by Mr. P. A. Taylor, member for Leicester, as follows: "That in the opinion of this house it is inexpedient and unjust to enforce vaccination, under penalties, upon those who regard it as unadvisable and dangerous." This resolution was supported by a speech of great vehemence, in which the whole system was denounced not only as dangerous, but utterly useless, and, without taking the trouble to produce facts, Mr. Taylor dogmatically asserted that as "a factor in national mortality small-pox is nowhere at all."

It was for Sir Lyon Playfair to reply to these assertions, which he did by a masterly array of facts, too convincing to admit of controversy, and which are worthy of reproduction. A military surgeon testified before the committee of 1871 that of over one hundred and fifty thousand soldiers vaccinated, not one instance was on record of the transmission of disease by the operation. And of the 17,000,000 children vaccinated within the last thirty years, Sir Lyon challenged any one to produce four authentic cases that had been poisoned by a syphilitic taint.

And in further elucidation of his position he presented a concise array of facts showing the beneficial results of vaccination. These facts are so succinct that they are of practical value in meeting popular errors upon this vital topic.

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[1] Concluded from page 76.

[2] Annual Report of the National Board of Health, page 291.

[3] Fifth Report of Medical Officer of British Privy Council, page 6.

In forty years after the introduction of vaccination into England the death-rate from small-pox had fallen from 3000 per million to 600 per million, and after gratuitous vaccination had been ordered in 1841 the average mortality was brought down in thirteen years to 305 per million.

Again, when vaccination was made compulsory, in 1871, the ratio of fatality was reduced to 223 per million; while in Scotland, in 1882, the rate was only six per million. Remarkable results are also observed in the late Franco-Prussian war. The year before the war 40,000 French soldiers and 216,426 Prussian soldiers were re-vaccinated. There was not, however, time to re-vaccinate a large number of recruits who entered the French army from Brittany, where small-pox was prevalent. And the physician-general of the French army, Dr. Leon Colin, records, "That the different armies, raised in haste and placed in the field without time for re-vaccination, were exposed both at their places of gathering and in their marches to the attack of the epidemic. The result was, that while 23,499 French soldiers died of small-pox, the mortality among the Germans did not exceed 263 deaths."

In London the deaths of the protected and unprotected are relatively 90 and 3350 per million, while in America the deaths of the unvaccinated are fifty per cent. in Boston, sixty-four per cent. in Philadelphia, and fifty-four per cent. in Montreal, and among the vaccinated the mortality is from fifteen to seventeen per cent.

At the conclusion of his argument, Dr. Playfair moved the following amendment to the resolution: "That in the opinion of this house, the practice of vaccination has greatly lessened the mortality from small-pox, and that laws relating to it, with such modifications as experience may suggest, are necessary for the prevention and mitigation of this fatal and mutilative disease."[1]

And this resolution was sustained by the remarkable vote, three hundred and two, while the anti-vaccination party mustered only sixteen votes.

It would seem, then, to be an easy matter to convince even the most skeptical that vaccination is a necessary means of defense against a terrible disease, and with Jaques, in As You Like It, the physician can confidently exclaim, with reference to this scourge of mankind: —

"Give me leave
To speak my mind, and I will, through and through,
Cleanse the foul body of th' infected world,
If they will patiently receive my medicine.'"

What better service can the profession render to the community than to assert a well-defined polity against *Superstition, Empiricism,* and *Quackery!*

The medical world has been more or less under the sway of superstition from the time of the early Egyptians to the latter part of this nineteenth century. During the highest period of Grecian civilization the disciples of Æsculapius depended upon feasts, fastings, and religious ceremonies for the cure of disease. The Romans combated the plague by incantations to the gods in the temple of Jove. The early Christian church believed that the power to cure disease lay wholly with the bishops and elders by the use of a miraculous power, independent of remedial agents. In later times kings and queens of England and France claimed the power of curing disease by the laying on of hands. Queen Anne touched the king's evil of Dr. Johnson, who was brought by his mother in his infancy for royal treatment by recommendation of a distinguished physician of Lichfield. And this kingly prerogative which prevailed through the Stuart dynasty was afterward assumed by those of less note, who passed through all the stages of wonder-working power possible to a diseased imagination.

Of the multiplied forms of superstition that have come down to us as a legacy, some are too trifling and harmless to deserve attention. Let the Dr. Johnsons remain happy by always putting forward the left foot on entering a room, and allow the college student the luxury of wearing a nutmeg strung around his neck as a talisman against disease. But when the foolish myths of an ignorant age are perpetuated and made to environ the pathway of a pregnant woman, and subject her footsteps to a succession of pitfalls and spring-guns; when the life of a young mother is made wretched by the old wives' fables of the dangers attending every period of lactation and dentition, it is well to challenge these miserable maxims and "call a halt."

Quackery does not always appear in the *rôle* of a mendicant who practices his base arts upon the unwary and the ignorant. It does not always flaunt its filthy rags and display the tawdry show of its stock-in-trade to the gaping crowds in the streets. It has other artifices and other devotees. It sometimes assumes the air of a gentleman and rides in a gilded coupé. It finds too easy access to the home of affluence and fashion, and the doors of the library and the boudoir open to its persuasive knock. It can adapt itself to all moods, and patiently lies in wait for the weakness and duplicity of suffering humanity. It is in such lurking and subtle form and garb that this foe to science and to humanity is most to be feared. And do we not sometimes find it seeking refuge behind the protecting seal of a piece of parchment?

It is a grim satire upon the pride and glory of medical science that the confidence of the great public in the power of specifics, as curative agents, remains as strong as in the former days of alchemy and astrology. Perkins's tractors and Bishop Berkeley's tar-water are perpetuated in the long list of patent nostrums that come in like a flood and threaten to overwhelm the land. Colossal fortunes are amassed from the sale of vile concoctions, whose virtues are set forth with all the glaring allurements of cheap art, and the convincing logic of those grateful people who, in turgid rhetoric, tell the suffering public of their ready relief from maladies which "regular physicians" had tried in vain to cure. What a piece of patchwork is man, with his garniture of liver pads, lung protectors, electrical belts and jackets! How is he guarded from all pulmonary ailments by alternate trials of stuffing and starving! How is he led captive by the invitations and warnings that confront him in painted characters upon every available rail-fence or rocky cliff in the land! How does the poor long-suffering stomach run the peptonized gauntlet, and barely escape destruction in the dreadful ordeal! And will not mercy cry out in pity for the helpless babies in their struggles with many of the preparations of artificial food? Denied the nourishment that nature so bounteously pours out, these poor victims of mercenary greed are stuffed with an ever-varying round of compounds that vie with each other only in the differing grades of worthlessness.

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[1] From Parliamentary Report published in the Boston Daily Advertiser, July 4, 1883.

Empiricism not unfrequently appears in the itinerant lecturer, who, with an airy grace, exhibits his credentials, and unfolds his manikins and his skeletons to the applauding public. And, having prepared the way by a generous course of free lectures, he plies his specialty with lucrative success, and then leaves his victims to wonder why they are not cured, while he is "over hills and far away" with his ill-gotten gains. And before the old-fashioned family doctor has finished making repairs on mutilated eyes and scarified organs of generation, or has found time to remove the pessaries and supporters, and liver pads and electric belts, the annual visitant again appears, and finds new victims to his devices with a generous patronage from his old dupes.

Massachusetts is far behind many of her sister States in the enactment of laws regulating the practice of medicine. While nearly every other State and Territory have done something, more or less effective, in this direction, our own State is unprotected, and quackery in every form is practically unhindered in its imposition upon the public.

The State of Illinois has done noble service to science and to humanity by empowering the State Board of Health to regulate the practice of medicine, and this has been done so wisely and so efficiently that quackery and empiricism find but feeble foot-hold within its jurisdiction. From the admirable and exhaustive report recently prepared by Dr. John H. Rauch, the able secretary of the Board of Illinois, we gather valuable information upon the whole subject of "Medical Education, and the Regulation of the Practice of Medicine in the United States and Canada." In the long list of States that have enacted laws of various degrees of force and effectiveness the name of Massachusetts does not appear, while those States possessing *good* laws are North Carolina, Alabama, West Virginia, Illinois, Missouri, Minnesota, New Mexico, Wyoming Territory, Mississippi, and Louisiana.

The Illinois Board of Health did important service in the exposure, in November, 1882, of the fraudulent "Bellevue Medical College of Massachusetts," which issued medical diplomas under the protection of a law relating to "Manufacturing and other Corporations." And the officers of this "bogus" college contended that they had a legal right to issue diplomas and confer degrees without any restriction on account of study or professional attainments. The United States Commissioner, before whom the trial was had, held this plea to be valid, and dismissed the case with the following remarks: "The State has authorized this college to issue degrees, and it has been done according to legal right. The law makes the Faculty of the College the sole judges of eligibility of applicants for diplomas. If the Faculty choose to issue degrees to incompetent persons *the laws of Massachusetts authorize it.*"

Such an outrageous possibility, under a law of Massachusetts, has been canceled, and the State saved from further disgrace in this direction, by the passage, June, 1883, of an act forbidding any corporation organized under the law referred to from "conferring medical degrees or issuing diplomas, unless specially authorized by the Legislature so to do."

Why should Massachusetts lag so far behind other States in the enactment of laws so wise, just, and humane? Laws not primarily intended to protect the medical profession, but to stand between the public and the horde of vampires that feed upon the life blood of their ignorant, superstitious, and deluded victims.

Is it not the duty of the members of our profession to educate the popular mind into a right appreciation of this vital question, and so to enlighten our legislators as to induce them to enact laws that shall redeem the good old Bay State from the contumely of fostering, by her legislation, the basest kind of frauds upon her citizens?[1]

Such, then, Mr. President and Fellows, are some of the methods by which the physician can render service to the public. It may be unrequited service; it may be called drudgery, but it is the drudgery that comes from ministration and sacrifice. It is the service essentially belonging to the highest ideal of the medical profession; a profession which makes the most profound problems of scientific research subservient to the wants of suffering humanity; whose noblest teachers and specialists are found wherever misfortune and woe have sown the seeds of disease.

It is a service scattered broadcast over the land. The same in the country doctor who toils among the hills of Berkshire, or along the sandy reaches of the Cape, as in the city practitioner who threads his way, not only among the homes of affluence, but also through the lanes and alleys — the "Ghettos of the poor." In the eloquent words of "Hyperion," the physician is the servant of the public, "toiling much, enduring much, fulfilling much; and then, with shattered nerves, and sinews all unstrung, lies down in the grave and sleeps the sleep of death, and the world talks of him while he sleeps! And as in the sun's eclipse we can behold the great stars shining in the heavens, so in this life-eclipse does he behold the lights of the great Eternity, burning solemnly and forever."

APPENDIX.

LAWS REGULATING THE PRACTICE OF MEDICINE IN THE UNITED STATES AND CANADA.

Extracts from a Report presented before the American Academy of Medicine at New York, October 10, 1883, by Richard J. Dunglison, M. D., *and* Henry O. Marcy, M. D.

The excellent laws now in force in West Virginia and Illinois have been taken as models, and although it has been found impossible to imitate them exactly, on account of local obstacles and local prejudices, the wedge has been entered, and some good results must inevitably attend the enforcement of the law. A letter recently received from Dr. Millard, the Secretary of the State Board of Minnesota, a State which has adopted restrictive enactments since the last annual report of your committee, summarizes the general aspects of the best of these laws; and we may quote his remarks upon their provisions as particularly appropriate in this connection, especially as he has given the subject of medical legislation close study and attention: —

"I think," says Dr. Millard, "the law or 'Acts' now in force in West Virginia, Illinois, Minnesota, and Missouri the best, by far, extant in any of the States. These four States are governed by virtually the same law, and have a constituency of at least 15,000 physicians. Each Act gives the Board the power of deciding the diplomas of what schools they shall recognize, and of revoking the certificate of any practitioner for unprofessional conduct; also the power to grant licenses to non-graduates by passing the necessary examination to test their fitness. You will observe that the main features of the law of these four States make the Board the Censors of the different medical schools as well as the professional conduct of those practicing within the jurisdiction of the different Boards. It is claimed by the enemies of this Act that it constitutes a 'medical autocracy' of the Board, and that it may use its power very unjustly. There is no doubt that, if the Act is administered by unfair men, this criticism is true. It is, however, noticeable that outside of a few '*commercial*' medical schools the law gives the greatest satisfaction, and I have not heard a whisper of complaint. The profession in general and a few of our leading medical institutions recognize that this country is flooded with incompetent medical men. That the time has arrived to cry, halt! all will assert, but as to the means of bringing about the halt there is a great difference of opinion. That it will not be brought about by the colleges themselves the profession is satisfied after the last ten years' agitation of the subject, and the example set by Bellevue and some others. In appealing to legislatures to regulate this evil I think the correct law should compel *all parties* to submit to an examination before practicing in the State. Such legislation is, however impracticable now, and next to this I think the Acts of the States I have mentioned the best."

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[1] See Appendix.

The Mississippi State law, which was adopted in 1882, is stated, by an earnest observer in that section of the country,[1] to be on a par with that of Illinois, in its efficiency and practical working, and is said to have accomplished already all that its most sanguine friends could have expected. To quote his own language: "All practitioners in the State, as far as I am aware, of every grade, have cheerfully complied with its requirements. . . . The pile doctors, down to the Indian doctor tramping around with his banjo and his calico gown, have given us a clear field. Their places are vacant, and their voice is heard no more in the land. Thus, already, in one season, thousands of dollars have been saved to the people of the State, to say nothing of other benefits." In Alabama the diplomas of medical colleges confer no right to practice medicine in that State; the applicant must be actually examined by a Board appointed for that purpose. In Arizona and Pennsylvania, and in Washington Territory, the law is simply for purposes of registration; in Arkansas a bill providing that all practitioners should be graduates of reputable medical colleges failed, this year, to pass both houses of the Legislature, and county boards of medical examiners, appointed by county judges, who may not be competent to decide as to the professional qualifications of their appointees, still continue to give certificates to applicants for permission to practice medicine in that State. Connecticut's very brief law is mainly intended for the punishment of itinerants. In Kentucky the law is a dead letter except in a few counties, and in Texas and Nebraska it is weak and ineffective.

Dr. Piffard considers the New York law a good one, but that it has one important defect, in that a perjury in registering is only punishable as a misdemeanor, and not as a felony. Oregon has had a bill before the Legislature every year, for ten years past, but it has not yet succeeded in attaining so desirable a consummation. In Tennessee, which has no law of this kind, the practice of medicine is said to be free to all; according to the authority of the Secretary of the State Board of Health, "Indians, Negroes, confidence men, and all that ilk, ply their 'trade' with no restrictions whatever. Any man who claims to be a doctor is one; hence druggists who do not know enough to make a living turn out as doctors in full practice before you know it. A farmer boy, too lazy to plow, reads an old work on practice, or Every Man His Own Doctor, invests six dollars in drugs, and is a physician; and, being a 'regular,' we all consult with him. Our legislators will not touch, and our doctors are too timid to press, the subject, and so we languish in the old paths."

It may well be asked by us, as a committee watchful of the progress of the times, whether, in States like this, which have imposed no restrictions upon the unlimited and unbridled practice of medicine, the experience of nearly four centuries has seen any marked change from the days of King Henry VIII. to the present hour;[2] for we read in the preamble of an Act, passed in England in the year 1511, looking to the regulation of the practice of physic and surgery, that its adoption was rendered necessary by the fact that "the science and cunning of physick and surgery is daily, within this realm, exercised by a great multitude of ignorant persons, of whom the great part have no manner of insight in the same, some also can read no letters in the book, so far forth that common artificers, as smiths, weavers, and women, boldly and accustomably take upon them great cures and things of great difficulty, in which they . . . apply such medicine as be very noxious and nothing meet therefore, to the high displeasure of God, great infamy to the faculty and the grievous hurt, damage, and destruction of many of the king's liege people."

Utah has shown her interest in medical legislation only by that provision of her Penal Code which punishes physicians who are drunk, and has been content with this measure of legislative protection of the people of that section of the country. A correspondent in Salt Lake City writes that "the inference is, that during the little time he is sober he will not do much harm. As for the medical fraternity proper, I do not think any of them care for any law regulating medicine. I believe they are advocates of the doctrine of the 'survival of the fittest.'" Wisconsin might be placed in the list of those having a law to regulate the practice of medicine, but the title indicates that it is simply An Act to prevent Quacks from Deceiving the People by assuming a Professional Title, and not really a law that may be classed in the same category as those mentioned previously.

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[1] Dr. J. M. Taylor: Miss. Valley Med. Monthly, February, 1884.

[2] W. T. Ely: Early English Medical and Surgical Legislation. New York Medical Record, September 1, 1883.

Original Articles.

A FEW MEDICO-LEGAL FEATURES OF LIFE INSURANCE.[1]

BY MAX F. ELLER,

Of the New York Bar, Member of the New York Society of Medical Jurisprudence and State Medicine, Associate Member of the Massachusetts Medico-Legal Society, etc., etc.

The beneficent institution of life insurance has, in proportion to its extent, perhaps more than anything else, been a fruitful source of litigation. With the exception of criminal law, there is no branch of legal science, both theoretical and practical, which presents so many features of medico-legal interest and which has contributed in such a marked degree to the study, investigation, and judicial settlement of controversies, largely based upon difficult or doubtful problems of forensic medicine. The reasons for this are not far to seek. The physical condition of the applicant for life insurance at and prior to the time of his application, his mode of life, his habits, his family history, the remote and proximate cause of death, nature of death, if known, and still more so if doubtful, suspicious, or mysterious, all furnish abundant and diversified material for misrepresentation, fraud, deceit, and many other sins of omission and commission. A great many persons, otherwise honest and conscientious, consider a life insurance company the legitimate prey of their fraudulent devices and conspiracies. This is not confined merely to persons desiring to insure their lives, but is also extensively practiced by the legal representatives or other claimants for the insurance money after the death of the risk. On the other hand, it must be admitted that, up to within recent times at least, a great many life insurance compaines availed themselves of the most flippant excuses and the most frivolous pretexts to defeat honest claims. No doubt this has had something to do with the desire to "get square" at any cost. The law reports are full of cases in which an honest claim was contested on purely technical grounds, or on shallow subterfuges, with an expense of legal and medical learning worthy of a better cause.

It is a sign of a healthier tendency, that at the present time reputable companies content themselves with contesting those cases only which present either an important question, not hitherto judicially determined, or such an array of facts and circumstances of a suspicious or doubtful character, that *not* to make them the subject of judicial investigation and decision would be placing a premium upon fraud and dishonesty.

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[1] Read at the annual meeting of the Massachusetts Medico-Legal Society, June 10, 1884.

You are, no doubt, familiar with the more prominent medico-legal features of life insurance. They are nearly all, if the expression be permitted, of a post-mortem character. From the very nature of the contract between insurer and risk, and from the immense number of risks, scattered over a vast expanse of territory and among all conditions of men, it can easily be inferred that it is practically impossible, except in a few isolated cases, to ascertain before death those facts and circumstances which contribute to make a particular case the subject of medico-legal inquiry and investigation.

The examination of an applicant, both as to his previous history and habits and as to his present physical and mental condition, may be as exhaustive as possible, yet there will always remain a large margin for deception, misrepresentation, and concealment of important features.

Again, it is almost equally difficult to prevent deceit and misrepresentation in the proofs of death if the persons claiming the insurance money are bent upon it. *Almost* equally difficult, yet the chances of discovery and exposure of the actual state of affairs are much better on account of the greater number of persons necessary to the carrying out of the collusive scheme and conspiracy upon which the success of the fraudulent enterprise is based.

One of the most frequent attempts at deception is that of representing a death by suicide to be due to natural causes. This was practiced extensively for a long time and as stubbornly contested by the companies. The moving cause of this class of frauds was the popular fallacy, which up to this day has a great many sincere adherents, that suicide, *eo ipso*, is an evidence of insanity. Believing this to be the case, claimants had no scruples to misrepresent and deceive in order to obtain that to which they considered themselves fairly and honestly entitled, and at the same time avoid the odium of a suicide in the family.

The defense of suicide is now but rarely resorted to, and then only in flagrant cases, although the companies certainly never admitted the theory that suicide was an evidence of insanity. The policies still contain a suicide clause, but it is rarely made the basis of contest, except in cases like the famous Calvocorepes case or the more recent Dwight case, in both of which the attempt was made to establish the fact that unusually heavy insurance had been secured with the preconceived determination to provide liberally for the surviving family by committing suicide after payment of only one or but few premiums, and by giving it the appearance of natural death or homicide.

It seems hardly necessary to state that the defense of suicide cannot prevail if the suicide is actually committed in a condition of mental irresponsibility. Yet, in order to prevent that defense from gaining any foot-hold whatever in such a case, laws have been made declaring that it shall not be a defense if the suicide is committed by an insane person.

Such a law was passed by the Legislature of the State of New York at its last session. The necessity for such a law is apparent when it is considered that the companies have changed very materially the wording, and consequently the legal bearing, of the suicide clause in their policies. That clause formerly read, that the company should not be required to pay and the policy be null and void, if the insured shall die by his own act or hand. It now reads, that the "self-destruction" of the insured is *not a risk assumed by the company*. This makes it incumbent upon the claimants to prove that the risk is one of those which *are* covered by the policy and assumed by the company. As a rule this is a matter of grave difficulty and even impossibility.

The following is a case in point, to show the quandary in which claimants may find themselves under this clause, even when it is admitted that the risk, whether suicide or not, was sane at the time of death: —

Some eight or nine years ago a New York importer was found dead in bed in his boarding house. Nothing was found in the surroundings which would point to suicide, no weapon, poison, empty bottle, etc. The autopsy, performed by the deputy coroner, revealed, however, death by cyanide of potassium, whose odor when the abdominal cavity was opened was so strong that it drove even the coroner from the room. Under the rules of the company the minutes of the coroner's inquest and the verdict of the coroner's jury must be attached to and made a part of the proofs of death.

This had to be done in this case, but the claimants expressly stated that they did not admit the truth of the inquest and verdict, and did not consider themselves bound by them. The company having ascertained that the claimants, under an assignment of the policy, were a firm of creditors of the deceased, who had persistently and continuously dunned and pestered this man, and had thereby doubtless contributed in a large measure to his death, refused payment on the ground of self-destruction. Suit was thereupon brought upon the policy, the defense of the company being that the death of the insured was one of the risks *not* assumed by the company, being one by self-destruction. When the cause came on for trial the company's counsel, in cross-examination of one of the plaintiffs, introduced in evidence the proofs of death with the coroner's minutes and verdict attached thereto, and thereupon moved for a dismissal of the action on the ground that it appeared *primâ facie* that the deceased came to his death by his own hand, and that therefore the risk was one *not* assumed by the company.

The court held that the affirmative must be with the plaintiffs to prove the cause of death, in other words, that the plaintiffs must show affirmatively that the death was the result of one of the causes whereof the risk is assumed by the company. This ruling is in accordance with a decision of the United States Supreme Court in a leading case.

How could the plaintiffs, in the face of the coroner's verdict, prove that the death was a natural and not a self-inflicted one?

Under the law of New York, suicide, in order to be an available defense, must be proven by the party setting up such defense to have been the act of a sane person. The *onus probandi* is thus shifted, and justly so, both from a legal and equitable stand-point. The law does not and ought not to encourage any person or corporation to shield themselves by cunning devices and shrewd expedients against the consequences of their contracts and obligations.

On the other hand, there is no doubt that it is fallacious and illogical, as well as unscientific and unpsychological, to claim every suicide as the act of an insane person, and to condemn the defense of insanity *in toto* on that ground.

The New York Penal Code makes it a felony to commit an attempt at suicide. While this is undoubtedly mistaken severity and wholly indefensible on corrective and philanthropic grounds, yet the underlying principle is a sound and just one, that is, that attempted suicide is not necessarily the deed of a person of unsound mind, but is an act which, though only directed against one's self, is more or less a violation and infraction of the rights of person, and is therefore punishable.

That it is a breach of contract for an insured sane person to lessen the probable duration of life by his own act cannot be denied. It matters not whether poverty or business reverses, unrequited love, or fear of punishment cause the act. Why should not a corporation have the right to consider a contract rescinded or violated for good and sufficient cause the same as a private individual? The answer is that in many cases, though hardly ever with the large and substantial companies, the keen competition and active rivalry between the companies has made it a matter of expediency and business policy for them to pay every claim, unless the fraud be a very gross and palpable one.

A great many cases have been published both in books and in the daily and periodical press, which are replete with the most interesting facts, especially those of mysterious disappearances, fraudulent suicides, fictitious burials, etc. Yet the most interesting cases from a medico-legal point of view are those where misrepresentations and concealment have been perpetrated by an applicant for insurance, or where the proofs of death have been so manipulated and falsified, either by the family or by friends and other interested parties, that it is very difficult, sometimes almost impossible, to ascertain the truth, which when at last found and established, ought to, if it does not, operate as a complete barrier to the payment of the loss.

There are three principal classes of cases which come under this category: —

First. Those where the applicant makes an intentional misstatement or concealment of the truth as to family history or previous illnesses from certain diseases, which, if admitted, would defeat the application. These cases are very frequent and most difficult to ascertain and prove. In a country like this, with its ever shifting, restless population, it is well nigh impossible to establish the truth or falsity of a person's declaration as to family history in regard to diseases which are commonly accepted as capable of hereditary transmission.

Then, again, how easy is it for a risk to claim entire ignorance of the existence or suspicion of any hereditary taint. In a long and varied experience in the investigation of doubtful and suspicious cases on behalf of one of the most prominent life insurance companies of the United States I have succeeded in but one case to demonstrate to the satisfaction of the company, and for that matter also to that of the claimants, that the representations as to the absence of hereditary taint were willfully false and knowingly untrue. This was a case where a prominent manufacturer in a large city of the Middle States had not only his own life, but also that of his three sons, insured for large amounts. The physical examinations were highly satisfactory, and all four were considered extraordinarily good risks. Within a few years the three sons, all of them at the time of death barely twenty-two or twenty-three years old, had died of phthisis pulmonalis, while the father continued to live in the enjoyment of the most rugged health. The death of the third son, following so shortly after that of the second and first, put the company upon its inquiry. I was requested to investigate the family history, without regard to time, trouble, and expense, and I succeeded, after the most patient and laborious searches, in a large number of places in city and country, in records of births, marriages, and deaths, cemetery and burial books, etc., etc., in obtaining a pedigree of that family for five generations back, which showed most conclusively the hereditary transmission of the disease on the mother's side, it appearing every second generation with surprising regularity. It goes without saying that the father of the three sons, *to whom all this was known*, when confronted with the proof, admitted the fraud and made even partial restitution.

Another interesting case which came under my observation, was that of the intentional concealment of a previous illness, which, if known to the company, would have debarred the applicant from insurance. It is often claimed, by those who find a particular delight in disparaging life insurance and the protection which it is bound to give to its beneficiaries, that the company, once having accepted a risk and having received the premium, ought not to try to "crawl out" of its just obligations by protecting and defending itself against such "trifles" as a few mistakes about previous illness, caused by so-called forgetfulness, absent-mindedness, etc., etc. The following case contains, perhaps, the best answer to these apologists of fraud and deceit: —

A prominent New York merchant of high business and private character obtained an insurance of $5000 on his life. A few years thereafter he applied for a second policy. The examination was entirely satisfactory. The application among other questions contained this one, "Have you ever suffered from gallstone?" To this he answered "No." The second policy was written also for $5000. Six months afterwards he died. The proofs of death stated as the remote cause of death "biliary calculus;" as proximate cause of death "ulceration and rupture of gall-bladder and internal hæmorrhage; duration of last illness twenty-five days." Now, like Rome, biliary calculi are not built in one day, and an investigation became necessary to ascertain, if possible, how long this man had suffered from biliary trouble. Permit me to say here, before completing the history of this case, that a coroner's or medical examiner's inquest, compared to the investigation of a doubtful or suspicious life insurance case, is but child's play. The family of the deceased are, of course, if not openly against you, at least non-committal and non-communicative; friends or acquaintances as a rule know very little or nothing about the essential and material facts. If they do, they have no inclination to tell what they do know for fear of being called upon to testify. The doctors immediately seek refuge and shelter in that convenient and charitable asylum called "privilege." Obstacles and closed mouths everywhere, open or concealed hostility on all sides, dust in the eyes, if possible, anything, everything to prevent the truth from becoming known. The family physician is the most formidable obstacle. Self-interest, professional privilege, perhaps fear of detection of mistaken or unskillful diagnosis or treatment, all these contribute towards making him as silent as a sphinx, except as to the facts absolutely necessary to be stated in the proof of death. In the face of all this active and passive opposition the investigation must be carried on. A proper regard for the interests of other risks requires that a palpably fraudulent claim should be opposed, but it must be satisfactorily proven to be a palpably fraudulent one. This cannot be done, nor can an unfounded suspicion be dispelled, without the most thorough investigation. In the case mentioned, the following facts were ascertained after an exhaustive and searching investigation: In the winter preceding his second insurance, this merchant was attacked by a dangerous illness, caused by an obstinate constipation, which finally settled into an utter inability to defecate. Peritonitis followed. Several prominent physicians were called in consultation, not all together, but successively. Every one of them, independently of the others, diagnosticted the disease as a severe attack of biliary calculus. The peritonitis finally assumed the most alarming character. All remedies had failed to produce a movement of the bowels, and the patient was given up. He had been told by at least two of the physicians what the nature of his illness was, that it was "gall-stones." He begged that a certain physician, whose fame as a specialist in intestinal diseases had reached him, be sent for as a last resort. This was done. Copious injections of warm water, suggested by him, brought on the long delayed movement, and the patient recovered. This last physician also advised him of the nature of his illness, and warned him of its almost certain recurrence. Hardly had the patient recovered when he, no doubt bearing in mind the doctor's prophecy, proceeded to an attempt at defrauding the company out of five thousand dollars by fraudulent concealment of the true state of affairs. Can it be expected that the company in a case like this should submit to imposition and pay the policy?

Another very interesting case was that of a young man, whose life was insured for $10,000. A year afterwards he died. The remote cause of death was stated as general paresis, and the immediate cause as maniacal exhaustion. Investigation showed that prior to his being insured he had been afflicted with a severe attack of tertiary syphilis requiring protracted specific treatment. As soon as the evidences of that disease had disappeared, he took out the policy, carefully concealing the fact of his having suffered from venereal disease. Would he have been accepted as a good risk if he had told the truth and concealed nothing? The history of his last illness, laboriously obtained from reluctant and hostile witnesses, showed that the paresis was caused by or was the consequence of the syphilitic lesion, and that he received up to his death and while in the private lunatic asylum, where he died, specific treatment. Yet some of the physicians attendant upon him endeavored to make it a case of sclerosis of the posterior columns and of tabes dorsalis of other than venereal origin, and denied the specific treatment. Notwithstanding all these denials and evasions, the investigation established conclusively two facts: first, that the risk died of a disease which was the consequence of tertiary syphilitic lesion, and, second, that this lesion existed and was known to the risk to have existed before the policy was applied for. Will it be seriously contended that the company should acquiesce in such a fraud and offer no resistance to the claim based upon it?

It has been stated before that one of the chief obstacles in the way of a thorough and exhaustive probing of cases of this class is the rule, and what physicians understand and claim to be the rule, as to privileged communications. It must be confessed that the decisions of the courts, especially in the State of New York, are decidedly unfavorable to the publication by testimony or otherwise by a physician or surgeon of *any* information acquired while attending the patient, and that only the patient himself can absolve the professional attendant from the obligation of secrecy.

Section 834 of the New York Code of Civil Procedure says: "*A person duly authorized to practice physic or surgery, shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity.*" Our courts have held that this applies not only to facts and circumstances communicated by patient to doctor, but also to knowledge of facts and circumstances of his physical condition ascertained and acquired by the physician from attendance upon the patient, without being directly informed thereof by the patient.

Of course professional confidence ought to be protected to the fullest extent, as otherwise unscrupulous or recklesss professional men might be enabled to do a vast amount of mischief, either from mere carelessness and want of discretion, or for purposes of gain. But it is a serious question whether, as between parties to a dispute or controversy, justice should fail, so that the professional privilege may remain inviolate even when it is relied upon to protect from the consequences of fraud and deceit.

I venture to say, and I know that in saying so I place myself in antagonism to many able judges and lawyers, that the rights of society and the demands of justice and equity ought to be superior to the rights of individuals; that the law ought not to allow any man whose knowledge (not information) is necessary and material for the establishment of exact justice to withhold that knowledge from the court, and thereby perhaps defeat the overthrow of a vicious and fraudulent claim.

Take the above case of biliary calculus, for instance. There some of the attending physicians informed the patient of the nature of his illness. Their knowledge of its character was and must have been to a considerable extent obtained from information furnished by the patient himself. Should the testimony of those physicians be ruled out and a flagrant fraud be countenanced? For upon that fact hinges the entire issue. If the patient knew that he had biliary calculus and concealed that fact, that ought to be an end to the claim.

It has been my good fortune, in the many cases which I have investigated, to convince a large number of physicians that in giving the history of a case from notes of their observations only, they violate neither the spirit of the law nor that mysterious professional, shall I call it entity or nonentity, to wit, ethics. Those who could or would not be convinced had to be made to talk by stratagem, — the end justifies the means.

There is nothing the average physician delights in more than to find some poor victim at whom to fire broadsides of technical terms and scientific definitions. The saying is, that a little learning is a dangerous thing, but when a layman reads up a few generalities and elementary points on some particular medical question which he likes to have elucidated, the little learning generally is a dangerous thing — not for the layman. I have found this to work exceedingly well in many cases. The little learning shows the layman to be a man of some education, all the more easily, so the doctor thinks, to be impressed with Greek and Latin words, etc., because some of them are at least partially understood. Of course the main point is willfully misunderstood and misapplied by the layman, thus rendering a fuller explanation and further details necessary to deepen the impression. Then the layman begins to understand, but not yet fully. More explanations, more details, more questions and answers, and very soon the layman knows all he cares to know. The doctor imagines that he has impressed the interlocutor with his profound learning, but the latter has himself learned a thing or two. This process is not patented, and is cheerfully and unselfishly dedicated to the medical examiners of Massachusetts for use in their intercourse with the legal profession.

Second. The second class of cases are those where the applicant makes an intentional misrepresentation or concealment of the truth as to mode of life or habits, which, if admitted, would defeat the application. The majority of cases arising under this category are those of intemperance, although there are also occasionally cases of extra-hazardous occupations, which would, if stated, render the acceptance of the risk extremely doubtful. The habitual excessive use of alcoholic beverages has in its train a variety of dangerous diseases, such as probability of early death, exposure to fatal accidents and violent abbreviation of life, and for these reasons excludes applicants addicted to such habits. Their concealment, therefore, becomes necessary if insurance is sought, and it is astonishing what an overwhelming proportion of teetotalers and temperance men there is in this world, if the compilation of statistics be based exclusively upon life insurance tables. The moderate use of stimulants is not forbidden or deprecated, yet the majority of applicants, for fear of being rejected, refuse to admit even that. There seems to be no reason why the concealment of this habit, or whatever you may call it, should not vitiate the policy. The point to consider is, Would the risk have been accepted if he had been known to be a drinking man? And as the answer is an emphatic No, the answer to the question as to the liability should be the same.

A case in point is the following: A New York merchant of very convivial habits conceived the idea of providing for his family by securing a $10,000 policy, and then drinking himself to death. He had been a hard drinking man for years, which, of course, the company did not know. In furtherance of his design he did what he otherwise would not have done, he kept sober for a number of months, and, being a man of originally sturdy constitution and powerful frame succeeded in destroying, or at least obliterating for the time being, all traces of his intemperate habits. His examination was eminently satisfactory. Among other things he stated that he never drank alcoholic liquors. The policy was issued, and within eight months thereafter he died of delirium tremens.

It was subsequently shown that from the day of the issuance of the policy to the day of his death his life was one continuous "spree," without any sober intervals.

The company refused to pay, the case was taken into court by the beneficiary, the widow, and the result was, as anticipated, a compromise.

This ending deserves nothing but censure, being but the compounding and condonation of a palpable fraud from motives of expediency and business interests. If the company had insisted upon a trial it would doubtless have received a verdict in its favor.

Third. This is a class of cases in which a forbidden occupation or journey is entered into, or a habit, detrimental to health and life, is acquired after the policy has been issued, and where the cause of death is attributable to such occupation, journey, or habit.

As to the first two (occupation and journey) the point is very clear. The latter (habit) presents a very interesting medico-legal question.

Habits of intemperance often degenerate into a condition which, in the light of modern medical research, cannot be regarded as anything else than a disease. Dipsomania, inebriety, alcoholism, whatever you may call it, is recognized and treated as a disease, and has found a distinctive place in the system of medical science. No one pretends to hold a person responsible for being afflicted with a disease, except it be self-inflicted or brought about by deliberate and willful exposure. Should a person with predetermination expose himself to the contagion of a dangerous disease, it would perhaps be very difficult to prove that such was the case, but should he deliberately use alcoholic stimulants or narcotics in excessive quantities and thereby acquire a habit which finally and imperceptibly changes into a disease, which is beyond his control, the matter would be quite different. In the latter case the perhaps at first involuntary foundation is laid for an impairment of those mental faculties and factors which, if in a normal condition, would be formidable obstacles to the physical change. In short, a physical habit is allowed to become a mental and physical disease, which is beyond the control of the individual just as much as typhoid fever or pleurisy.

Should such a tendency and proclivity be allowed to defeat a policy? To one who endeavors to be thoroughly impartial in matters of life insurance the answer must be unreservedly and emphatically a negative one, both from a medical and from a legal ground.

Fraud vitiates every contract, and for that reason the misrepresentations and concealments of applicants or others have been justly condemned, but in the class of cases under consideration there is no fraudulent intent; the minds of insurer and applicant meet on an honest, truthful basis. A guarantee by either party to do that which may be and undoubtedly is *ultra vires*, or to state it more correctly, not to do that which may and generally is *in futuro*, cannot and ought not to be enforced. The frailties and weaknesses of human nature must be considered, and the law, as applicable to the relations of individuals among themselves and to others, does take cognizance of them. If it did not it would not deserve its name. '*Ultra vires nemo cogi potest*' is as old as it is true. This class of risks the companies ought to assume, all conditions and provisions of their policies to the contrary notwithstanding. Supposing the drinking habit is acquired by a patient to whom stimulants have been prescribed by a physician, and who continues their use after the necessity therefor has ceased to exist, simply because he contracted the appetite. Such a case came under my observation not long ago. It is very difficult, in the majority of instances, to ascertain the exact time when the habit was contracted and when it ceased to be a habit and became a disease. The defense of bad habits acquired subsequent to the issuance of the policy ought, in order to be consistent, to include all cases where the illness and death were the consequence of any and every kind of indulgence, nay, even of a reckless exposure to cold or heat or the seductive wiles of cucumber salad. Where would this lead to? There would be a defense to nearly every loss.

In the relation of insurer and insured there must necessarily be some *risk* beyond that of the probable termination of life based upon mortality statistics. It forms the basis of the relation, it is its vital point, and should have as liberal an application as is consistent with justice and equity.

There are numerous other medico-legal features of life insurance which furnish interesting data of investigation and discussion, but those mentioned in the foregoing pages are perhaps of the greatest importance.

The companies, as a rule, have not only from necessity, but as a result of enlightened administration and adaptation to the progress of science, kept pace with the advancing spirit of the age and the demands of modern research. Their medical work, both as regards statistics of mortality, epidemics, physical and chemical examinations and problems of mental responsibility, etc., has been done conscientiously and scientifically, and has been and is fruitful of valuable contributions to medical science in its theoretical and practical aspects. Their legal work has to a great extent thrown off the shackles of narrow-minded technicality and slavish interpretation, and, while not yielding one iota to the demands of the blackmailers and rogues, has sought to infuse the dealings of the corporations with claimants and beneficiaries with a commendable spirit of fairness and liberality which is the very essence of justice among men. To both combined we owe much valuable material for scientific research and beneficial discussion of mooted points.

If the preceding remarks have in any way contributed towards stimulating further progress and study of medico-legal science as applicable to life insurance, they will find in that result a welcome justification.

— The following model certificate is said by the *Chicago Weekly Medical Review* to have been copied by Dr. P. S. Conner from the records of the Pension Office in Washington: "The braud muscle which compresses, lowers, and extends the linea alba, the muscle of expiration is entirely severed thereby affecting the scorbutus cordi, which goes straight up to the navel or umbilicus, and from thence down to the pubis which is evidently the primordial cause of the frequent abscesses of the scrotum. Also from the fact of increased attachment necessarily causes increased cicatrix which is constantly increasing, and hence the increase of all the detrimental symptoms."

A CASE OF DIABETES INSIPIDUS.[1]

BY SAM'L. AUG. FISK, A. M., M. D. (HARV.),

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It is always a delicate matter for a man to herald his bodily infirmities, and the reader, in this present instance, feels a hesitancy in presenting his own for the consideration of his professional brethren; but he has thought that the rarity of the disease to be spoken of and the fact that it has occurred in one who, by virtue of his being a physician, can note the symptoms with accuracy, would justify him in making this report, and that these considerations would also be a sufficient excuse for his being personal.

History. The subject of this disease is twenty-eight years old, and has, until within a few years, enjoyed health, although he has never been robust. When he was five years old he had an attack of "congestion of the lung." At fourteen years of age he was taken with acute inflammatory rheumatism, which lasted ten days or two weeks, and involved the joints of the ankles, knees, shoulders, and wrists, but did not affect the heart. Six years ago, in the spring of 1878, he was sent away from Boston, by the late Dr. Calvin Ellis, because it was found that there were dullness and subcrepitant râles at the base of his right lung, which signs cleared away without confining him to his bed. Two years later, in the spring of 1880, he was sick in bed for four weeks with a lobular pneumonia, — the acute catarrhal pneumonia of Niemeyer, — involving that portion of the lower lobe, on the left side, under and around the nipple. As this inflammation did not go on to resolution, but rather showed a tendency to spread, he was sent into the White Mountains for the summer, and in October of that year he came to Colorado. In November, 1882, he was examined by Dr. Austin Flint, Sr., and was told that one side of his chest was as sound as the other, and that no trace of the old trouble remained. So much for the personal history up to the time of the present attack.

The family history shows that his grandparents died in old age, except his maternal grandfather, the cause of whose death he does not know. His parents died in middle life, each of a valvular lesion of the heart. Brothers and sister are living and well. Three uncles on the father's side are known to have diabetes mellitus.

In October, 1883, while the reporter was busily occupied with professional and literary work, he noticed that he was passing a large amount of urine, but he did not make any measurements of the quantity. It must, however, have been at least double the normal amount. On the 31st of October he was attacked with inflammatory rheumatism, which proved to be subacute in its nature, and lasted, with the relapse, for six weeks, during the greater part of which time he was confined to his bed. The joints affected were the knees. The treatment was the salicylate of soda, in five-grain doses every three hours, in the early stage of the affection. Later, the acetate of potassium, twenty grains three times a day, was added, and for the last two weeks he was put on to salicin, ten grains every three hours, and the knees were painted with cantharidal collodion. All through the attack hypodermic injections of morphine, from a quarter to a third of a grain, were administered at night, and he was given ice to chew *ad libitum*.

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[1] Read before the Denver Medical Association, Tuesday evening, May 13, 1884.

Synchronously with the onset of the rheumatism the reader suffered from excessive thirst and a craving for the alkaline waters, such as Vichy. The artesian water tasted as though it were sweetened with molasses, and milk left a thick spittle in the mouth, while Vichy, or the iron Ute water, was palatable and "clean." These latter waters were obtained on draught at the fountains, and the average amount drunk *per diem* for nearly six weeks was two quarts. The total ingestion of fluids was about ten quarts a day, and the daily secretion of urine was from nine to ten quarts. An analysis of the urine showed: color, pale; reaction, slightly acid; specific gravity, 1003; albumen and sugar, absent.

The reader wishes to place especial emphasis upon this matter of excessive thirst. It was extraordinary, as the tongue and fauces would be parched and dry, even after drinking. The skin became furfuraceous, and the fingers puckered and so horny that the epidermis could be cut off as though from a corn. The delicacy of the sense of touch was impaired, and for weeks there was no moisture apparent anywhere on the body; in fact, it was impossible to produce sweating. Every once in a while a prickling, itching sensation would be felt in the skin, especially in the small of the back and on the inner side of the thighs. The emaciation produced by the rheumatism was marked, and there was, of course, great loss of strength. Convalescence was slow, and during it the polydypsia and hyduria continued. Water was the more palatable for being ice-cold, and the urine had to be voided nearly every hour. Thirty drops of dialyzed iron and three grains of the sulphate of quinine were taken three times a day.

About January 1, 1884, that is, after three weeks' trial, the quinine was discontinued, and the tincture of the chloride of iron was substituted for dialyzed iron.

As the reader supposed that the polyuria would disappear with the return of strength he did not pursue any treatment with especial reference to it beyond having a careful regard to follow a healthful regimen. With the return to his accustomed weight the tips of his fingers became rounded, and although the skin had previously been so dry that it cracked around the nails it now became somewhat moist, and perspiration occasionally appeared in the palms. It might be well to state, in this connection, that, in October, previous to the rheumatic attack, the prick of a pin over the inner edge of the gastrocnemius muscle of the right leg had produced sores which eventuated in regular eczematous ulcers. During the early part of January, 1884, the daily secretion of urine continued to be large, and an analysis showed the results to be the same as recorded, except that the specific gravity was lowered to near 1000. The bladder had to be emptied every hour, or hour and a half at the utmost, and the usual amount at each voiding was from 400 to 600 cubic centimetres. Of course this constant micturition interfered with sleep, as it necessitated the getting out of bed from six to ten times every night to pass water. The average secretion at night, during the sleeping hours, was and is at least 3000 cubic centimetres, and it reaches as high as 4000 cubic centimetres.

January 20, 1884. Ten drops of Squibb's fluid extract of ergot was given three times a day, and the treatment continued for two weeks; then the dose was increased to half a drachm, and finally to one drachm, three times a day, until four ounces in all had been taken. There was no decrease in the amount of urine, but the effect on the general health was so bad that the ergot was discontinued. The appetite was affected, and the sight of food nauseating. Constipation and flatulence existed, and the pulse-rate fell from 96 beats to 82 or even 76 a minute. The ergot produced marked muscular weakness, so that walking became an effort and was exhausting, and the patient noticed a tendency to go to the left in walking. When the drug was abandoned these symptoms disappeared, the appetite improved, the strength returned, and the functions of the bowels became normal.

After the patient had been under the treatment by ergot for two weeks a quantitative analysis of the urine was made. The solutions used and the methods employed were those recommended by Tyson. The utmost care was taken in the preparation of the solutions and in performing this and all subsequent analyses, and it was hoped that the results would be accurate. They were as follows: —

February 6, 1884. Daily amount of urine, 9000 cubic centimetres; reaction, very slightly acid; specific gravity, 1000; color, in small quantities, very pale; in larger amounts, a light greenish-yellow; odor, when freshly voided, slightly sweetish, like new-mown hay, but not marked; urophæine, the palest amethyst; indican, almost *nil;* earthy phos., scarcely a trace; alk. phos., very slight; albumen and sugar, absent; urea = 30 grammes; P_2O_5 = 2.1 grammes; SO_3 = 4.4 grammes; sediment, absent.

February 13, 1884. After taking drachm doses of ergot it was found that the amount of urine was 10,000 cubic centimetres; specific gravity, 1000; reaction, neutral; color, odor, and sediment as recorded above; urea = 40 grammes; P_2O_5 = 2.4 grammes; SO_3 = 4.4 grammes.

February 20, 1884. A week after the discontinuance of the ergot the results about as above.

March 1, 1884. Began the administration of

℞ Ferri et quininæ citratis . . . . . . gr. v.
Ex. nucis vomicæ . . . . gr. ¼. M.

to be taken three times a day; also a half a drachm of Squibb's fluid extract of uva ursi three times a day. At the same time an eighth of a grain of the sulphate of morphia was given by the mouth three times a day, and seven drops of Magendie's solution were administered hypodermically at night. This latter amount acted as a stimulant, producing a mild delirium, which kept the patient awake for several hours after its administration, and also made him feel listless on the following morning.

The morphine was taken in this way for a week, and was then stopped for a few days, to be continued for another week.

March 27, 1884. After the above treatment strength and appetite good. Skin nearly normal. Weight one hundred and forty-seven pounds, full weight. Thirst and frequent micturition as annoying as ever. Analysis of urine: amount, 10,000 cubic centimetres; specific gravity, 1000; reaction, color, and odor as before; urea = 53 grammes; P_2O_5 = 2.2 grammes. This large amount of urea may have been the result of a nitrogenous diet, or have been caused by the work that the reader was doing at the time, as he had been engaged pretty steadily during the month in writing for publication.

After an interval of ten days or so, during which all medication was discontinued, the exhibition of

R Zinci valerianatis	gr. v.
Ferri et quin. cit.	gr. iij.
Ex. nucis vomicæ	gr. 1-7 M.

Sig. To be taken three times a day.

was taken up and continued for two weeks, and at the end of that time an analysis of the urine was made with the following results: —

April 23, 1884. Weight of patient, one hundred and forty-seven and a half pounds. Amount of urine for twenty-four hours, 9000 cubic centimetres; specific gravity, 1002; color, odor, and reaction as recorded before; albumen and sugar, absent; urea = 38.96 grammes; $P_2 O_5 = 2.4$ grammes; $SO_3 = 24.7$ grammes. Appetite and general condition good. Skin moist, though still somewhat horny over the knuckles. General strength good, as was shown by the ability to walk long distances without fatigue. The total ingestion of fluids was at least 10,000 cubic centimetres. The thirst and frequent micturition continued as they had been all along. At this time the exhibition of all drugs was discontinued.

Remarks. The prominent features in the case just narrated are the secretion of a large amount of urine, of a low specific gravity, and the excessive thirst. For six months and over the average secretion of urine has been about 10,000 cubic centimetres *per diem*, while the daily ingestion of fluids has been fully as large.

The question might be raised in this connection as to whether the polyuria was produced by the polydypsia, the latter being the result of habit. The reader is convinced that such is not the case. In the first place there is evidently an inherited predisposition to diabetic troubles, then the onset of the disease was sudden, and from the first the thirst was excessive. The reader has tried to control this craving for fluids by eating ice, by drinking lime-juice, and also by drinking dilute H_2SO_4, by sucking lemons, and by limiting the amount of fluids ingested, and all of these measures have been of no avail. After abstaining from drink for a longer time than usual the thirst will become so intense that it requires a larger draught than usual to be satisfying and to give relief. Indeed, it seems to be absolutely necessary that the ingestion of liquids during the twenty-four hours should be somewhat in excess of the amount of urine voided in the same time.

The amount of urine secreted in an hour has been measured frequently, and it has been found to average about 500 cubic centimetres. For comfort it is necessary to empty the bladder every hour during the day, and if the time runs to an hour and a half the discomfort is extreme.

The secretion during the sleeping hours is between 3000 to 4000 cubic centimetres, and it requires that the patient should get out of bed about six times during the night for the sake of emptying his bladder.

In regard to the relation of the polydypsia to the polyuria Dr. Flint remarks, "There is no advantage in limiting the amount of fluids ingested. On the contrary the patient is rendered thereby uncomfortable, irritable, and the consequence is otherwise hurtful."

Dr. Brunton, in Reynolds', writes: "Acting on the notion that the polyuria was a consequence of polydypsia patients have been put on a limited amount of fluid, but without any good result, the tormenting thirst becoming increased, and the general condition worse."

Senator, in Ziemssen, says: "A *sudden deprivation* of ingested fluids may, on the other hand, not only have an injurious effect upon the subjective condition of the patients, who are much distressed by the thirst which torments them, but may also seriously endanger life by the drying of the tissues which is thus produced." In another place he writes: "It is to be noticed, however, that at any rate in a large majority of cases the thirst and the greater ingestion of fluids are secondary phenomena, dependent upon the increased diuresis." The reporter can testify that in his own case an interval of an hour and a half without the ingestion of any fluid produces a thirst as intense as he formerly was wont to experience after walking several miles on a hot day.

He has also noticed that intense mental application, as that of a game of chess or any nervous excitement, increases the activity of the secretion of the urine. The inconvenience of having to micturate frequently is most annoying, and has placed its subject in many embarrassing situations. Fortunately, although the night's rest is interrupted so frequently, it is sufficient in amount, and is refreshing.

The largest part of the fluid ingested is, of course, water, and almost invariably artesian water.

ANALYSIS OF ARTESIAN-WELL WATER.

Temperature	50¼° F.
Color	Clear.
Smell	None.
Taste	Pure.
Reaction	Neutral.
Hardness	1.5
Suspended substances	None.
Free carbonic acid	1.05 grs. per gallon.
Solids (sol. in H_2O) consisting of carbonate of potassa	1.01 grs. per gallon.
Carbonate of soda	10.28 grs. per gallon.
Trace of chlorine and sulphuric acid, less than one tenth gr. per gallon.	

The *water does not contain* lime, magnesia, iron, or other metals; *does not contain* ammonia, sulphuretted hydrogen, nitrous acid, nitric acid, or organic matter.

Drugs. Dr. DaCosta has reported a case that was cured by the administration of the *fluid extract of ergot* in large doses. On the other hand, Dr. Tyson failed to get any good results by giving ergot in drachm doses. The theory of the drug's action in these cases is that it contracts the dilated renal capillaries, and hence diminishes the amount of blood supplied to the kidneys. In the present case ergot in drachm doses had no effect upon the secretion of urine, but it produced the most unpleasant effects upon the general health. *Morphine* was given on the theory that it would have a sedative effect on the nervous system, and also relieve any irritability about the sphincter of the bladder. It was taken in doses sufficient to produce a dryness of the fauces and a tingling sensation of the skin together with an itching of the nose. It produced, perhaps, a slight diminution in the amount of urine secreted, but the effect was not sufficient to warrant the continued exhibition of the drug. Morphine was given hypodermically at night in order to thoroughly narcotize the patient, and thus break up the habit, if habit it was, of his having to get up so frequently to void his urine. But when it was found, by a trial of several nights, that seven drops of Magendie's solution would produce a delirium which would keep the patient awake for several hours the experiment was not continued.

As the reader's attention was called to reports of cures from the use of the *valerianate of zinc* in five-grain doses he determined to give that treatment a trial, but here, too, the results did not justify a continuance of the remedy. So far the effects of the drugs employed have not been good. There was, perhaps, a slight diminution of the thirst and of the secretion of urine under the morphine treatment, but they were not sufficient to justify the subject in taking the risk of contracting the opium habit.

Analyses of Urine. These were made with care, and the solutions were prepared according to the directions given in Tyson's work. I had expected to be able to give results which would be absolute and accurate, and until quite recently I had supposed them to be so. Within a few weeks, however, I have made further analyses which have made me somewhat distrustful of my solutions. These are two young men of nearly the same age and weight as the reader, and who are living under precisely the same condition as regards food, sleep, etc., as he.

Case I. Age, thirty years. Weight, one hundred and forty-four and a half pounds. Analysis of urine, made April 20, 1884, shows: Amount, 1000 cubic centimetres; color, amber; reaction, slightly acid; specific gravity, 1024; albumen and sugar, absent; urea = 37.962 grammes; P_2O_5 = 2 grammes; SO_3 = 19 grammes. Sediment, a slight cloud, containing mucus and some dust.

Case II. Age, twenty-six years. Weight, one hundred and forty-nine pounds. Amount of urine, 900 cubic centimetres; specific gravity, 1022; color, slightly high; reaction, acid; albumen and sugar, absent; urea = 31 grammes; P_2O_5 = 2.15 grammes; SO_3 = 13.95 grammes. Sediment, slight cloud, containing a considerable number of calcic oxalate crystals, which may have come from fermentative changes or a gouty diathesis, which he inherits, and some mucus and pavement epithelium.

Two other analyses were made in the cases of other young men in health and of nearly the age of the reader.

Case III. Age, thirty years. Weight, one hundred and seventy-two pounds. Amount of urine for twenty-four hours, 900 cubic centimetres; color, amber; reaction, acid; specific gravity, 1023; albumen and sugar, absent; urea = 28.5 grammes; P_2O_5 = 1.83 grammes; SO_3 = 21.6 grammes. Sediment, slight, consisting of mucus and a few middle-sized, round epithelial cells, probably urethral.

Case IV. (May 3, 1884.) Age, twenty-six years. Weight, one hundred and forty-seven pounds. Amount of urine, 1100 cubic centimetres; color, amber (slightly high); specific gravity, 1030; reaction, acid; albumen and sugar, absent; urea = 38.5 grammes; P_2O_5 = 3.146 grammes; SO_3 not taken. Sediment, slight cloud, containing mucus, a few crystals of calcic oxalate, and some spermatozoa.

For the sake of comparison we will tabulate these results, and place them in contrast with each other and with the normal standards given by Tyson, in the accompanying Table.

A consideration of this table shows us that the diabetic patient was secreting about nine times the amount of urine that the other men did, and that consequently while the total amount of solids contained in the urine was nearly the same as in the other specimens its specific gravity was very much reduced from the normal, that, in fact, it was only that of spring water. It is evident from the chemical analysis of the urine and from the fact that he is at his maximum weight, that the diabetic is not wasting in flesh. Our table shows us also that in all probability the analyses for SO_3 were erroneous. Indeed, as there is always a question in regard to the purity of chemicals, and as we do not know that any accurate data have been given of the effects of this climate and altitude on the renal secretions, we shall have to consider these results as comparative rather than absolute. In concluding our remarks on the analyses it may be well to state that the tests employed for the detection of sugar were those of Fehling, Trommer, Moore, and Boetger.

	Date.	Weight.	Age.	Amount.	Sp. Gr.	Color.	Urea.	P_2O_5.	SO_3	Total Solids
Normal . .		-	-	1500 cc.	1020	Amber.	20.40 grms	3.5 grms	3-4 grms	27.30
Case I.	April 20th.	144½	30	1000 cc.	1024	Amber.	37.962 grms.	2 grms.	19 grms	58.962
Case II.	April 20th.	149	26	900 cc.	1022	High.	31 grms	2.15 grms	13.95 grms	47.1
Case III . . .	April 24th.	172	30	900 cc.	1023	Amber.	28.5 grms.	1.83 grms	21.6 grms	51.93
Case IV.	May 3d.	147	26	1100 cc.	1030	High.	38.5 grms.	3146 grms	-	-
Diabetic.	April 23d	157½	28	9000 cc.	1000	Pale.	38.96 grms.	2.4 grms.	24.7 grms.	66.06

Prognosis. Roberts gives it as his opinion that "The cases which affect the general health the least, though mostly incurable, appear to be those which arise after the inflammatory complaints, after mental emotion, cerebral injuries, and those which arise early in life without any known cause."

Bristowe writes: "In some cases the patient appears to be well in all other respects, and, except for the continued presence of his infirmity, enjoys life, probably attaining old age. In some cases he presents all the usual indications of diabetes mellitus, and, after a longer or shorter time, dies as ordinary diabetics die."

Bartholow gives the following prognosis, namely: "Although death is rarely due to the disease, the prognosis is not favorable as to cure. In most cases the disease is rather an inconvenience, owing to the frequent calls to micturate and the incessant thirst, than a dangerous malady."

In the latest edition (1881) of Flint's Practice of Medicine we read: "It is not incompatible with good appetite, digestion, and nutrition. It has been tolerated fifty years. The prognosis is favorable as regards the duration of life and the preservation of the general health if the disease be uncomplicated, but it is unfavorable as regards recovery from the disease."

Dr. Brunton, in Reynold's, says: "This disease resists treatment, and is rarely cured. The duration of life, in general, does not seem to be greatly shortened by it." And Senator (Ziemssen) writes: "Permanent recovery from this disease is rare, but death, in uncomplicated cases, is still more rare."

In conclusion the reporter wishes to put on record the fact that, six months after the onset of the disease, he is in the possession of strength, good appetite, and full weight, and the confident hope of being able to bear his full share of the burden of caring for the sick for many years to come.

REPORT ON LARYNGOLOGY AND RHINOLOGY.[1]

BY FRANKLIN H. HOOPER, M. D.

FRACTURE OF THE LARYNX BY DIRECT VIOLENCE.[2]

An accident of infrequent occurrence, and of great interest from a medico-legal point of view. The thyroid cartilage in its normal state is of such a structure that interference with its continuity can only result under very untoward circumstances. The laryngeal cartilages, however, are liable in advanced life to become the seat of ossific deposit, and then to be more easily fractured. The injury in this case resulted from the free use of a piece of wooden rail. The post-mortem appearances were those of death by suffocation. The thyroid cartilage, more especially the right half of it, was broken up into many pieces, one of which hung free in the lumen of the tube, evidencing great violence. Ossific change was very extensive.

TREATMENT OF FRACTURE OF THE LARYNX.

Dr. K. Wagner, of Konigshütte, points out[3] that fracture of the larynx is very rarely met with, and that not even the most experienced surgeons are in a position to derive from personal experience fixed rules for treating this injury. Most observers, however, agree that in such cases the first indication is the performing of tracheotomy to prevent suffocation. Occasionally, where there is much displacement of the fragments, it is advisable to perform thyrotomy. A case is reported of multiple fracture of the larynx which led the author to consider the subject of the treatment of this injury, and convinced him that further therapeutic measures were necessary beyond opening the trachea. The subject of this case was a robust and very powerful man whose neck had been forcibly squeezed in a fight. He remained unconscious for about half an hour, and on recovering himself found that his breathing was very bad. On the following day, when the patient first came to the notice of Dr. Wagner, there was extreme dyspnœa; and, with coughing, much blood, partly fluid, partly coagulated, was brought up. The face, neck, and surface of the thorax were distended through emphysema. There was found to be free abnormal mobility of the left wing of the thyroid cartilage; and during the prompt performance of superior tracheotomy the cricoid was found to be also fractured and partly torn away from the upper ring of the trachea. The patient did well up to the third day after the date of operation, when signs were presented of hypostatic pneumonia on the left side, and there was complaint of acute pain beneath the sternum. On the evening of the fourth day there was free bleeding from the wound in the trachea, and on the following day the patient died. On post-mortem examination there was found to have been mediastinal emphysema and suppurative mediastinitis. The lungs, with the exception of the lower lobe on the right side, appeared quite healthy.

Dr. Wagner thinks now that in any similar case of laryngeal injury thyrotomy would be indicated, not so much for the purpose of replacing any fragments of cartilage, as for rendering the seat of fracture antiseptic, and for maintaining for a time this antiseptic condition. In a recent case of this kind, he would, after having plugged the trachea, incise the larynx in the middle line, and then separate the two wings of the thyroid cartilage so as to be able to see the whole interior of the larynx, and to apply some antiseptic fluid. He would then plug the interior of the larynx with small pieces of iodoform gauze. The wound would thus be rendered antiseptic, the fragments of broken cartilage be kept at rest, and the risk of hæmorrhage be diminished. If there be no longer any danger of infection, a late thyrotomy, it is held, is still justifiable if performed with a view of putting displaced fragments in a better position, and, if the thyroid cartilage be fractured, of uniting the alæ by silver suture. If the fragments of the thyroid cartilage cannot be thus united, or if stenosis cannot be prevented, Dr. Wagner would advocate extirpation of the partially detached portion of thyroid cartilage and even removal of half the larynx. In a case reported by Billroth in which this partial operation had been performed, a good voice was retained, and, at all events, the patient is thus placed in a better position than that of having to go through life with a completely useless and much obstructed larynx.[4]

IRRITATION OF THE SEXUAL APPARATUS AS AN ÆTIOLOGICAL FACTOR IN THE PRODUCTION OF NASAL DISEASE.

The evil effects of undue excitation or disease of the generative apparatus upon the organs of sight and hearing are well known to specialists in these departments. In the April number of the *American Journal of the Medical Sciences* Dr. John N. Mackenzie quotes authorities to prove the fact that immoderate indulgence in venery may lead to derangements of sight was familiar to Aristotle, and that the fathers of medicine recognized some mysterious connection between the ear and the reproductive functions, and that the intimate relationship between the genital organs and those of the throat and neck attracted the special attention of the ancients. While historical facts point to the early recognition of the relationship between over-indulgence of the sexual powers and morbid conditions of the eye, ear, and throat, the special part which it plays in the production of nasal disease seems to have been heretofore overlooked. Dr. Mackenzie points out the intimate physiological relationship between certain portions of the reproductive system and the erectile nasal tissue. Clinical observation has shown him that: (1.) In a fair proportion of women suffering from nasal affections the disease is greatly aggravated during the menstrual epoch, or when under the influence of sexual excitement. (2.) Excessive indulgence in venery seems to have a tendency to excite inflammation of the nasal mucous membrane or to aggravate existing disease of that structure. (3.) The same is true in regard to the confirmed habit of masturbation. (4.) The coexistence of uterine or ovarian disease exerts sometimes an important influence on the clinical history of nasal inflammation. These observations, therefore, encourage the belief, if they do not establish the fact, that the natural stimulation of the reproductive apparatus, as in coitus, menstruation, etc., when carried beyond its normal physiological bounds, or pathological states of the sexual apparatus, as in certain diseased conditions, or as the result of their overstimulation from venereal excess, masturbation, etc., are often the predisposing, and occasionally the exciting, causes of nasal congestion and inflammation. Whether this occurs through reflex action, pure and simple, or as the sequel of an excitation in which several or all of the erectile structures of the body participate, the starting-point of the nasal disease is, in all probability, the repeated stimulation and congestion of the turbinated erectile tissue of the nose. It is highly probable that this erectile area, so sensitive to reflex-producing impressions, is the correlative of similar vascular areas in the reproductive tract, and that the phenomena observed may accordingly be explained by the doctrine of reflex or correlated action.[1]

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[1] Concluded from page 80.

[2] James Oliver, M. B., Lancet, June 30, 1883.

[3] Centralbl. f. Chir., No. 23, 1883.

[4] London Medical Record.

DEPENDENCE OF ASTHMA ON DISEASES OF THE NOSE.

Macini describes [2] three cases in which he believes that asthma depended on a pathological condition of the nasal mucous membrane. His first case was a woman aged forty, who, with the exception of bronchitis and slight emphysema, was in good health. For the last two years her nose had been partly stopped up, and she was obliged to breathe constantly through her mouth. She frequently suffered from true asthmatic attacks, chiefly by night. On examination it was found that the nasal mucous membrane was greatly swollen, and that completely blocking the nostrils with cotton wool increased the severity of these attacks. The nostrils were made pervious by the galvano-cautery, with the result of curing the attacks, and enabling her to sleep peacefully. The second case was that of a woman aged thirty-four, whose right nostril was blocked by mucous polypi; her difficulty of breathing was cured by removing the polypi. The third case occurred in a man, aged forty, who had suffered from his youth from frequent attacks of coryza and difficulty of breathing. He gradually grew bronchitic and emphysematous, and his nose became blocked by considerable swelling of the mucous membrane. The difficulty in breathing increased gradually, till he suffered from attacks of true asthma. As soon as the obstruction in the nose was removed his asthmatic attacks became very much less severe. Macini considers that in these cases the asthmatic attacks were reflex, caused in susceptible persons by a peripheral stimulation of the nerves in the mucous membrane of the nose.

LYMPHATIC DISCHARGE FROM THE NOSE IN LEUCOCYTHÆMIA.

Dr. Cornil [3] relates the case of a patient suffering from leucocythæmia who had a discharge from the nose of a thick, transparent, glairy fluid. It flowed slowly but constantly, and was neither thin like the discharge of a commencing coryza nor opaque like that of a more advanced nasal catarrh, but contained a large quantity of white corpuscles. The patient did not sneeze, nor were there any tickling sensations in the nose. At the autopsy the mucous membrane of the nasal fossæ was seen to be smooth, without ulceration, but thickened in places. The thickened parts presented a gray color on section. They were formed by an infiltration of the connective tissue with a mucous, transparent fluid like lymph. It was this leucæmic infiltration of the Schneiderian mucous membrane which was the cause of the nasal lymphorrhœa.

THE VALUE OF CERTAIN SINGLE SYMPTOMS IN THE DIAGNOSIS OF DISEASES OF CHILDREN.

Among the "single symptoms" which Emeritus Professor Politzer [4] enumerates as in some cases pathognomonic is a ***strongly marked nasal or palatal cry.*** This is present in, amongst other complaints, syphilitic ozœna, hypertrophied tonsils, and paralysis of the soft palate; but where these can be excluded it affords very strong presumption of retropharyngeal abscess. Dr. Politzer relates that on one occasion he was examining a child when the nurse passed through the room bearing another, four months old, in her arms. On hearing it give this nasal cry he stopped the nurse, but the mother affirmed that the baby was quite well. However, Politzer introduced his fingers and felt the expected swelling. This was incised, and a large quantity of pus evacuated.

THE TREATMENT OF CORYZA.

Surgeon-major G. E. Dobson, in a note in the *Lancet*, May 31, 1884, recommends the following as an effective method of treating this troublesome complaint. About a drachm of camphor, coarsely powdered, is placed in an ordinary shaving jug, which is then half filled with boiling water. The patient, having made a cone (out of a sheet of brown paper or an old newspaper) large enough to surround his face by its wide extremity and the mouth of the jug by its narrow end, proceeds to respire freely, at each inhalation drawing the steam into his nostrils, and at each exhalation forcing it up against the outer surface of his nose and adjoining parts of the face. A twofold action is produced: the camphorated steam acts internally in a specific manner upon the whole extent of the mucous surfaces, and, externally, produces profuse diaphoresis of the skin covering the nose and sides of the face, there acting as a derivative from the inflamed Schneiderian membrane. The patient should continue his respirations from ten to twenty minutes, repeated three or four times in as many hours.

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[1] New York Medical Record.

[2] Gazz. de Osp., 1883, No. 77, 78.

[3] Revue Médicale, August 11, 1883.

[4] Jahrbuch f. Kinderheilkunde, Band xxi., Heft 1.

A NEW DIVERTICULUM OF THE NASO-PHARYNGEAL SPACE.

Dr. O. Pertik[1] describes a new diverticulum situated in the naso-pharyngeal space. It was discovered in a man about fifty-five years of age, who had died suddenly. On removing the cervical vertebræ and the tissue at the back of the pharynx a fluctuating, bilateral, symmetrical sac was observed, composed of fat and connective tissue, which projected laterally and downward over the upper part of the concave wall of the superior constrictor of the pharynx. Instruments could be passed into it from the lower part of the nasal passage, and it was found, when examined, to be nearly filled with coagulated blood. Two similar cases are reported by Luschka and Zuckerkandel. Dr. Pertik believes that these formations are congenital, and that their effect is to alter the normal resonance quality of the voice.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

JUNE 7, 1884. The meeting was called to order at eight o'clock, DR. E. M. BUCKINGHAM in the chair.

After presentation of a summary of the report of the previous regular and special meetings of the Section the reports of committees were called for.

The SECRETARY announced that the committee appointed at an earlier meeting to take into consideration the question of the milk supply of Boston had prepared a partial report, which was in the hands of the secretary, who, by request, read as follows: —

PRELIMINARY REPORT OF THE COMMITTEE APPOINTED TO TAKE INTO CONSIDERATION THE MILK SUPPLY OF BOSTON.

The committee appointed at the meeting of the Section on February 27, 1884, "whose duty it shall be to report upon the whole subject of the providing of milk for Boston, and suggest the means of obtaining it pure for the citizens," have attended to that duty, and have held several meetings, at which all, or nearly all, the members of the committee have been present. They have visited the section of country from whence most of the milk supply of Boston is derived, and have endeavored to ascertain the manner in which it is treated at the farm where it is produced, and have followed its history as nearly as possible until it is delivered in the city. The committee has on several occasions had the benefit of the advice and counsel of those interested in the purity of our milk supply, and has considered the question of a change in the present methods of transportation and delivery, and has carefully examined several forms of cans for the transportation and delivery of milk, and has also made careful study and examination of many samples of milk obtained from different sources representing some of the various grades of milk sold for consumption. The committee has been so fortunate as to receive the offer of every facility for the continuance of its work from the office of the State Board of Health, as well as from that of the City Board of Health, and has been promised the assistance of the Milk Inspector of Boston in its efforts to devise a means for improving the quality of milk supplied to the people.

A work of such magnitude as that which has been intrusted to your committee could not be concluded in the limited time since the appointment of the committee, and it is desired at this time to present a preliminary report of progress with the suggestion that the committee be continued and allowed to prosecute its labors, and report to the Section at some future meeting of the Society.

The labor intrusted to the committee seemed legitimately to commence at the source of supply, the farmer's stable, where the cows are housed, and consequently one member of the committee has made a personal inspection of the farms and dairies in several localities. The investigation was made in four towns in Worcester County. It is the usual custom of the farmers after milking one or more cows to strain the milk into the eight-and-a-half-quart cans furnished by the contractors, which, when full, are set in cellars during the winter months, and in warm weather lowered in springs, wells, or put in tubs supplied with running water. A can partially filled in the morning is mixed with enough evening milk, after it is cooled, to fill the can. A letter or mark with chalk on each stopper indicates from whose farm the milk is obtained. Just before the milk is called for by the collector the stoppers are put in place. During the evening it is transported to the railroad station and put on board cars especially designed for this purpose. In the winter a small stove is used to prevent freezing. In the summer the cans are iced with great care. The milk arrives in Boston early the next morning, and is delivered to the distributers during the day.

Many farmers are careless in cooling the milk, and as a result it is returned sour by the contractors. This is nearly a total loss to the farmer, as he receives no pay, and often the cream has been removed.

Many of the cows were very dirty. Their hind flanks were covered with manure an inch or more thick, which must often drop into the pail, and is, no doubt, the deposit so frequently found in the consumer's supply. The contractors often complain to the farmers for not being more careful in this regard.

If a farmer waters the milk it is immediately returned, and to every man who comes to the car it is whispered very privately that Mr. W. has been caught, and a request "not to say anything about it." In a few days all in the town know it, and if the man chances to be a church member his punishment seems to be adequate.

None but "grade" cows are kept for supplying "railroad" milk, and their food is such as to improve the quantity rather than the quality. In the winter English hay, shorts, cotton-seed meal, roots, and occasionally corn meal are fed. In the summer grass and corn fodder.

But very few of the farmers have silos.

The prime defect in the present system of milk supply appears to your committee to consist mainly of two factors, namely, the employment of such a kind of can as admits of being opened without detection, whereby the milk may be variously manipulated in the form of addition or subtraction, or both, and which gives to the consumer a deteriorated quality of milk, as the analyses of the State Board of Health conclusively show, the proportion of specimens which were found to be adulterated amounting to ninety per cent.

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[1] Arch. für Path. Anat. und Phys. und für klin. Med.

The other defect in the present system of supply is the habit, now almost universal, of keeping the milk received on one day until the next morning, thereby adding a considerable amount of time, sometimes as much as twenty-four hours, to the age of the milk when it finally reaches the consumer. This is a disadvantage in another respect, as it exposes the milk to whatever deleterious influences or infective processes may be contained in the place of storage, where it is necessarily exposed to the air in the process of mixing and putting into small cans for family service. The temptation to adulteration which here exists should not be forgotten, and it is at this part of its journey that by far the larger part of all adulteration is committed.

Any practical method of delivery to consumers immediately on the arrival of the milk in the city depots, and of avoidance of the process of mixing and recanning would seem to offer a remedy for these two greatest dangers to which milk is exposed.

It might be said that it would only be inviting the farmer to adulterate the milk instead of allowing the retail milkmen to do so, but this would be less likely to occur, as any particular dairy could be easily identified, which is not possible under the present system.

Another disadvantage attending the prolonged keeping of milk arises from the necessity of adding some chemical substance to prevent fermentation and souring. This addition may not be directly injurious, but it is an adulteration, and the addition of any foreign substance to milk should be condemned. It is also to be feared that the additions made to milk, particularly that sold in stores, are not always harmless.

The committee has examined several varieties of cans and glass jars for the transportation of milk from the source of supply. The system of glass jars has never been practically tried in this city, but from places where this system has been introduced it was learned that the loss by breakage is very considerable, amounting, on an average, to a complete renewal of the entire stock of jars once in three months. Your committee is unable to find any place where this system has long remained in operation except in the case of certain private individuals who carry on a limited business in milk, and charge an unusual price. This system seems entirely unsuited to the requirements of a general milk supply, and your committee cannot recommend it. A can holding sixty quarts was brought to the attention of your committee, and illustrated by a model. This can is of steel, made without solder, and is of strong and durable character. It is provided with a large opening for cleansing purposes, and may thus always be thoroughly freed from impurities before receiving milk. This can is to be filled at the farm of supply, and when full a cover is placed in the opening and securely fastened and sealed with lead so that it is thereafter impossible to obtain access to the interior of the can until the seal is removed by an authorized person. In this can the milk is cooled and transported to Boston in the same manner as is now done with the ordinary can. The milk can be withdrawn as required, only by inverting the can, when it flows freely from a valve-opening, which closes automatically the instant the milk ceases to flow through it. It is practically impossible to tamper with the contents of this can after the cover is adjusted, and efforts to introduce water by the orifice for pouring out the milk were not successful. Air is allowed to enter the can to replace the milk as this is poured out, by means of a second guarded opening, through which it is impossible to introduce any foreign substance whatever. The advantages claimed for this can are its imperishable nature, its ease of cleansing, its perfect protection of the milk from manipulation or contamination, the thorough mixing of the milk at every withdrawal by the necessary inversion of the can, the impossibility of removing the cream from the milk, and a saving of several hours of time in the age of the milk when it is delivered to the consumer.

The objection was raised that the adoption of this can would preclude the possibility of obtaining the milk of one cow separately for the use of infants or invalids. The committee considered this point carefully, and came to the conclusion that this constituted no objection, inasmuch as the milk now furnished to the people of Boston is almost invariably brought to the city in large tin cans, and is put into service cans for family use at the milk sheds after its arrival in Boston. It is, therefore, practically impossible to secure the milk from one single cow for any purposes whatever. Your committee also came to the conclusion that one cow's milk presented no advantage to recommend it above the mixed milk from a dairy of several cows. Indeed, the advantage seemed to be on the side of the mixed milk, as this constitutes a protection to a certain extent against the perturbations of health and of the quality of milk supplied by any one animal.

Your committee also desires to point out the fact that the majority of people taking milk from milkmen are not acquainted with the varying character of this secretion at different times of year and under different conditions of health in the cow.

During the months when the cows are fed on hay the milk is generally much paler and somewhat thinner than when the cows are at pasture. By demanding at all seasons of the year a quality in milk which exists in it at only one season the people unconsciously encourage adulteration of milk, and thus defeat their own best interests.

With the hope of placing a supply of pure and wholesome milk within the reach of the inhabitants of the poorer parts of the city, and especially of sick children and invalids, your committee would suggest the establishment of "milk stations" in accessible and well-known localities, possibly in connection with the district dispensary establishments, or at certain drug stores, to which the poorer people, and particularly the sick, might be referred by physicians or others, and by means of a ticket or voucher obtain a supply of pure milk at a cost within their means, instead of buying, as is now too often the case, milk which has been diluted sometimes to the extent of sixty per cent.

It is in the poorer parts of the city that the greater proportion of adulterated milk is to be looked for, and therefore it forms the supply of those who most need a pure and wholesome article. There can be but little doubt that the rate of mortality among children might be materially affected if it were possible to furnish pure and fresh milk to the inhabitants. The "depots," as suggested above, seem to your committee to be a step in this direction.

Signed by the committee.

Henry O. Marcy, *Chairman.*
E. W. Cushing.
Lloyd F. Abbott.
Henry J. Barnes.
Albert N. Blodgett, *Secretary.*

The report of the committee was accepted, and, in accordance with the suggestion contained in the paper, the committee was continued, in order that its labors may be prosecuted still further, and the utmost benefit be derived from the thorough investigation of an important branch of domestic supply, upon which the lives and health of a large proportion of our population are more or less directly dependent.

The hour being already somewhat late, it was voted that the reading of the papers appointed for this evening, by Dr. P. C. Knapp, on "Observations on the Cutaneous and Tendon Reflexes," and Dr. F. Minot, on "Three Cases of Distended Gall-Bladder," be postponed to the next meeting. The readers having expressed their approval of this arrangement, and there being no further business before the Section, it was voted to adjourn, at 9.15 o'clock.

Medical and Surgical Journal.

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No. 4 Park Street, Boston, Mass.

ELECTRIC NEUROSIS.

The public exhibitions which have been given of late in some of our large cities of Lulu Hurst, in which it is claimed that the girl is able to exert upon inanimate objects a force, which while not muscular, is able to oppose and overcome muscular force exerted against it, have attracted popular and professional interest. And while it is true that those best qualified to judge who have witnessed these exhibitions have been generally of the opinion that the force exercised by Miss Hurst is capable of satisfactory explanation as being the product of strong muscles, trained with especial reference to overcoming by sudden and unexpected movements the steady and even attentive resistance of an opponent unpracticed in the best way to meet these sudden onsets, yet it is of interest to learn in this connection of well-observed cases of real electric force disengaged by the human body, — involving nothing especially occult or mysterious either. In *Le Progrès Médical* (July 5th) a short article by Féré speaks of some of these cases.

In the first case described in this paper, a woman of neuropathic constitution, twenty-nine years old, with perversions of appetite, ovarian excitability, etc., had noticed from girlhood the production of sparks in her hair when it was combed, but this common phenomenon during the two years before she came under Féré's observation had increased in intensity. Light objects clung to her fingers, and the hair not only gave forth sparks on being combed but obstinately stood up on end, each hair repelling its neighbor. When her linen approached the skin it caused a luminous crepitation, and her vestments adhered strongly to her body; sometimes this adhesion impeded her movements. These phenomena were noticed by Féré on several occasions. A few strokes of the hand on a napkin spread on a piece of wooden furniture caused the stuff to adhere strongly to the wood, and from it sparks could be drawn a centimetre in length. The most intense electric discharges followed lively moral emotions, for instance when she had just heard a piece of music which had deeply moved her. The crackling sounds were then perceived all over the body, especially in the legs, and a disagreeable pricking sensation was produced. Frosty weather favored the electric phenomena, but damp days hindered them; a change in humidity could even be predicted several days in advance, from modifications in the electric tension. A high electric tension corresponded with a state of excitation clearly appreciated by the patient herself; but in wet weather when the tension diminished there was general lassitude.

This patient, who was ill nourished and anæmic, had a marked œdematous infiltration of the legs, which possessed the peculiarity of nearly disappearing in dry weather, and in damp days increasing so as almost to prevent locomotion. The loss of electricity was met in the treatment of the case by directing silk clothing, and in moist weather she was given an electric bath of ten minutes daily, with relief to the sensation of fatigue.

Other cases have been reported. Mussey[1] speaks of a case of a woman of thirty, of nervous temperament, who, during an aurora borealis, was suddenly charged with electricity, whose presence showed itself by sparks when the woman, by chance, passed her finger over the face of her brother. This phenomenon lasted with variable intensity for two months and a half. In the most favorable conditions she sent from her finger to a copper ball four sparks a minute an inch and a half long.

Other cases are recorded in which electrical phenomena, especially noted in the hair, seemed to have a relation to mental irritation, to neuralgic attacks, and other manifestations of nervous derangement. So long ago as 1846 Arago described to the *Academie des Sciences* a young girl who appeared to him to have the power of attracting certain light bodies and repelling others without touching them, but these facts were not reproduced before the committee of the Institut. It is, perhaps, needless to say that every such claim should be subjected to the most searching investigation before its validity is allowed. The ability of hysterical women to fool the public mind is very great. We confess to a feeling of suspiciousness of people of any class who "attract light objects to their fingers." And we suspect that most of the influence exerted upon surrounding ponderable matter by women exhibiting themselves either for fame or for money emanates from a contraction of the *flexores digitorum*.

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[1] Extraordinary Case of Animal Electricity. American Journal of Medical Science, 1837, vol. xxi., p. 377.

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TREATMENT OF THE VEGETAL PARASITIC SKIN DISEASES.

Whatever conflicting views may be held respecting the rôle of microphytes in internal pathology (and certainly the germ theory of contagious diseases seems every day to be receiving fresh support), there are certain communicable skin affections which by common consent of dermatologists are attributable to the irritation caused by parasitic fungi. The proof that the diseases in question are occasioned by the presence of the fungi is such as to satisfy every scientific requirement. The presence or absence of the parasite always attends presence or absence of the pathological condition; the disease can be induced by topical communication of the spores of the microphyte, as Gruby found with reference to the *Tricophyton tonsurans* more than forty years ago; eradicate the fungus and you eradicate the cutaneous affection, as has been shown in innumerable instances; finally, the spread of the eruption varies concomitantly with the extension of the fungus.

The phyto-parasitic diseases are Trichophytosis, or ringworm, due to the lodgment and growth of the *Tricophyton tonsurans;* Tinea favosa, or favus, caused by the *Achorion Schonleinii;* Chromophytosis, or Pityriasis versicolor, dependent on the germination and development of the *Microsporon furfur.* Four varieties of Trichophytosis are described, which recognize the same cause but differ in appearance by reason of their locality, namely, Trichophytosis-capitis, barbæ, corporis, and genito-cruralis. The vegetal parasites are microscopic organisms, akin to bacteria and vibriones, presenting themselves under the aspect of cells, isolated or multiple, which latter are often united end to end, in the form of straight or flexuous tubes. They are constituted of three principal parts: mycelium, spores, and receptacle. The first represents the body of the organism, the second are the reproductive elements, the third is composed of filaments springing from the mycelium, and which bear the spores. But little is as yet really known as to the natural history of these cryptogamic formations; they are undoubtedly polymorphous. Hallier believes that the human phyto-parasites belong to a small number of species which are capable, under different conditions of culture, of undergoing profound modifications. Their typical condition when grown where there is free access of air is that of *moulds;* the state of *achorion, leptothrix, torula, tricophyte,* etc., results from privation of air or of light.[1]

As for the habitat of the cutaneous parasites, the microphite of chromophytosis luxuriates among the inner epidermic cells; its spores and mycelium do not invade the hair follicles and hairs, which are the favorite sites of the achorion and trichophyton tonsurans.

The treatment of these parasitic skin diseases is one of great simplicity; as they arise from local, not general, causes (except so far as debilitated conditions of the organism favor the invasion and ravages of the fungus), topical measures are generally sufficient for a cure. Unfortunately, however, it is not always easy to meet the indication of "bearding the monster in his den," by a suitable parasiticide. While the habitat of the microsporon that causes chromophytosis is sufficiently near the surface to be accessible to lotions or ointments containing sulphur, mercury, chlorine, etc., and the same may be said of the trichophyton that causes ringworm of the body, the affections of the hairy scalp and beard, and tinea cruris, the so-called eczema marginatum, are much less manageable. In tinea of the scalp and beard the mycelia and spores of the parasite penetrate deeply the hair follicles, and even invade the roots and fibres of the hair; the infiltration is always distant from the surface, and hence is not easily reached. Therefore in order to destroy the fungus *in situ* epilation is necessary. This, to be effectual, must be done thoroughly, a little at a time, every hair being carefully plucked out by the roots with the epilation forceps; then a solution of carbolic acid or of corrosive sublimate (one grain to the ounce) should be applied. The solution readily penetrates to the follicles through the track left by the hairs. Instead of the corrosive sublimate solution Vlemingk's solution of sulphur and quick lime may be used after epilation. The principal discouragements arise from imperfect removal of hairs, which, owing to their brittleness, easily break off during extraction, leaving the stumps remaining with the roots and follicles to continue the disease. In these cases epilation will have to be repeated as fast as the hairs grow out again. In cases where thorough epilation has proved impossible or inefficacious it was several years ago proposed by Dr. Alden Smith to produce an artificial kerion by croton-oil inunctions, thus instituting a severe inflammatory process by which the fungus is destroyed. This practice has been adopted with varying success by dermatologists in all parts of the world. Instead of croton oil, goa powder and ointment of chrysophanic acid have been used with the same intention. Dr. Robert J. Lee, in the *British Medical Journal*, July 21, 1877, was one of the first to protest against this mode of treatment as being unnecessarily severe. After a long experience with inveterate cases he found a combination of olive oil, sulphur, and carbolic acid to be the most satisfactory. One drachm each of precipitated sulphur and oxide of zinc, with sixteen grains of crystallized carbolic acid, is added to one fluid ounce of sweet oil. This must be rubbed in every five hours with a sponge or brush, the head being washed with castile soap and warm water every night and morning before the application of the carbolized oil. He regards this preparation as sufficiently penetrating to destroy spores which exist under the horny layers.

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[1] Fournie, Applications des Sciences à la Médecine, Paris, 1878, [illegible]

Dr. Morris Smith, in the *Lancet*,[1] strongly advocates the use of a solution of thymol in chloroform (thymol, ʒss, chloroform, ʒij, olive oil, ʒvj) as being the very best antiseptic and parasiticide of which he has had experience. By adding coloring matter (asphalt) to this solution he had had ocular demonstration that the dye had penetrated the follicles (the subject on which he experimented and from which portions of the skin were taken for examination being a dog). The oil in the above prescription is added to arrest the evaporation of the chloroform and to prevent it from acting as an irritant. By the use of this preparation, he says, "the disease is more quickly cured than by any other method I have ever tried." The oil should be well rubbed in after first washing the diseased scalp with soap and water. After the treatment is commenced neither soap nor water should be again used.

In the July number of the *Journal of Cutaneous and Venereal Diseases* the subject of the treatment of the vegetable parasitic diseases is ably discussed by Dr. Shoemaker, who insists first on attention to the constitutional condition. If debility exist tonics and good food are demanded. To lessen the ravages of the parasite and destroy it he would first interdict water, frequent use of which favors the development of the parasite. The diseased surface should be cleansed every day with sulphuric ether or with a mixture of equal parts of ether and alcohol with a few grains of thymol. Another good antiparasitic is equal parts of ether and alcohol with boracic acid. In trichophytosis capitis he first procures isolation of the patient. The spread of the contagion may be prevented or lessened by washing the parts in ether or an alcoholic solution of borax. This should be followed by oiling the hair and scalp with a solution of thymol (ten to twenty grains to an ounce of sweet oil). He orders the seat of the eruption to be sponged with a weak alcoholic solution of thymol, borax, naphthol, or corrosive sublimate. To the surface thus cleansed he rubs in a fifty per cent. solution of boro-glyceride till the whole scalp seems saturated with it. Borax is one of the most efficient antiparasitic agents, and is mildly astringent and soothing. Glycerine penetrates and carries the substance into the follicles to the parasite; it also withdraws water from the tissues, thus depriving the fungus of one of its main elements of development. The solution should be applied night and morning with a little sponge or mop, and should be well rubbed into the follicles with the tips of the fingers.

Oleate of copper is excellent where the above means fail. It has the power of deep penetration to the parts, especially the follicles. The ointment is made by blending one part of oleate of copper with nine parts of lard. A small piece of this ointment should be rubbed over the affected surface night and morning till all traces of the disease have disappeared. A ten per cent. ointment of oleate of mercury has also given good results.

Rubbing in croton oil to produce an artificial Kerion is only to be resorted to in very chronic cases where all other means fail.

The same treatment holds for *trichophytosis barbæ*. As for trichophytosis corporis, mild forms are, in the writer's experience, readily cured by the use of the thymol, naphthol, and corrosive sublimate solutions, while obstinate cases readily yield to the copper oleate.

In favus the oleate of mercury is generally sufficient to effect a cure if well rubbed into the scalp after the necessary epilation and removal of the epidermal scales and cups.

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FEMALE PHARMACISTS.

AMONG the new means of livelihood which women have claimed for themselves at the present day is that of pharmacy. At Louisville, Ky., a school has been established for giving instruction in this calling. It has just completed the first year of its existence and has graduated a few students. It had its origin in a demand for special educational facilities by certain women, already engaged in the business, and others desiring to enter thereon. While the School is designed especially for the instruction of women, yet male pupils are admitted on application, provided there is an excess of room after the wants of women are supplied.

The dispensing of drugs and the compounding of prescriptions is an occupation, so far as we can see, within the physical capability of women. While the calling of the pharmacist involves great responsibilities, yet they are such as can be mastered by a person of steady hand, clear eye, sober and accurate habits, who has in addition to these qualifications a proper training in practical chemistry and in pharmacal manipulation. These latter elements are now offered in the Louisville School, and we have no doubt that in so far as the former ones are present in the students who apply for instruction, the results will be satisfactory both to them and the public.

One thing, however, should be borne in mind by women entering upon this as well as upon other callings formerly limited to the other sex. In the evolution of modern society women have changed their relation to the world's work. No longer do they, as in the days of chivalry, from on high —

> "Rain influence and judge the prize
> Of wit or arms."

Far be it from us to say that woman's present position among the world's workers is one of less inherent dignity than that she formerly held. But the point to be emphasized is this, that having made the change, having come down into the soil and turmoil, she can no longer expect to receive the chivalrous devotion which was the accompaniment of the feudal institution. Work is a leveler, and distinctions of sex as well as of class disappear before it. Men are not likely to abandon the callings which they have been used to follow. In pharmacy as in everything else they are already in the field. Competition everywhere is sharp; in it the weaker always go to the wall and the stronger survive, whether they be men or women. The golden rule is the most favorable code that women can hope for, and if they always are treated in accordance with that they will be faring better than most men. Any special consideration by virtue of their sex they must not expect. Employers will not pay for a month's work if there have been only twenty-eight days of service, and if in the competition of any calling woman suffers because of her physical limitations, she must accept the fact of those limitations and not quarrel with their necessary consequences.

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[1] London Lancet, April, 1881. (American Reprint.)

PARALDEHYD.

THIS hypnotic, which is proposed as a substitute for chloral, has been somewhat used of late. Like chloral it is not useful for the relief of pain, but only to promote sleep in insomnia. It is a liquid with an agreeable, somewhat ethereal (?) odor and unpleasant taste; it is, however, less irritating than chloral. In some instances only it is said to have caused nausea. In diseases of the stomach or in advanced phthisis it is contra-indicated.

It does not exert much influence on the respiration or on the circulation, which would suggest that it may be more safely administered in cardiac affections than the more common hypnotic chloral. The dose of paraldehyd is rather larger than that of chloral, and it must be increased as the system becomes tolerant of it. At present it is much more expensive than chloral, but this disadvantage would doubtless be readily overcome should it prove to have any material advantages over its older rival. It may prove to be a useful substitute for, or alternate with, chloral in cases where that drug is not found to agree with the patient, or when it is desired to interrupt from time to time its long continued use.

MEDICAL NOTES.

— The *Dublin Journal of Medical Science*, speaking of the use of vaseline to prevent loss of alcohol from specimen jars, says that in a paper with this title, by Prof. Burt G. Wilder and Dr. Simon H. Gage, of Ithaca, N. Y., attention was called to the fact that the petroleum preparation termed vaseline was known to be practically unaffected by ordinary temperatures and by most substances. In the *Journal of the Chemical Society* for July, 1882, page 785, it was said to be sparingly soluble in cold, strong alcohol, and completely in hot, but to separate out on cooling. After trying various substances — wax, paraffine oil, and glycerine — with but partial success, the use of vaseline was suggested by the two authors independently and nearly at the same time. The experiments tried last spring indicated that during three months, at ordinary spring and summer temperatures, there was no appreciable loss of ninety-five per cent. alcohol from glass phials or jars, whether upright or inverted or on the side, provided the corks were smeared on the bottom as well as on the side. Ground glass stoppers were anointed and firmly inserted, and the rubber rings of fruit jars and the specimen jars, made by Whitall, Tatum & Co., were coated on both sides and the covers well screwed down. The authors had also used the vaseline for preventing the loss of other liquids, including chloroform and oil of turpentine, as a lubricator of drawers, and to prevent the sticking of the covers or stoppers of cement phials, and for the prevention of rust upon steel instruments.

— The *Pacific Medical and Surgical Journal* has been consolidated with the *Western Lancet*, and is to be edited by Dr. Whitwell, who is a graduate of Harvard, and should be well fitted for the position which he is to assume.

— M. Rigaud, in the *Journal de Therapeutique* speaks favorably of collodion as a remedy for the [illegible] pains often so harassing in phthisis. It is applied in successive layers till a sort of cuirass is formed, solid enough to withstand movements of the chest. If a split occurs it should be immediately repaired by a new application.

— In its application to carious teeth, remarks *Progrès Médical*, creosote is often inconvenient in consequence of its fluidity producing ill effects upon the mucous membrane of the mouth. This may be obviated by giving to it a gelatinous solidity by adding ten parts of collodion to fifteen of creosote. This, besides being more manageable than liquid creosote, also closes up the orifice in the tooth, preventing the accession of the air to the dental nerve.

— Dr. Betz (*Memorabilien*, January, and *Medical Times*, June 11th) strongly recommends nitrate of silver in spinal irritation as a means of relieving the attendant pain whatever may be its primary cause. A solution of one part of nitrate of silver to one hundred of alcohol is thoroughly applied twice a day not only to the painful parts, but also for some distance beyond these, and, when necessary, along the whole spinal column. The liquid penetrates quickly, and soon dries up, producing an agreeably cool sensation, and very seldom gives rise to any irritation of the skin. This painting of the parts will have to be continued for weeks or even months, especially if there is any disease of the spine itself present.

— A report was read before the Sub-Section o Public Health of the Academy of Medicine in Irela (*Medical Press*, July 9th), by Dr. Cameron, on an septic experiments in the vaults of St. Micha Church, Dublin, celebrated for their antiseptic pr erties. Bodies dry up in a desiccated mass rat than decompose when deposited in these vaults. The author placed an infusion of melon in Tyndall's tubes and having submitted both to a high and prolonge temperature so as to sterilize the liquid, he placed number of them in a vault of the church which seem to possess the greatest antiseptic properties. T tubes were deposited with great caution, and in su a way as to occasion the least possible disturbance the atmosphere. The extremities of the tubes we broken by means of hot forceps, and the vault kept locked up for six weeks. They were then moved from the vault. Seven of the tubes presen no change, but in the remaining five there was gr turbidity, owing to the development of mycelium, etc. In the case of the liquid kept in the unbroken tubes at the laboratory of the Royal College of Surgeons no turbidity was noticed in their contents. On nipping ends of the tubes of those kept in the laboratory and the sound ones brought from the mortuary vaults turbidity set in under forty-eight hours. The author did not venture to draw any positive conclusion from these experiments, but their results seem to show that the preservation of the liquid was due to the great freedom from dust which he noticed in the vault. Franklin, the reader remarked, had found that in the higher Alps organic infusions remained for a long time freely exposed to the air without undergoing decomposition, a fact attributed to the freedom of the air at great altitudes from dust, which, of course, included germs of various kinds.

— A correspondent of the *Medical News* says that an operation of enterotomy was recently performed upon a Pittsburgh lady of wealth. The surgeon removed four inches of the small intestine, uniting the divided ends by sutures. She recovered. He charged $1000 for the operation and twelve days' attendance. As payment was refused he brought suit. The jury gave a verdict for $330, which was thus arrived at: Each put down the amount he would allow. They then divided the aggregate sum by twelve, and thus reached the verdict. In some other similar cases that we have heard of it would seem as if each juryman must have divided the figures of his individual estimate by twelve before averaging.

PHILADELPHIA.

— Prof. Robert E. Rogers, who held the chair of chemistry in the Jefferson Medical College, has resigned.

Miscellany.

A STATEMENT IN REGARD TO THE CHARGE OF NEPOTISM AT THE MASSACHUSETTS GENERAL HOSPITAL.

It is sometimes said that the nominations of the visiting physicians and surgeons for house pupils at the Massachusetts General Hospital are influenced by nepotism, and that a connection of any member of the staff is sure to get the appointment he wants, to the exclusion of all other candidates. The list of appointments for house pupils both on the medical and surgical services of the hospital for eleven years from 1874 to 1884 inclusive, obtained from a report recently made by a committee of the Board of Trustees, — at whose request this publication is made, — tends to show how entirely without foundation such statements are.

It appears that out of forty-four appointments on the surgical side five were of gentlemen in some degree connected with surgeons who had at some time been upon the hospital staff.

Out of twenty-two appointments on the medical side three fall into a similar class.

On the surgical side the appointments were: A. T. Cabot, 1875; George G. Hayward, 1879; W. D. Hodges, 1880; John Homans 2d, 1881; Edward Reynolds. 1884.

On the medical side there were: J. J. Minot, 1877; V. T. Bowditch, 1878; Henry Jackson, 1883.

Of the surgical appointments three, Messrs. Hayward, Homans, and Reynolds were not connected with any member of the staff which nominated them. Mr. Hayward's grand uncle and the grandfathers of Messrs. Homans and Reynolds had been upon the staff, probably before the birth of those gentlemen.

On the medical side Messrs. Bowditch and Jackson had no connections upon the nominating staff. There remain, then, out of sixty-six appointments three gentlemen who were connected with members of the staff nominating them. But there is no reason to believe that these gentlemen were nominated for any other reason than merit.

The allegation that when a relative of any member of the staff applies for a position he is sure to get it is further disproved by the fact that several instances have occurred where such relatives have failed to obtain the places applied for, because the staff did not consider them the best fitted for the place.

The object of the Trustees is to appoint as house pupils the best available men. They attach the greatest importance to the nominations sent them by the staff; but they regard these nominations as only one (perhaps the most valuable) among several sources of information concerning the candidates.

It would be a mistake to suppose that those appointments are offered as prizes to the best scholars, or to those who pass the best examination by the staff. Those examinations are not intended to be thorough tests of knowledge. Candidates who have maintained high rank at the Medical School, and who are successful at the examinations of the staff, have secured important advantages. But besides good scholarship other qualifications are to be considered, such as dexterity, good character, good manners, tact, the power of getting on with other men. In short, all the qualities, moral, intellectual, and physical, which go to make the successful physician or surgeon, the Trustees try to obtain in the house pupils. If those qualities should be found in the highest degree in candidates who were also near relatives of members of the staff it would be the duty of the Trustees to appoint them.

THE ORGANIZATION OF AN INTERNATIONAL SCIENTIFIC ASSOCIATION.

Mr. Charles S. Minot writes in *Science* (July 25th), regarding the movement on foot to secure the establishment of an International Scientific Association, that there is now in circulation for signatures a request supported by some of the leading scientific men of America, and addressed to the two national associations which meet on our side of the ocean this year. This request is to the effect that the two bodies shall consider the advisability of forming an international association.

Mr. Minot enumerates some of the advantages in an association of this sort, and adds: —

"As regards the special occasion of founding the new organization, the advocates of doing so in America this summer maintain that another opportunity is not likely to soon re-occur so favorable as will be afforded by the meeting of the British Association in Canada, followed immediately by that of the American Association in Pennsylvania. If the scheme is carried out, it will, in fact, be the legitimate and anticipated culmination of a movement of which the coming to America of the British Association is one part. In 1881 the proposal was made that the American Association invite the British to America. This was actively discussed, and finally it was determined — largely, I believe, from motives of real modesty — to postpone the invitation, and issue instead a large number of special requests to individuals to attend from abroad the meeting of our Association at Montreal. This duty fell to the local committee of Montreal in 1882. The large number of foreign visitors who came revived the hope that the British Association could be induced to come over as a body. The matter was then independently taken up by the Canadians, and pushed generously and eagerly towards the great success which every one now anticipates for the gathering at Montreal. From the first it has been understood that if the original enterprise, which was in many ways so full of difficulty, should be brought to a successful issue, then the still greater enterprise should be broached, and the foundation of a permanent international association be attempted.

"It is hoped that the British Association will take some action in the matter. It has been suggested that a committee with powers might be appointed to confer with the American Association at Philadelphia. The organization of the latter body is such that no further official action on its part is possible until the time of meeting itself; but there can be no doubt as to the cordiality with which any proposal emanating from the British Association will be received. At present no definite plans have been formed, as it has been felt that public discussion was necessary before making any decision; but, as it is advisable to gather as many suggestions beforehand as possible, I shall be glad to correspond with any one interested in the proposal."

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A REMARKABLE EPIDEMIC OF SORE THROAT ORIGINATING IN A MILK SUPPLY.

In the *Practitioner* for June appears an account of an epidemic of sore throat occurring in February last in Dover, England, distinctly traceable to a milk supply from cows suffering from aphthous fever (foot and mouth disease). In four days 188 persons were attacked by a malady whose leading symptoms were uniform in the whole series of cases. These symptoms were local inflammation of the throat, accompanied by enlargement of the lymphatic glands of the neck, vesicular eruptions preceding and accompanying the inflammation. During the week ending February 9th 205 persons were attacked, all of whom obtained their milk supply from one particular dairy.

The houses in which these people resided were distributed in forty-two different streets in the town, widely separated from each other.

In nineteen of these streets (or nearly half of the whole number) every house supplied by this milkman was invaded by the epidemic, whilst, with one or two doubtful exceptions, no other cases could be heard of in the same streets, at any rate none of sufficient gravity to require the services of medical men. Thus the striking fact was exhibited of an exact correspondence between the milk supply and the houses invaded by the epidemic.

In the remaining twenty-three streets where this milk was delivered, out of eighty-six houses supplied fifty-one were invaded by the disease.

The number of persons attacked in each house stricken averaged 2.5 per house.

In thirty-one houses there was only one case in each; in twenty-one houses, two cases in each; in fifteen houses, three cases in each; in seven houses, four cases in each; in five houses, five cases in each; in three houses, six cases in each; in one house, seven cases; and in another nine.

The marked correspondence between the victims of this epidemic and the customers of a particular dairyman attracted attention, and investigation was made. He obtained his milk from a dairy of his own in Dover and three farms in the country. From the former source he furnished a special supply to a few customers in separate cans. In one case it was found that a gentleman and his wife who used milk brought thus in a sealed can escaped the disease, while the servants in the same house, using the mixed milk, were attacked.

At one of these establishments in the country it was found that aphthous fever had broken out amongst the stock on January 14th, and that milk from some of the affected cows was delivered to the Dover dairyman, and, after being mixed with other milk, distributed to his customers. Moreover, it was from this infected farm alone that the Dover dairyman obtained the supply of cream furnished to his customers.

At the beginning of the inquiry it was stoutly denied that any of the milch cows had suffered from disease, and a certificate from a veterinary surgeon and inspector to this effect was obtained and published. Recourse was had to the police, and the truth gradually oozed out, until the facts, as above stated, were established beyond dispute; then the farmer not only admitted the fact of the disease amongst the milch cows, but confessed to the sale of their cream and milk in Dover not only to the dairyman whose milk was specially implicated, but also to another milkman, on two separate occasions, amongst whose customers a second simultaneous outburst occurred. Thus a second experiment was performed with this tainted milk amongst another set of individuals with like results to the first, contributing (if such corroboration was necessary) additional evidence of the presence of poison in the milk supplied from the infected farm.

The diseased cows and stock, which were clearly shown to be suffering from the symptoms of the foot and mouth disease, were kept in low, close sheds surrounding a small yard, which was full of decaying manure, rotting turnips, and the infected excreta, so that the specific poison, after elimination from the animals, would, instead of living structures, have for its pabulum decomposing and putrefactive organic matter, swarming, doubtless, with the bacteria attending these changes.

In one case personally observed by the reporter of the epidemic this milk administered raw to a dog produced a blistered and inflamed condition of the buccal and labial mucous membrane, and inflammation of the skin and cellular tissue between the toes of one foot terminating in suppuration.

In the human subjects attacked the vesicular eruptions were followed either by a raw, red, œdematous appearance of the mucous membrane or white patches, and the ulcers which supervened assumed, in many instances, a chronic character, with thick, puckered edges, and were a long time in healing.

When the inflammation of the tonsils went on to suppuration recovery was much slower than after common quinsy, and the enlarged cervical glands remained tender, red, and swollen long after the throat symptoms had subsided, resembling in this respect the sequelæ of scarlet fever. Erysipelas and purulent formations were concomitants also of the epidemic. In some instances the feet of those who suffered were swollen and painful, simulating rheumatism, and in one case eczema occurred between the toes of the feet, the affection being accompanied with very fetid exhalation.

A fatal termination resulted in the cases of two children, who had very bad throats and mouths, with the extension of the disease, in one case, to the respiratory tract, their deaths being, in the opinion of the medical attendant, due to the poisonous effects of the milk.

Two persons who labored under chronic kidney disease were respectively attacked with sore throats, and died on the same day, other people in the same houses suffering also from the epidemic sore throat.

In one house three persons were attacked, on the 4th February, with sore throat; one of these was a servant girl, who was sent home, and seen by the hospital surgeon on the 9th at twelve A. M., and died at four P. M. Mr. Wood gives the following history of the case: —

"F. S., attacked five days previously with sore throat and pains in the limbs, complained on the 8th of great pain in the epigastric region and dyspnœa. There was a purple-red patch on the left cheek extending to the nose. At three P. M. on the 9th she passed into a state of coma, and died at four P. M."

Mr. Wood says this was an obscure case, but thinks it possible that it was one of blood-poisoning.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 19, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Measles.
New York	1,340,114	870	540	44.62	9.66	33.95	2.76	3.57
Philadelphia	927,995	470	247	25.41	11.34	15.41	3.36	.21
Brooklyn	644,526	371	237	60.03	8.07	47.23	2.42	1.08
Chicago	632,100	369	264	55 36	3.24	38.07	1.08	3.24
Boston	423,800	181	86	35.75	13.20	26.95	2.20	—
Baltimore	408,520	183	103	40.95	10.37	31.12	1.63	1.09
St. Louis	400,000	192	99	33.28	6.24	24.44	2.08	1 04
Cincinnati	272,400	108	45	32.16	16.50	24.76	3.67	—
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	104	52	28 80	14.40	22.08	1.92	—
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	40	29	57.50	6.00	37.50	1.25	—
New Haven	62,882	37	—	62.10	13.50	54.00	5.40	—
Nashville	54,400	28	—	46.41	10.17	17.85	10.71	—
Charleston	52,286	35	18	14.25	11.40	11.40	—	—
Lowell	71,447	23	13	47.81	8.68	43.47	—	—
Worcester	69,442	27	15	40.70	7.40	30.30	3 70	—
Fall River	62,674	33	22	51.51	6.06	42.42	3.03	3 03
Cambridge	60,995	19	6	10.52	10.52	—	5 26	—
Lawrence	45,516	27	19	51.80	11.10	40.70	—	—
Lynn	44,895	15	5	33.33	11.11	—	—	—
Springfield	38,090	15	12	73.26	6.66	59.94	—	—
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	16	9	50.00	—	37.50	—	—
New Bedford	30,144	13	5	—	15.38	—	—	—
Salem	29,503	10	5	20.00	30.00	—	—	—
Chelsea	24,347	6	3	16.66	16.66	—	16.66	—
Taunton	22,693	6	1	66.66	—	16.66	50.00	—
Gloucester	21,400	6	1	16.66	—	—	—	—
Haverhill	20,905	10	3	10.00	30.00	—	—	—
Newton	19,421	4	0	—	—	—	—	—
Brockton	18,323	6	4	50.00	—	13.33	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	5	1	—	—	—	—	—
Fitchburg	13,433	4	2	50.00	25.00	50.00	—	—
Eighty-nine Massachusetts towns	407,998	99	37	13.13	11.11	6.06	1.01	—

Deaths reported 3232 (no reports from New Orleans, Buffalo, Pittsburg, and Milwaukee): under five years of age, 1883; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases), 1301, diarrhœal diseases 984, consumption 317, lung diseases 160, diphtheria and croup 89, measles 53, typhoid fever 43, scarlet fever 39, whooping-cough 37, cerebro-spinal meningitis 20, malarial fever 20, puerperal fever 10, small-pox one. From *typhoid fever*, Philadelphia 12, New York and Chicago five each, Boston four, Baltimore and Nashville three each, Brooklyn, St. Louis, Cincinnati, and District of Columbia two each, Lowell, Lawrence, and Chicopee one each. From *scarlet* *fever*, New York 11, Philadelphia six, Baltimore and District of Columbia three each, Brooklyn, Chicago, Boston, St. Louis, and Cincinnati two each, Providence, New Haven, Lawrence, Springfield, Gloucester, and Natick one each. From *whooping-cough*, New York 10, Brooklyn eight, Philadelphia six, Boston five, Baltimore three, Nashville, Worcester, Cambridge, Lynn, and Brockton one each. From *cerebro-spinal meningitis*, New York three, Philadelphia, St. Louis, and Providence two each, Chicago, Baltimore, Charleston, Worcester, Fall River, Lawrence, and Springfield one each. From *malarial fevers*, New York eight, St. Louis four, Baltimore three, Brooklyn two, Philadelphia, Nashville, Lynn, and Chicopee one each. From *small-pox*, Philadelphia one.

In 106 cities and towns of Massachusetts, with an estimated population of 1,383,104 (estimated population of the State 1,955,104), the total death-rate for the week was 18.58 against 17.68 and 15.35 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending July 5th, the death-rate was 19.5. Deaths reported 3279: acute diseases of the respiratory organs (London) 231, diarrhœa 175, measles 126, whooping-cough 103, scarlet fever 61, fevers 46, diphtheria 25, small-pox (London 30, Liverpool three, Sheffield two, Hull one) 36. The death-rates ranged from 13.4 in Brighton to 26.1 in Huddersfield; Birmingham 15.7; Blackburn 17.9; Bradford 19.9; Leeds 19.9; Leicester 18 9; Liverpool 20.8; London 19.6; Nottingham 22.4; Sheffield 19.4. In Edinburgh 18.2; Glasgow 25.9; Dublin 21.

For the week ending July 5th, in the Swiss towns, there were 32 deaths from consumption, lung diseases 26, diarrhœal diseases 20, typhoid fever six, diphtheria and croup four, whooping-cough one, puerperal fever one. The death-rates were, at Geneva 16.3; Zurich 5.9; Basle 13.9; Berne 18.9.

The meteorological record for the week ending July 19th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
July, 1884.	Daily Mean	Daily Mean.	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11 23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 13	29.580	67	77	62	99	62	78	79	SW	NW	NW	10	8	9	O	O	C	—	—
Mon., 14	29.590	65	75	58	69	52	79	67	W	W	W	15	15	12	C	F	C	—	—
Tues., 15	29.717	65	74	57	73	43	62	59	NW	NW	NW	14	13	8	C	F	C	—	—
Wed., 16	29.693	63	73	54	69	66	84	73	W	NW	NW	9	9	8	O	F	C	—	—
Thurs., 17	29.772	66	75	57	74	67	75	72	W	SE	NW	10	6	5	C	F	F	—	—
Fri., 18	29.893	67	74	60	76	76	90	81	NW	S	SW	6	5	7	C	O	F	—	—
Sat., 19	29.809	70	81	62	83	71	76	77	SW	S	NW	6	20	14	F	O	O	—	—
Mean, the Week.	29.722	66.1	75.6	58.6				72.6										8 53	0.70

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM JULY 19, 1884, TO JULY 25, 1884.

Wright, J. P., major and surgeon. Assigned to duty as post surgeon. San Antonio, Texas. Paragraph 4, S. O. 87, headquarters Department of Texas, July 14, 1884.

Wright, J. P., major and surgeon. Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 3, S. O. 89, headquarters Department of Texas, July 17, 1884.

Hartsuff, Albert, major and surgeon. Leave of absence extended one month. S. O. 79, headquarters Div. of the Missouri, July 18, 1884.

Strong, Norton, first lieutenant and assistant surgeon. Granted leave of absence for two months, to take effect when relieved from duty in Department of the Platte. Paragraph 2, S. O. 68, headquarters Div. of the Missouri, June 27, 1884.

Appointments, Boston City Hospital. — Dr. William P. Bolles has been appointed visiting surgeon.

Dr Edward J Foster has been appointed visiting physician.

Books and Pamphlets Received. — The University of Minnesota, Minneapolis. 1883–84. College of Medicine. Special Announcement. May 1884.

Quarterly Report of Medical Officers United States Army, with their Stations and Duties. July 1, 1884. Washington, D. C.

Proceedings of the American Association for the Advancement of Science. Thirty-Second Meeting, held at Minneapolis, Minn. August, 1883.

Fifth Annual Report of the Wells Memorial Association and the Workingmen's Institute. Boston. May, 1884.

Department of the Interior. Bureau of Education. Report of the Director of the American School of Classical Studies at Athens for the Year 1882–83. Washington. 1884.

Twelfth Annual Report of the Board of Health of the City of Boston for the Financial Year 1883–84. Boston: City Printers. 1884.

Annual Announcement of the Medical Department of Niagara University, Buffalo, N. Y. Session of 1884–85.

Circulars of Information of the Bureau of Education. No. 2. 1884. The Teaching, Practice, and Literature of Shorthand. By Julius Ensign Rockwell, Stenographer. Washington 1884.

Poisoning by Canned Goods. (Reprint from the Medico-Legal Journal.) By John G. Johnson, M. D., of Brooklyn, N. Y.

Poisoning by Cannabis Indica (Two drachms of Herring's English Extract Indian Hemp). By A. B. Cook, A. M., M. D. (Reprint.)

Annual Announcement of Trinity Medical School, Toronto. Session 1884–85.

University of Georgetown. Thirty-Sixth Annual Announcement of the Medical Department. Washington, D. C. Session of 1884–85.

Sixth Annual Announcement of the Central College of Physicians and Surgeons. Indianapolis, Ind. Session of 1884–85.

Association of the Alumni of the Albany Medical College. Medical Department, Union University. Proceedings of the Eleventh Annual Meeting, held March 5, 1884.

Annual Catalogue of the Albany College of Pharmacy. Department of Pharmacy, Union University. For 1883–84. Albany, N. Y.

Catalogue of the Albany Medical College. Medical Department of Union University. Fifty-third Session. 1883–84. Albany, N. Y.

Directions for the Antiseptic Treatment of Wounds as employed at Professor Billroth's Clinic. Arranged for Students and Physicians. By Dr Victor R. von Hacker. Translated by Frederic W. Taylor, A. B., M. D. Boston: Cupples, Upham, & Co. 1884.

Original Articles.

A CASE OF ACUTE HYDRAMNIOS, WITH REMARKS ON THE PATHOLOGY OF THIS AFFECTION.[1]

BY CHARLES M. GREEN, M. D.

On March 9, 1883, Dr. J. R. Chadwick was consulted by an American woman, twenty-nine years of age, whose history was briefly as follows: She had married at the age of nineteen and, in her ten years of married life, had borne five children in rapid succession, namely, in 1875, 1876, 1878, 1879, and 1881. The children were all girls and weighed at birth from eight to ten and one fourth pounds: the labors were all natural. The mother suckled her last baby once a day for four months, when the catamenia appeared and recurred regularly until October 27, 1882, at which date her last period ended. A month later she began to have nausea and vomiting, which symptoms continued with considerable severity until early in March, 1883, since which time she had rarely vomited but once a day. About the middle of February she thought she felt fœtal movements and she had several fainting spells. Believing herself at this time about four months pregnant she thought she was larger than she ought to be: two weeks later, that is about March 1st, the abdomen began to grow rapidly larger in size, and thinking something must be wrong with her the woman sought advice. She was below the medium height and of slender form. The abdomen was symmetrically enlarged to the usual size at the end of the eighth calendar month of pregnancy: the parietes were tense, and the superficial veins well marked. There was tympanitic resonance in the loins and over the epigastrium, elsewhere the abdominal percussion note was flat. Palpation revealed a well-marked fluctuation wave in all directions, stopping short however of the tympanitic region, and showing, as Dr. Chadwick subsequently pointed out to the writer, that the intestines were not floating in the fluid; in other words, that it was not a case of ascites. On vaginal examination the introitus was seen to be of deep violet hue: the cervix was soft, long, and funnel-shaped. No fœtal parts were felt by vagina; but by abdominal palpation Dr. Chadwick felt fœtal parts so remote from each other as to warrant in his mind a surmise of twin pregnancy. No fœtal heart sounds were heard; but the uterine souffle was plainly audible

On March 12th the case was seen by Drs. W. L. Richardson and C. M. Green in consultation with Dr. Chadwick. The tumor had increased in size, and the patient was suffering from distention and pain in the right side and back. The twenty-four hours' urine amounted to only fifteen ounces, its color was high, specific gravity 1.030, and there was a trace of albumen. Ballottement revealed the presence of a small fœtus. The consultants agreed with Dr. Chadwick in the diagnosis of acute hydramnios, and the patient was placed by him under the care of the writer.

On March 13th the circumference of the abdomen, measured on a level with the umbilicus, was 36.5 inches. Inunction of the abdominal wall with oil and the application of a swathe were advised; and tinct. digitalis and tinct. ferri chloridi were ordered for both their tonic and diuretic effects. Sedatives were also employed. Six days later the abdominal circumference, measured as before, was 39.0 inches, an increase of 2.5 inches; and the distance from the ensiform cartilage to the pubes was 16.5 inches.

On March 21st the patient was found in great distress: she could assume no position in which she was comfortable, she had had no refreshing sleep for several days, narcotics seeming only to deaden her sensibilities. She could take no solid food, felt worn out, and expressed herself as feeling as if she would burst. The twenty-four hours' urine during the past eight days had varied from ten to twenty ounces, the daily average being less than a pint. I determined to induce labor, and at 10.30 P. M. of the same day, with the kind assistance of Drs. Chadwick and J. W. Farlow, I proceeded with the operation. At this time the abdominal girth had not increased above 39.0 inches; but the distance from the ensiform cartilage to the pubes had increased from 16.5 to 18.0 inches: the pulse was 96; the temperature, 98.3° F. The cervix was soft and patulous, the os internum admitting two fingers. A new, English gum-elastic catheter, with its stylet sharply bent about an inch from the tip, I passed between the uterus and membranes a distance of six or seven inches and then, turning the catheter quickly, ruptured the membranes high up. Withdrawing the stylet I thus drew off through the catheter six quarts of liquor amnii, and the uterus contracted down to about two inches above the umbilicus. There was no shock, but a feeling of great relief: the pulse fell to 88. There were active fœtal movements. I then withdrew the catheter, pinned a binder firmly around the body from the breasts to the fundus uteri, and waited. In three quarters of an hour uterine contractions set in and continued feebly during the night: the patient was comfortable, however, and slept between the pains: there was a constant, slight dribbling of the amniotic fluid. During the following day there was a cessation of pains, and the patient was comfortable, taking a proper amount of nourishment and sleep: there was, however, retention of urine which necessitated the use of the catheter.

At 2 o'clock A. M., March 23d, pains began again with somewhat increased vigor, and at 6.15 A. M. the os was dilated and expulsive pains began. A fœtus presenting the head, O. R. P., quickly descended into the pelvis, the occiput rotated forward, and the child was born still in fifty minutes from the beginning of the stage. A second fœtus now appeared at the brim presenting O. R. A.; but in the temporary cessation of pains the head disappeared, and a shoulder entered the pelvis. I did not rectify the malposition, but waited to see what would happen. Strong pains very soon began, and in thirty minutes from the birth of the first fœtus the second was born by spontaneous evolution, *corpore conduplicato.* The single placenta was expressed ten minutes after and was followed by a very moderate hæmorrhage, which however was promptly controlled by ergot. The patient suffered no discomfort during the puerperium except from the breasts, which were hard and tender during three days, but which subsided without treatment. On the second day the temperature reached 101.2° F., but declined the following day and was not above normal after the fourth day. Carbolized vaginal douches were used for the sake of cleanliness, and small doses of ergot and opium were employed to promote involution of the uterus. On the tenth day I measured the abdomen and found the circumference at the level of the umbilicus to be 27.5 inches, and the distance from ensiform cartilage to pubes 12 inches: there had been an increase, therefore, from the dropsical distention, of 11.5 inches in the girth and of 6 inches in the distance from the xiphoid cartilage to the pubes, in a woman much below the medium size.

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[1] Read before the Obstetrical Society of Boston, February 9, 1884.

The chief dangers to be apprehended in cases of this nature are

1. Shock, from the sudden discharge of a large amount of fluid and consequent disturbance of the circulation;

2. Hæmorrhage, from the inefficient post partum contraction of a uterus whose muscular tonicity has been much impaired by undue distention.

To avert the danger of shock the membranes were ruptured high up in the manner described; and as, fortunately, the fluid did not escape around the catheter but only through it, I was able with my finger on the end of the catheter to control the escape of the fluid while the pulse was carefully watched. To avoid the danger of hæmorrhage I purposely withdrew only a portion of the superfluous fluid and left the remainder to trickle away slowly: this gave time for the patient to have needed food and rest, and for the uterus to regain in a measure its muscular tone before it should be called upon to expel its contents. The uterus was also carefully supported post partum, and with the use of ergot firm contraction was maintained.

In accordance with the rule in twins from one ovum the fœtuses were of the same sex; namely, both were boys[1]: they weighed one pound and one pound two ounces respectively. One fœtus was club-footed, the other bore no outward mark of abnormality. The placenta was single and weighed one pound one ounce: macroscopically it was of normal appearance. There was one chorion, and there had doubtless been originally two amnions; but the septum had partly atrophied, and as usual in such cases the remaining septum was of falciform shape. A specimen of the amniotic fluid was submitted to Dr. Charles Harrington for chemical analysis; he reported, however, that it contained nothing abnormal. The placenta, membranes and fœtuses were sent to the pathological laboratory of the Harvard Medical School for examination: most unfortunately the fœtuses were lost, and with them the possible opportunity of throwing light on the pathology of this obscure subject. Dr. W. F. Whitney very kindly examined microscopically the placenta and membranes; but there were no pathological appearances.

The pathology of hydramnios has long engaged the attention of obstetricians and has been the subject of much critical and polemic writing. Prof. Charpentier, in a long and exhaustive treatise,[2] concludes that the pathological anatomy of this affection is far from presenting the least certainty; for, he says, it is not rare to find the lesions to which hydramnios has been thought to be due in cases where there had been no trace of hydramnios. But before attempting to seek the cause of the increased quantity of amniotic fluid constituting the condition known as hydramnios, let us consider for a moment the probable origin of the fluid existing under normal circumstances. This subject is still a matter of controversy; but the opinions of those commanding the greatest weight of authority warrant the present belief that the fluid is a fœtal product and that its sources are

1. The capillaries of the skin.

2. The capillary network described by Jungbluth and known as the vasa propria of the chorionic boundary-membrane of the placenta, lying just beneath the amnion, and anastomosing with the umbilical vessels.

3. The kidneys.

In accordance with this belief, the sources of an abnormal increase of the liquor amnii are to be sought in the fœtus and in the placental circulation: in an excessive kidney- and skin-secretion of the fœtus; and in abnormal transudation from the vasa propria of the chorionic boundary-membrane above mentioned, which may remain patent beyond the time when their gradual obliteration normally begins, namely, after the first half of pregnancy. In short the cause is to be sought in mechanical disturbances of the fœtal circulation, especially of the circulation of the umbilical vessels with which the vasa propria anastomose.[3]

A maternal influence in the production of the superfluous amniotic fluid is not, perhaps, to be completely excluded. Spiegelberg pointed out that from the numerous vessels of the decidua vera, after the union of this membrane with the decidua reflexa, a transudation might well take place into the amniotic cavity. Carl Braun does not accept this view, but believes that such transudations collect either between the uterus and the chorion and give rise to the so-called hydrorrhœa gravidarum, or, very rarely, between the amnion and the chorion simulating but not constituting a true hydramnios.[4] Braun therefore attributes the origin of the superfluous fluid solely to the mechanical disturbances of circulation above alluded to.[5]

Some recent observations of Otto Küstner of Jena form an interesting and suggestive contribution to the literature of this subject, even if they do not afford any positive knowledge. In 1876 Küstner published[6] an account of the autopsy in a case of twins associated with a high degree of amniotic dropsy, and deduced from the post mortem appearances the probable origin of the superfluous fluid. The smaller fœtus bore only the signs of death from suffocation: the larger, however, revealed

a. Hypertrophy of the heart, of both ventricles equally;

b. Cirrhosis of the liver, which was also smaller than normal;

c. Ascites to 150 ccm. (℥v circa).

The examination was incomplete from the fact that the placenta and membranes were not seen by Küstner: in fact it was not known whether or not the diseased fœtus had lain in the hydramniotic sac; but from such facts as he had Küstner explained the occurrence of hydramnios as follows: —

The cirrhosis of the liver, which was probably the primary factor, resulted in compression of the branches of the hepatic veins and of the portal vein. As the umbilical vein opens by one of its branches into the portal vein (the other branch constituting the ductus venosus), the portal vein may be said to have two separate places of ramification; namely, an intra-fœtal, in the abdomen of the fœtus, and an extra-fœtal, in the placenta. Compression of the portal vein in the liver would cause increased blood tension in both the intra-fœtal and extra-fœtal distribution of this vein. This increased tension could be compensated for by an increased heart action: if the tension increase slowly, the heart hypertrophies gradually and accommodates itself to the increased demand upon it. But when finally the hypertrophy no longer suffices to compensate for the increased venous tension, transudations naturally result. These transudations take place from the intra-fœtal distribution as ascites; from the extra-fœtal, as hydramnios.

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[1] It is an interesting fact, worthy of [illegible] notice, that in the great majority of cases of hydramnios the fœtuses are female. In the [illegible] thirty-three cases there were only eight boys, and of Spiegelberg's cases the fœtuses were female almost without exception.

[2] Archives de Tocologie, Juin–Octobre, [illegible]

[3] Spiegelberg, Lehrbuch der Geburtshülfe, 2te Aufl., S. 336.

[4] Carl Braun, Lehrbuch der gesam. Gynaek., S. 79.

[5] Op. cit., S. [illegible]

[6] Archiv für Gynäkologie, Band X, S. [illegible]

In 1880 Küstner had a case of acute hydramnios which presented striking analogies to the case above mentioned, and he has published[1] the case in full with a synopsis of several cases observed by others. In this second case premature labor with twins took place in the sixth month. The fœtuses were both female and lay in separate amniotic sacs: the first sac, in which lay the larger fœtus, contained by estimate thirty pounds of fluid; the second, which did not rupture until after the birth of the first fœtus, contained but little fluid. The second fœtus presented no abnormality: the first and larger fœtus, which lay in the dropsical amnion, showed the following post-mortem appearances: —

Great enlargement of the liver (apparent by abdominal palpation), its vessels uniformly enlarged, the perivascular spaces enlarged and partly filled with blood corpuscles, the connective tissue around the vessels not increased. Ascites to the amount of 30 to 40 ccm. Effusion in both pleural cavities. Hypertrophy of both ventricles of the heart. A number of circumscribed enlargements of both umbilical arteries, the umbilical vein presenting no changes. The single placenta weighed 410 grams (14.5 ounces), and its cotyledons were soft and œdematous. The cord belonging in the dropsical amnion had a central insertion and was œdematous; the other cord had a velamental insertion and was slender: both placenta and membranes were fattily degenerated to a great degree. The fluid from the dropsical membrane, in addition to the usual constituents, contained 0.07 per cent. of urea, which is more than double that which Fehling considers the normal amount.

Comparison of Küstner's two cases reveals certain striking similarities. In both cases the fœtuses were of like sex, but of different degrees of development; in both, the smaller fœtus was healthy, while the larger showed marked pathological changes affecting chiefly the liver and heart. In both cases the heart was hypertrophic, in the earlier case corresponding in size to that of a child four months old. In both cases there was ascites. The changes in the liver, however, were different: in the earlier case there was well-marked cirrhosis, and the liver was small, pale, and anæmic; in the later case the liver was enlarged and presented the appearances above stated. Küstner considered, however, that both livers were examples of the same process — interstitial hepatitis — the former case being in the last stage, and the latter case in the first. From the high per cent. of urea in the liquor amnii of the second case Küstner concludes that an abnormally large amount of urine was voided by the fœtus, owing to the increased action of the hypertrophied heart.

In addition to his own cases Küstner has collected four others of well-marked dropsy of one amnion in twins from one ovum; that is, where the placenta is single, with one chorion and two amnions. In all these cases the heart was hypertrophied and in one case dilated. In three of the cases the liver was small and cirrhotic; in two, in what Küstner considered the hypertrophic stage of interstitial hepatitis; in the remaining case the condition of the liver was not noted.

These cases, while too few in number to prove anything, yet serve to illustrate in what way disturbances of the fœtal circulation, whether originating in the heart or in the liver, may lead to a dropsy of the amnion. The one condition necessary, it seems to me, to a serous transudation is a venous stasis: whether the prime disturbance is in the heart, in the liver or elsewhere, it matters not, provided the blood tension becomes so great as to cause capillary transudations. It seems to me not irrational to suppose that excessive convolution of a long fœtal cord might so retard the blood stream with undue friction as to lead to circulatory disturbances. Again, an active congestion of the fœtal kidneys, with coincidently increased arterial tension produced by a hypertrophied heart, would lead to an increased urinary secretion which, evacuated into the amnion, would increase unduly the amount of the liquor amnii: such seems to have been a factor in Küstner's second case.

In cases of twins from one ovum the placental vascular distribution is such that a considerable number of cotyledons are common to the circulation of both fœtuses, and it is possible that one fœtus may thereby gradually appropriate an undue portion of his fellow's blood: this would explain why in one-ovum twins one is usually larger than the other. It may be, too, that consequent upon the increased proportion of blood circulatory disturbances may ensue in the larger fœtus, to compensate for which the heart may hypertrophy and thus lead the way to serous transudation. Certain it is that hydramnios occurs frequently in connection with twin pregnancy; but while in some cases of record the larger fœtus has been found to occupy the hydramniotic sac, the cases are too few to warrant the assertion that it is always so.

It will be seen, therefore, that the pathology of this affection is still involved in uncertainty; but recent observations have done much to illuminate the subject, and in due time doubtless the causes of hydramnios will be as clearly demonstrated as those of other pathological conditions at one time equally obscure.

A CASE OF MONOMANIA.[2]

BY W. A. GORTON, M. D.,
Assistant Physician Danvers Lunatic Hospital.

So much has been included under the term monomania, and it has been to such an extent made synonymous with other and varying terms, that it is little wonder that the propriety of its existence as a separate form of insanity should have been disputed. Still, among the great insane multitude coming before us for review or treatment, every now and then a case occurs which seems in certain fairly well-defined respects to be entitled to consideration as a lunatic in a far different sense from the victim of acute or chronic mania or melancholia. Among the Germans such a distinction has long existed, and the French, since the time of Esquirol and Pinel, have described cases to which they have applied the term monomania. By British writers, the propriety of the term has been questioned, but most of them have been forced to employ it in their descriptions of certain cases, either with or without some degree of modification. The present case may serve to illustrate the type of disease to which the term is most commonly applied.

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[1] Archiv für Gynäk., Bd. xxi., Heft 1.

[2] Read before the Boston Medico-Psychological Society, March 6, 1884.

C. V., aged forty-six, married, is the son of a musician and school-teacher, and was born in Germany. So far as can be learned the father was a man of respectable ability, largely self-educated, and all his life dependent upon his earnings for his support. In Germany he held the position of government school-teacher, but relinquished it to come to this country when the patient was seven years of age. He (the father) is said to have been somewhat eccentric. He died at the age of seventy-four, from some acute cerebral disorder. The mother was of average ability and without any known mental peculiarity. Patient has one brother and one sister, both of whom are a little peculiar, being of an emotional and excitable temperament, but neither betray any actual insanity. The brother is quite an accomplished musician, and beside playing in the orchestra of a leading theatre holds a position of trust in a prominent dry goods house of a large city. He is very fond of discussing his brother's case from a quasi-scientific stand-point. On one occasion he brought to me a sackful of popular works upon mental philosophy from which he proposed to read a description of the patient's case, and to point out the proper treatment to be pursued. Later he had an interview with the patient, and in attempting to read the same description to him so enraged him that a fight between them for a time seemed imminent. The sister is devoted to the patient, thinks he is not insane, and tries whenever she visits the asylum to convince the officers that he ought to be liberated. Beyond this persistence and a somewhat emotional manner her conduct exhibits nothing demanding special comment.

As a child the patient was somewhat delicate, but appears to have had no special disease, certainly nothing resembling any cerebral affection. He manifested a good degree of intelligence, learned readily, and early displayed a taste for music and drawing, in both of which he received careful training by his father, becoming a good performer upon the violoncello and a fairly good architectural draughtsman. He was temperate in his habits, and not addicted to sexual excesses of any kind so far as can be learned. His sister declares that as a young man he had a most gentle and affectionate disposition, but displayed great sensitiveness to opposition or criticism, and cherished a fanciful sense of honor which led him to explosions of temper whenever anything he considered unfair treatment of himself or others came to his knowledge, or whenever anything which he thought vulgar or indelicate was done in his presence. His education having been wholly undertaken by his father he lived almost wholly at home, where he had no trouble, until he was twenty years of age. From this time, or when he began to support himself, his mental peculiarities began to be more prominent, and he began to display an intolerance of discipline and restraint that brought him into constant collision with his employers. Failure to obtain as much pay for his work as he demanded led him to think his employers unjust, and finally to believe that all who tried to support themselves were prevented from succeeding as they ought by the tyranny and meanness of the people employing them.

For the past ten years his frequent quarrels with his employers, and his refusal often to work for men who offered any criticism of his performance, have prevented his being steadily occupied either as a musician or draughtsman, and he has tried various other occupations to eke out his earnings. He has been an unsuccessful canvassing agent for a book publisher, getting one subscriber who refused to pay for the book when delivered; tried canvassing for a newspaper without getting any subscribers at all; tried collecting bills for a physician on a commission of ten per cent., collecting twenty dollars the first day, and not a cent for the next three weeks. These quarrels and failures never induced him to yield any of his self-constituted rights in an effort to live without friction and discomfort, but rather strengthened his belief that the world was going wrong.

He seems to have manifested no definite delusion until 1877, when he was arrested upon a groundless charge of felonious assault and locked up for a night in the police station. The fact of his arrest and of the charge made against him was published in the daily papers and never retracted, although no case was made against him. From that time he has regarded the police as a vile body of men, encouraged and paid by the rich to browbeat the poor, and especially himself. On a later occasion he became involved in a quarrel with the proprietor of a theatre in the orchestra of which he was playing, which resulted in his forcible ejection from the building, during which process his instrument was broken. He at once wrote to the chief of police asking for the arrest of the manager for assault and battery, and urging that he be sued for breaking his instrument. The police paying no attention to his letter, he wrote them a postal card accusing them of venality and of hostility to him. At various other times the police have requested him to move when he has been standing upon the street, and in every instance he has regarded their action as a personal insult and an inexcusable outrage. In consequence of these acts of the police he wrote certain postal cards to various newspaper editors, expressing his opinion, as he termed it, and protesting against the system of injustice to which he believed himself subjected. He had also from time to time written letters upon the labor question, which he declares were temperate arguments upon the subject and intended only to draw attention to the deplorable condition of the working classes.

He appears to have kept himself within legal limits until 1882, when he began a wholesale writing of abusive and threatening letters to various people of prominence. Complaint having been made he was arrested in June, 1882, declared insane, and committed to the Taunton Lunatic Hospital. When arrested he was in his own house, and made a stubborn resistance, shooting at the officer who arrested him. He explained the shooting by saying that he did it in self-defense, believing the police to be about to kill him. He remained at Taunton until August, 1882, when upon his written promise to abstain from writing letters, and to conduct himself properly in other respects, he was released.

Upon assuming the care of himself and family he seems to have found the strain too great for his self control, and he very soon began again to send abusive postals, though he says he was careful to avoid any vulgarity of expression this time, as he thought he would thus escape arrest. Finally, he became so great a nuisance that he was arrested and committed, August 23, 1883, to the Danvers Lunatic Hospital upon the following medical certificate: —

"For many years he has been peculiar, and at times has threatened violence. He was committed to the Taunton Hospital June 22, 1882. He has been writing many abusive postals to respectable gentlemen, and was arrested by order of the Police Commissioners. Sent to the Boston Lunatic Hospital as an emergency case August 20th." "He is excitable and very suspicious. He believes that the world is all wrong, that there is no chance for the poor, that he is the victim of persecution, and has many enemies, that every one who differs from him is a liar and a villain. He can see no impropriety in the postals he has written, and considers all proceedings against him an outrage. His word and written promise have proved entirely unreliable. All these things have rendered him an annoyance to many whom he thinks have injured him. In our opinion he is liable to be violent at any time, and is a dangerous man, who probably never will recover or be safe to be at liberty."

The notes of the examination made upon admission are as follows: He is of medium height, of rather slender build, is somewhat pale, and appears to be imperfectly nourished. He has a well-developed, symmetrical head, and clear-cut and intelligent features. Hair light brown, partly gray; blue, rather prominent eyes; pupils equal in size, and readily responsive to light and darkness. Facial muscles active, and betray slight tremor while he is speaking. Tongue is protruded without difficulty, is straight, and shows a moderate degree of fibrillary tremor. There is no apparent abnormality of the thoracic organs, except that the heart sounds are somewhat ill-defined and the cardiac action irregular. Pulse is 80. Has inguinal hernia of the left side, which is supported by a truss. Hernia has existed for several years, developed slowly, and is not due to traumatism. Genital organs apparently normal.

There is considerable tremor of the limbs during voluntary movements, but no more than is often seen in persons of a sensitive organization undergoing examination for the first time. No local paralysis of motion or sensation can be found. The patellar reflex is markedly exaggerated.

He is quiet and gentlemanly in manner, but seems to be laboring under excitement, which he subdues only with great effort, as he fidgets uneasily when questioned, and is querulous and abrupt in certain of his replies. He is disposed to be noncommittal, but admits that he has been writing postals which have brought him into trouble. Says he sees no impropriety in them, as they were mostly written to people whom he did not know, even by sight, and whom he had no intention to injure.

Admits that those written last year were abusive and vulgar, but insists that he was careful this year to avoid any indecent expressions. Says he did not expect any personal benefit from writing, but thought he might as well express his opinion to people disposed to neglect or trample upon the rights of the poor. Thinks society is imperfectly organized, because people who have money keep it all to themselves, and do not give the laboring classes any chance to get ahead. Believes the rich ought to furnish proper employment at proper wages to the poor. Does not understand that all have the same right to get money, and insists that poverty and hardship come only from the cruelty of the rich. Asked if he expects to revolutionize the existing state of affairs, he says, "No, I only wanted to express my opinion." Said the police and rich people were all against him, and, intimating that the examiner was also one of his enemies, he declined to talk further. Speaks with a slight foreign accent, but with unimpaired articulation. Within a week after admission a paroxysm of excitement occurred. He had asked for his discharge, and had been told that as he had been duly committed to the hospital as an insane person it would be necessary for him to remain long enough under observation to satisfy the superintendent that he was not insane before he would feel justified in discharging him. At this he became furious, began to gesticulate wildly, assumed an intensely dramatic attitude and expression, and shouted, "You have no right to say I am insane; you know I am not insane; in the name of God I say I am not insane. In the name of God, I say my liberty has been unjustly taken from me; in the name of God, I say you are a liar if you pronounce me insane; in the name of God, I demand justice and liberty." In this way he talked, or shouted rather, for several minutes, pacing excitedly about his room, and presenting the insane manner in a degree not to be described in words. Half an hour later he was quiet, and rational, but justified his previous conduct by saying that no man had ever been as unjustly treated as himself, and that it was the only way in which he could adequately call attention to his wrongs. For several weeks he refused to go out of doors, but when two or three strong attendants came to take him out he went without resistance, protesting, however, that it was an outrage and an injustice to make him submit to the farce of going out for a walk while he was in reality a prisoner in a lunatic asylum. About a month after admission he made a bungling effort to escape by removing his window. Since he has been in the hospital he has had frequent outbreaks, almost exactly like the one described. They are always of short duration, and although at times his manner has been threatening in the extreme, he has not attempted any actual violence. He prefers to be alone as much as possible, passing much of his time in his own room reading papers furnished by his relatives. He has refused books that have been given him, regarding the offer as an insult, and declaring that he would not read them while deprived of his liberty. He refuses to do any work or to engage in any game or amusement, declaring that he has no taste for such things while held as a prisoner. He has been repeatedly requested to join the hospital orchestra, but he always becomes angry, and declares that is a "put-up job," as he calls it, to get music for nothing. Drawing materials have been offered him, but he always has refused to use them, saying, "I shall get nothing for my work, and I can never be interested or amused while deprived of my liberty." He regards the hospital officers as his enemies because they do not liberate him, and declares, "in the name of God," that no earthly consideration would induce him, were he in their position, to detain a sane man like himself for a single hour. He becomes very cautious in manner when questioned about himself, saying, "I prefer to say as little as possible about my past life, for my position is a peculiar one. I am shut up here as a lunatic by my enemies, and I must be careful about what I say, as you are one of those who are against me, and will make use of my statements to injure me." Upon general topics he converses with ease and considerable ability. His perception is good, his memory accurate and retentive, and his conclusions are generally just and fair. Except for his total inability to see the impropriety and absurdity of his past conduct his intellect seems to be very little impaired. He admits that he was foolish to write so many letters, but only because of the bad result. He is still an assiduous letter writer, but writes only to his wife and sister, begging them to come and release him. Frequently writes two or three letters in the same day, and all are worded almost exactly alike. They present a characteristic appearance, nearly every other word being heavily underscored, and the phrase "in the name of God" is often repeated.

He denies that he is in any sense inspired, and denies that he has ever experienced any hallucinations of sight or hearing. He reasons very clearly upon the subject of hallucinations and inspiration, and conclusively shows that his delusions spring from his actual experiences. Says, "I am not inspired. I have never had in a dream or in any way any inspiration or ever heard any voice urging me to do what I have done. I only felt that because of these acts of injustice done me by the police and others I had a perfect right to express my opinion in the way I did, and what I said was my own opinion, and was not an inspiration in any way whatever." He does not entertain expansive delusions as to his social or professional capabilities, but declares that he is a good musician and an average draughtsman, and that if given steady employment and justly treated and paid he would be perfectly satisfied, and would trouble no man. Since he came to the hospital he has had a fair appetite, has preserved a good degree of nutrition, and has slept very well. He has made no complaint of bodily indisposition, and has taken no medicine.

This case is interesting chiefly on account of its clearly defined character and its medico-legal possibilities. The intellectual deterioration is so slight and the patient's capacity to explain his delusions is so great, and so similar are many of these delusions to the views of Dennis Kearney, Herr Most, Henry George, and other socialist agitators, that he might very easily seem no more insane to a miscellaneous body of the laity, such as compose the ordinary jury, than would the men just mentioned. To be sure they have only spoken to masses of men about other masses of men, and they have not so far lost self-control as to precipitate quarrels with individuals in attempting personal applications of their own avowed principles, but their language, notably that of Kearney, has been as violent and outrageous as the worst fulminations of this patient at his most excited moments. The loss of self-control, one of the strongest evidences of insanity in this case, while all powerful in determining the opinion of the medical expert, is much too delicate a question for decision by a jury, and would very likely be overlooked in the present case were the patient allowed to testify in his own behalf.

The question of responsibility for grave crimes might in this case be a delicate one to settle. Certainly with the present legal definition or with Hammond's definition of criminal responsibility it would be difficult to say that this man does not come within the limits of responsibility understanding, as he does, the difference between right and wrong in the ordinary ethical sense.

Briefly summarized the history shows that this man probably inherited an unstable mental organization, that his early life was passed under very bad auspices, his education, conducted solely by his father, a man of peculiar and eccentric habits, doubtless serving to intensify rather than to restrain any morbid mental peculiarities shown in youth, and his seclusion from that society in which he was to live having, to a certain extent, unfitted him for living in it. The cultivation of his artistic instincts at the expense of a careful training in the practical affairs of life placed him in a position to compete at a disadvantage with others in the struggle for existence, and the dissipation of his energies in undertaking two professions further increased this disadvantage. His failure to succeed as well as he had hoped forced him into a morbid state of mind, out of which, under the exciting influence of an unfortunate chain of circumstances, vague ideas of ill treatment emerged as systematized delusions of persecution. As these delusions became sharply defined they so far dominated his mental processes as to destroy his self-control and lead him to the perpetration of acts of lawlessness which may be taken as forerunners of more serious manifestations, as the history of similar cases, almost without exception, has been one of progressive mental failure. Should hallucinations develop it seems highly probable that this patient, with his present mental attitude, might, under their influence, be goaded to the commission of the worst possible crimes.

The case closely resembles the description of Primäre Verrücktheit given in the *Psychiatrisches Centralblatt* for December, 1877,[1] but differs from it notably in the absence of hallucinations of the special senses, of anything approaching a belief in divine inspiration, and in its freedom from expansive delusions of a social or political character. It has been described as a case of simple monomania, as it seems to fall very clearly within the limits of Spitzka's definition of that disease, namely, "a chronic form of insanity based on an inherited or acquired neuro-degenerative taint, and manifesting itself in anomalies of the conceptional sphere, which, while they do not destructively involve the entire mental mechanism, dominate it."

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A CASE OF PLACENTA PRÆVIA, MOTHER AND CHILD LIVING.[2]

BY EDWARD JACOB FORSTER, M.D.

The case which I present to-night seems of sufficient interest to report in full, as the method employed to terminate the pregnancy, manual dilatation of the os, is one which is not as yet recognized by the text-books, although well known to members of this Society, as it was first suggested by one of our number, Dr. A. D. Sinclair, who prior to 1865 successfully delivered a case of placenta prævia in this way. Since then he has reported nearly a dozen cases treated in the same manner and with the same result. Dr. Richardson, in an article in vol. 5 of the Gynecological Transactions, has strongly advocated this method of inducing labor when from any cause it may be necessary during the later months of pregnancy. In this vicinity, at least, it is, I believe, the recognized practice superseding entirely the tedious methods formerly employed, as electricity, the hot and cold douche, the introduction of foreign bodies with the view of separating the membranes, or the dilators of Barnes.

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[1] Journal Mental Science, April, 1879.

[2] Read before the Obstetrical Society of Boston, February 9, 1884.

When the placenta is situated over the os there can be no absolute safety for the mother until delivery is accomplished: a hæmorrhage of such an extent as to rapidly prove fatal may take place at any moment, when once the placenta from any cause becomes separated from its insertion. In such cases as this this method seems particularly applicable; for while we have the means of rapidly terminating the pregnancy, the presence of the hand in the os can to a great extent control the flooding.

On the 8th of January, 1883, I was called to Mrs. R., forty-eight years old, born in Ireland, of previous good health. She had had ten living children without more than the usual amount of trouble, and one miscarriage eighteen or nineteen years ago. Her last child was born in November, 1875. While carrying her sixth child she menstruated throughout her pregnancy. This was probably a partial placenta prævia. At my visit late in the afternoon I found her in bed, and she gave me the following history of the present pregnancy: Motion was first noticed about 6th August, 1882. Her general health had been good with the exception of heart burn, for which she had taken magnesia and other remedies without relief. Her bowels were regular. About five P. M. Thursday, 28th December, without having any pains she passed a few clots: again on Sunday, the 31st, there was slight flowing without pain. From then one week passed and she soiled only two cloths until the midnight before my visit, when she was awakened from sleep and found blood in the bed: the flowing lasted about half an hour, then slight pain in twenty minutes and more blood, little if any after and no pain except such as was caused by the motion of the child. Examination per vaginam settled the diagnosis.

Believing, as I have before stated, that while pregnancy lasted there was no safety for the mother, and that the serious character of the case needed prompt interference and careful management, I asked and obtained the services of Dr. W. L. Richardson in consultation. It was decided at once to proceed to induce labor. After stating to the patient the chances of leaving the case to nature consent was readily obtained. The patient was etherized, manual dilatation performed, and at a quarter of two A. M. a living male child was delivered by version, the operation not lasting over three quarters of an hour. There was comparatively but slight loss of blood. Dr. Richardson, who performed the version, found some difficulty in bringing down the foot and unavoidably fractured the femur: as he is present, the explanation of this accident I leave to him.

Dr. Richardson had gone home, Dr. Blood who had taken charge of the anæsthesia was preparing to do the same, when the nurse hastily summoned us again to the bedside, where we found the patient in a state of collapse. The uterus was quickly seized and little hæmorrhage ensued: brandy, quinine, and laudanum were freely used and the circulation was soon restored. While these remedies were given by the mouth three subcutaneous injections in the thigh were given, a drachm each of brandy and fl. ext. of ergot, and a drachm of a solution of quinine containing five grains. The condition of collapse lasted long enough for the husband to become thoroughly alarmed and again summon Dr. Richardson. "January 16th the sore spot on the left leg made by injecting brandy discharged pus freely. January 17th. Quinine-sore discharged but little." I regret to say that the foregoing notes by the nurse are the only ones which I have of the appearance of the ulcers caused by the subcutaneous injections, having lost those which I had carefully prepared as well as some sketches. Suffice it to say, each left a deep circular ulcer about an inch in width and more than that in depth, which were several weeks in healing: this, as regards ergot, is contrary to the teaching of Mundé, who says in his Minor Surgical Gynecology he never knew any trouble to follow its use. At the point where the injection of quinine was given an eschar was formed which remained quiescent for about three weeks, when falling off disclosed one of the ulcers above mentioned. The quinine used was the sulphate. Edes recommends the use of hydrobromate or hydrochlorate for hypodermic injection as being less irritating: this we did not then know, or we might have had one less ulcer to annoy the patient.

An interesting point is the shock or collapse which followed the delivery and which perhaps might have been avoided if the rule, which I remember Dr. Gordon Buck of New York advocated some years ago in the *Boston Medical and Surgical Journal*, of giving an alcoholic stimulant always before etherization had been followed. It has been suggested to me that the condition of the patient which alarmed us was not shock, but was possibly due to the entrance of air into the circulation.

I am happy to record the ultimate recovery of the mother. Last week I heard the child was running about.

RECENT PROGRESS IN SURGERY.

BY A. T. CABOT, M. D.

LAPAROTOMY IN OBSTRUCTION OF THE INTESTINE.

Schramm[1] reports three cases of laparotomy performed by Miculicz, and has collected 190 cases in which this operation was done for occlusion of the intestine; 64.2 per cent. of these cases were fatal, but investigation shows that the rate of mortality during the last ten years has been 58 per cent., having been 73 per cent. previous to that time. This shows an improvement of 15 per cent. in consequence of better technique and antiseptic precautions.

From a study of these cases Schramm draws the following conclusions: —

As the tendency is to death from collapse it is manifestly wise to operate early, before the patient is weakened, and before peritonitis has developed. This is especially true in cases of invagination in children, when a favorable result can only be expected if the operation is done within the first forty-eight hours, as after this time the intestinal surfaces are almost hopelessly glued together. In adults, on the other hand, if the symptoms of strangulation are not severe it is well to wait until there is evidence of failure of strength.

The incision is best made in the median line, especially when the seat of the obstruction is not known.

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[1] Arch. f. klin. Chir., Band xxx., Heft 4.

If an intussusception is difficult to pull apart, the lower end of the inclosed portion may be kneaded and pressed back with one hand while with the other the entering portion of intestine is gently drawn out. In a difficult case the invaginated portion may be firmly compressed to reduce its size (as recommended by Hutchinson) before any traction is applied.

In extensive irreducible invaginations of the large intestine, and when gangrene has already commenced, it is advisable to open the bowel above the obstruction, to establish an artificial anus, and then to wait for the spontaneous separation of the gangrenous part.

In case of a short irreducible intussusception of the large intestine, or of an irreducible invagination of the small intestine, Schramm would advise resection of the affected portion with union of the ends by suture. This latter treatment would naturally be proper in case of carcinoma.

When the source of obstruction cannot be discovered by investigation of the localities where the trouble is most commonly situated, the search should be conducted in the following manner: A presenting coil of intestine should be seized by the assistant and held fast in the wound while the operator, starting from this point, draws the intestine out bit by bit, always proceeding along the gut in the same direction and returning the coil last examined as the next one is drawn out. If from the appearance of the intestine (redness and amount of distention) it becomes manifest that he is receding from the point of obstruction, he should return to the original coil which the assistant still holds and start from it in the opposite direction. If a band is reached, behind which the intestine is strangulated it should be tied close to its insertions and cut away completely.

In case a twist or knot is found which cannot be unloosed, several methods have been adopted to reëstablish the patency of the canal. Reali cut the intestine in two and reunited the ends after disentangling the knot. This patient recovered. Also a union may be effected between the intestine above and below the knot after the manner described by Wölfler in his operation of gastro-enterotomy. If the twist is already gangrenous it may be cut out and the ends either joined together or brought out through the wound.

In regard to the operation of enterotomy for obstruction, without an attempt to find the cause of the obstruction, a procedure strongly recommended by Maisonneuve, Schramm points out the danger of making the opening too high in the intestinal tract or of opening a coil below the obstruction, and urges further against it that the patient is left to the danger of gangrene of the strangulated intestine.

In the *American Journal of the Medical Sciences* for July, 1884, Dr. R. H. Fitz publishes a paper upon Persistent Omphalo-Mesenteric Remains, in which he calls attention to the important part that the diverticula and fibrous cords formed by a persistence of the omphalo-mesenteric duct or vessels may play in causing intestinal strangulation and obstruction. He draws the following conclusions of practical surgical importance: —

"(1.) Bands and cords as a cause of acute intestinal obstruction are second in importance to intussusception alone.

"(2.) Their seat, structure, and relation are such as frequently admit their origin from obliterated or patent omphalo-mesenteric vessels, either alone or in connection with Meckel's diverticulum, and oppose their origin from peritonitis.

"(3.) Recorded cases of intestinal strangulation from Meckel's diverticulum, in most instances at least, belong in the above series.

"(4.) In the region where these congenital causes are most frequently met with an occasional cause of intestinal strangulation, namely, the vermiform appendage, is also found.

"(5.) It would seem, therefore, that in the operation of abdominal section for the relief of acute intestinal obstruction not due to intussusception, and in the absence of local symptoms calling for the preferable exploration of other parts of the abdominal cavity, the lower right quadrant should be selected as the seat of the incision. The vicinity of the navel and the lower three feet of the ileum should then receive the earliest attention. If a band is discovered, it is most likely to be a persistent vitelline duct, that is, Meckel's diverticulum, or an omphalo-mesenteric vessel either patent or obliterated, or both these structures in continuity. The section of the band may thus necessitate opening the intestinal canal or a blood-vessel of large size. Each of these alternatives is to be guarded against, and the removal of the entire band is to be sought for, lest subsequent adherence prove a fresh source of strangulation."

In connection with Dr. Fitz's article the following case of intestinal obstruction recently reported by Mr. Clutton[1] to the Clinical Society of London is of interest: —

The patient, a boy of ten, had had several previous attacks of obstipation, none of which had been of more than two or three days duration, and which had always been relieved by enemata. The attack in question, accompanied by continued vomiting, had lasted four days when Mr. Clutton was called by the attendant, Dr. Purvis. Laparotomy was decided upon.

When the abdomen was opened a collapsed coil of intestine was quickly found, and in bringing it to the surface a tight, ring-like cord could be felt and seen to be the cause of the strangulation. This band was seized by two pairs of forceps and divided, the ends being tied with catgut. The strangulation was now entirely relieved. The cord was found to have started from the top of a diverticulum two inches in length, and to have been attached by its other end to the wall of the same loop of intestine from which the diverticulum started, at a distance of about six inches. A portion of bowel, about three inches in length, between these two points of attachment was the part strangulated, and was of an extremely dark color, with a deep sulcus at each side. The boy made an uninterrupted recovery.

Mr. Clutton regarded this cord as the remains of the vitelline duct, which had remained patent for two inches from the ileum, and had formed a cord for some distance beyond. The free end of this cord he supposed to have become adherent to the intestine at the point where it was found attached. A portion of the gut between had slipped beneath the cord and become strangulated.

NEPHROTOMY BEFORE NEPHRECTOMY.

R. Clement Lucas[2] calls attention to the importance of incising and draining a suppurating kidney before performing nephrectomy. He says: "It is not only that drainage relieves at once the patient, and in many instances is alone sufficient for cure, but that it renders a subsequent nephrectomy (when necessary) much less dangerous. Thus a double advantage is obtained. At first the patient is subjected to only a trivial operation, which is certain to give relief, and may effect a cure, and, secondly, should the course of events later indicate the advisability of removing the shrunken kidney, nephrectomy will have a greater chance of success. I showed in my paper[1] that six cases were all successful in which nephrectomy followed drainage, whereas nephrectomy for pyonephrosis with these cases abstracted has a mortality of fifty per cent. It is but reasonable to anticipate some such difference in the results, for, apart from the accidents which may happen in the attempt to remove a large and adherent bag of pus, it is evident that a much greater surface must be exposed to injury in removing a distended kidney than in excising a shrunken one. Further, drainage gives time and opportunity for the patient to gain strength before being submitted to the major operation."

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[1] British Medical Journal, May 17, 1884.

[2] British Medical Journal, March 22, 1884.

PULMONARY SURGERY.

Krönlein[2] recently removed a nodule of recurrent sarcoma from the surface of the lung. After resecting a portion of the sixth rib, which was involved in the growth, it was found that the portion of the tumor that projected into the chest (about the size of a small fist) was adherent to the lung. This was easily separated with but little hæmorrhage. At this point in the operation the lung collapsed, and the dyspnœa was extreme, so that the administration of chloroform was discontinued. A nodule about the size of a walnut was now discovered in the periphery of the lung. It was drawn up to the opening in the chest wall and excised with the scissors. There was scarcely any bleeding, and what little did occur was checked by bringing the edges of the wound together with catgut sutures. The lung expanded with great rapidity, the wound healed readily, and recovery was complete at the end of three weeks.

The insignificant hæmorrhage from the lung tissue is the most interesting feature of this case.

In a recent editorial in the *Lancet*[3] the tapping of cavities near the apices of the lungs is regarded as a procedure of doubtful utility, but the opening of cavities near the base is thought to be justified in view of the great relief afforded by providing an easy outlet for the putrescent contents, which if they discharged through the bronchi would expose the patient to great risks of secondary lobular inflammation.

Krönlein, in the article quoted above, deprecates all attempts to clear out tuberculous cavities or to remove portions of diseased (tuberculous) lungs, and says that he should regard it as an advance in pulmonary surgery to go back to the advice of Richter, given in 1812, to operate only in case of an abscess carefully diagnosticated and accurately defined.

HYDROCELE. INJECTION OF IODINE.

Dr. Otto Weiss[4] has made some investigations as to the final results of the radical operation for hydrocele as at present practiced in Billroth's clinic. The cases were treated by the injection of a freshly-prepared mixture of equal parts of tincture of iodine and distilled water. From thirty-five to seventy grammes of this mixture were introduced in each case into the sac from which the fluid had been drawn. After this had been retained for five minutes, during which time the scrotum was gently kneaded, it was allowed to escape. Antiseptic precautions were observed throughout.

The pain following this operation was generally severe for from one half an hour to an hour. The patients were kept in bed for four or five days with the scrotum well supported.

Fifty-one cases have been thus operated upon in this clinic since 1876. Of these thirty-eight answered Weiss's circular of inquiry as to the final result, of which thirty-two reported themselves as entirely well, while in six the disease had recurred.

INJURIES OF THE THORACIC DUCT.

Boegehold[5] reports a case in which, during the removal of a malignant tumor of the neck, the thoracic duct was opened. Simple compression controlled the escape of chyle, and the wound did well.

Boegehold succeeded in showing by injection the existence in two cases of collateral trunks by which communication with the veins is maintained when the main duct is compressed or ligated.

CIRCUMRENAL TUMORS.

Sir Spencer Wells[6] reports a case in which he removed two large fibro-lipomatous tumors which lay encapsulated, one around each kidney. They shelled out quite easily for the most part, but the lower third of the left kidney adhered to the tumor surrounding it, and was torn off with it. The bleeding was controlled without great difficulty, and notwithstanding the injury to the kidney the patient, a lady of forty-eight, made a good recovery, and did not suffer from any disturbance of the urinary functions. The tumors weighed sixteen and a half and fourteen and a half pounds.

RETROGRADE DIVULSION OF THE ŒSOPHAGUS.

Professor Loreta,[7] of Bologna, who recently devised the operation of digital divulsion of the pylorus,[8] has within the past year introduced an operation which he calls "retrograde divulsion" for the treatment of a cicatricial stricture near the cardiac end of the œsophagus. A tight stricture in this region is almost always beyond the reach of successful treatment by the mouth.

Loreta's case was as follows: The patient, a man of twenty-four, reduced to an extreme degree by starvation, was operated upon October 24, 1883. Gastrostomy was first performed, and through the opening thus made a divulsor was passed into the stricture, and this was dilated to what seemed a sufficient extent. The wound healed by first intention with no sign of peritonitis. The patient could swallow easily the first day, and was entirely well at the end of a fortnight, although the future use of a bougie will probably be required to keep the passage patent.

— Morean de Tours, the celebrated French alienist, whose aphorism, "Le Genie est une névrose," made the groundwork of his great work on La Psychologie Morbide, is dead at the age of eighty.

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[1] Address before British Medical Association, August, 1883.
[2] Berlin. klin. Wochenschrift, 3 März, 1884.
[3] March 8, 1884.
[4] Wien. med. Wochenschrift, 1884, Nos. 1, 2, 3, 4.
[5] Arch. f. klin. Chir., xxix., 3, p. 443.
[6] British Medical Journal, April 19, 1884.
[7] Gaz. Med. Ital. Lomb , November 24, 1883.
[8] See report in this Journal, June 28, 1883.

Reports of Societies.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. M. GREEN, M. D., SECRETARY.

February 9, 1884. The President, Dr. C. Ellery Stedman, in the chair.

Dr. W. L. Richardson exhibited a blank form which he had devised for recording cases of obstetrics in the out-patient department of the Boston Lying-In Hospital.

Dr. G. H. Bixby reported Five Cases of Abdominal Section. (Paper reserved.)

ACUTE HYDRAMNIOS.

Dr. C. M. Green reported a case of acute hydramnios, with remarks on the pathology of this affection.[1]

Dr. J. R. Chadwick said that the most characteristic feature of this case was the extreme rapidity with which the abdomen enlarged, resembling nothing in his experience except ascites. The patient, though believing herself to be nearly four months pregnant in the middle of February, had observed no increase in girth; between that time and March 9th she had grown to the size of the end of the eighth month of pregnancy. The resemblance to ascites was enhanced by the very distinct wave of fluctuation which was felt throughout the greater part of the abdomen, and by the impossibility of defining by palpation the upper end of the uterus. Ascites was, however, excluded by his finding that the wave of fluctuation was not transmitted to and from the epigastric region, where the resonance was tympanitic, to the other parts of the abdomen, where it was flat. This point in the differential diagnosis between ascites and all encysted abdominal fluids (uterine, ovarian, vesical, etc.), is mentioned by Spencer Wells[2] in the following terms: "When fluid is free in the peritoneal cavity the wave of fluctuation may be felt not only where the sound is dull on percussion, but also beyond the line of dullness, even where resonance may be tympanitic. The intestines float in the fluid, and the fluid may be thrown in waves among them. But when fluid is contained within a cyst, fluctuation cannot be detected beyond the boundaries of the cyst. Hence the outline of the cyst, traceable by dullness on percussion, and the line where fluctuation can be perceived, must be the same."

Dr. Chadwick emphasized this diagnostic sign because it seemed to him to have been generally overlooked by even the most thorough and eminent writers, such as Thomas, Hart and Barbour, Goodell, Tait, and others. He had found it to be more reliable than any other sign.

An ovarian cyst complicating pregnancy was excluded by the sudden rapidity of growth, by the absence of a furrow in the abdomen indicating the line of demarcation of the cyst and the pregnant uterus, by the ubiquitous wave of fluctuation, and by the central position of the cervix uteri in the pelvis.

As to the source of the amniotic fluid, he could add nothing to its solution except to point out, in favor of its being contributed in part, at least, by the fœtal kidneys, that in those cases in which certain drugs administered to the mother have been detected in the amniotic fluid, they have likewise invariably been found in the first urine passed by the child.

Dr. Richardson believed there would be less danger of entering the placental sinuses if the catheter, previously warmed, were passed without the stylet, and the latter subsequently introduced.

Dr. Chadwick said if the tip of the catheter, with the bent stylet contained, was kept away from the membranes, there would be no danger in his opinion, unless air was actually pumped in.

Dr. Draper said that if the catheter entered a utero-placental sinus the negative pressure of the uterus would serve to draw in air.

Dr. Chadwick said that to illustrate more fully this unusual complication of pregnancy he would give briefly the notes of a case supplied him by Dr. Helen Morton, with whom he had seen the patient in consultation: —

Mrs. W., aged twenty-eight years, eight years married, had always been hysterical, and at times depressed mentally, but was otherwise in perfect health, as was her husband.

January 14, 1877, was born the first child. July 14, 1878, was born the second child at six and a half months of pregnancy; there was an excess of amniotic fluid; the child was weak, and had only superficial respiration; the umbilical cord continued to pulsate, and kept bleeding, although repeatedly ligated, until the death of the child, twelve hours after birth.

November 7, 1879, was born the third child, at the seventh month of pregnancy, with an excess of amniotic fluid; the cord pulsated and bled as before until death after four hours.

February 14, 1881, was born the fourth child, at the eighth month of pregnancy, there being marked hydramnios. The child was puny, jaundiced, had feeble respiration and pulsating cord for some time, but survived, and was nursed nine months.

In February, 1883, was born the fifth child, at the eighth month; the liquor amnii was so markedly increased that at the fourth month of pregnancy the uterus was as large as it usually is at six and a half months; the fœtal heart sounds were strong during the pregnancy. The cord beat for half an hour, when it was tied; the child died four hours later.

The patient conceived again on March 14, 1883, and Dr. Chadwick was called in consultation on June 9th, in the expectation that some means might be devised to prevent the recurrence of the hydramnios and premature delivery. He was unable to offer any suggestion, but subsequently advised the persistent use of chlorate of potash, which was done for a time, but he could not flatter himself that it had much if any effect. Early in the autumn she was seen by Dr. Fordyce Barker, who advised the use of viburnum prunifolium. There was no hydramnios in this pregnancy. At the seventh month nature made an effort for many days to expel the contents of the womb; but the uterine contractions were successfully arrested by the repeated administration by Dr. Morton of morphine. This, the sixth, child was born at full term, December 14, 1883. The child was small; the cord did not pulsate after ligation; the amount of amniotic fluid was normal. The patient was kept in bed from the middle of the pregnancy until delivery.

The above history shows a remarkable recurrence of hydramnios in successive pregnancies, even under the most favorable conditions of life and health.

Dr. Bixby alluded to the case of an anemic woman whose abdomen was as large as at full term, but who did not think herself pregnant; he aspirated, and drew off four ounces of amniotic fluid. Miscarriage ensued ten hours later.

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[1] See page 121 of this number of the Journal.

[2] Diseases of the Ovaries, page 130.

The general consensus of the Society seemed to be that aspiration of the amniotic sac through the os, as suggested by Playfair, was sure to excite uterine contractions and terminate the pregnancy; and that the only available treatment was to induce labor when the distention became extreme. Anæmia should, of course, be appropriately treated when present, and various palliative measures could be resorted to.

DR. E. J. FORSTER reported

A CASE OF PLACENTA PRÆVIA, MOTHER AND CHILD LIVING.[1]

DR. CHADWICK had always used subcutaneous injections of ether in cases of collapse, and had found them equally efficient even if the patient were etherized. Dr. Sinclair and Dr. Richardson had also used ether for this purpose.

DR. RICHARDSON said he was frequently astonished at the way physicians temporize and delay when brought face to face with a case of placenta prævia: they will often resort to the vaginal tampon or colpeurynter when the patient has been bleeding for hours, and is bleached and fainting.

DR. SINCLAIR said that delay is criminal in such cases; that prompt dilatation and delivery would often save the child as well as the mother.

DR. J. R. CHADWICK exhibited

A SPECIMEN OF DERMOID CYST OF THE OVARY.

The patient had had an obscure mental and nervous affection following childbirth which had kept her in bed for three years, during which there had been frequent retention of urine, necessitating the passage of the catheter. On many such occasions a tumor had been felt, at times resting upon the bladder, at others in one or the other lumbar region; it was repeatedly pushed up almost to the ribs, where it was for the moment suspected to be a floating kidney; for long periods it could not be found at all. He was utterly at a loss to account for it, so that he attended the autopsy at the McLean Asylum, where she died of the brain lesion a month ago, with great curiosity. This dermoid cyst of the left ovary, as large as the fist, was found with a pedicle nearly four inches long, which allowed the tumor to be put in almost any part of the abdomino-pelvic cavity. It contained this wad of hair imbedded in a mass of solidified sebaceous matter, and four small incisor teeth attached to the same alveolar process which is still connected with the wall of the cyst.

BOSTON MEDICO-PSYCHOLOGICAL SOCIETY

WALTER CHANNING, M. D., SECRETARY.

THE Society held its twenty-second regular meeting March 4, 1884, at the residence of Dr. Rowe, City Hospital.

After the consideration of such business as came before the meeting **DR. W. A. GORTON** proceeded to read the paper[2] of the evening, entitled

A CASE OF MONOMANIA.

DR. JELLY said: "I have known something of the patient concerning whom Dr. Gorton's paper is written, for about two years. He had then been sending abusive, obscene, and threatening postals to various people, and was arrested by order of the chief of police. When arrested he fired a pistol at a policeman, the ball lodging in his sleeve and doing no harm. I examined him at some length for two days. His dominant ideas were the wrong way in which society is organized, the oppression of the poor by the rich, and his own personal troubles. A few months later he was arrested again, having again sent threatening postal cards. Then he was noisy and explosive in his behavior, and his language was homicidal and dangerous. He was committed to Taunton. There, after many weeks, he became rather more quiet, and induced his brother to remove him, he giving in writing certain promises which he did not keep. He, after a few weeks, wrote again many very abusive postals, threatened policemen with personal violence, and was finally arrested by order of the police commissioners. When examined he had the same delusions, and was excited, abusive, sullen, and suspicious. He was committed to Danvers. He is really a fine musician, and his brother musicians have borne everything in the way of abuse from him. I think his case a good illustration of monomania. I believe him incurable and a dangerous man, who never should be discharged from the hospital."

DR. FISHER said he first knew the patient whose case Dr. Gorton had reported, about six years ago, and his condition was precisely the same as described. It was the most limited case of monomania he had ever known. He hoped fuller information could be obtained concerning his mental condition at and before puberty. He had been unable to determine whether it was a case of *primäre Verrücktheit* or of *originäre Verrücktheit.* In some of its aspects the case resembled that of Guiteau. The peculiar views and conduct of his brother also found their parallel in the Guiteau case. In their recent books on insanity Dr. Spitzka cited Guiteau as an instance of *primäre Verrücktheit,* while Dr. Hammond classed him as a case of *folie raisonante.* The proper distinction is not always made between these forms, and was not clearly brought out by the reader. In the former the intellectual disorder is primary, and consists in a definite delusion or group of delusions concerning a certain subject. In the latter the affective disorder is primary, and the mania is shown in change of character and conduct, the patient reasoning well on all subjects, and having no delusions. Dr. Spitzka must have regarded Guiteau's claim to inspiration as a genuine delusion, while Dr. Hammond considered it the fraudulent defense of a reasoning maniac.

Dr. Fisher narrated several cases of monomania, and among them referred to the well-known case of G. W. F. Mellen, described by Dr. Rowe. Dr. Mellen believed himself the real president, and the *deus ex machina* of the northern army, which he directed in all its important movements by means of letters to President Lincoln and General Grant. Another case described was that of a merchant who went mad on the subject of Thompsonianism, and wrote crazy pamphlets in its defense, diverting his property from his heirs to found a hospital, converting his own house into an impracticable kind of hospital, for which he never found any patients, and after forty years of this folly ending his days by the exhausting effects of his own prescriptions. He also mentioned a lady who has for years believed that "Boss Kelly" and Mr. Oliver Ditson were in a conspiracy to defraud her of immense sums due for copyright of some insignificant songs published by the latter. The conspiracy contemplated personifying her indecently on the stage, mobbing, and finally murdering her. Other cases were related illustrating the depressive form of monomania, wherein the depression grows out of the delusion, and not *vice versa*, as in melancholia.

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[1] See page 126 of this number of the JOURNAL.

[2] See page 123 of this number of the JOURNAL.

CHICAGO MEDICAL SOCIETY.

Dr. D. A. K. Steele, President.

Regular meeting of July 14, 1884. The Society held a largely attended meeting, and the following scientific business was transacted: —

Dr. F. A. Martin described

A SUCCESSFUL CASE OF ABDOMINAL SECTION FOR PYOSALPYNX TREATED BY VOLKMANN'S METHOD.

Mrs. T., American, married, aged twenty-seven, weight two hundred pounds, childless, yet desirous of becoming a mother. Four years ago aborted with a three-months fœtus. Consulted the writer one year ago because of suspected pregnancy. She had many of the symptoms of pregnancy, such as morning sickness, enlargement and pain about the mammary glands, enlargement of abdomen, etc.; although she flowed regularly every month for the four months that she considered herself pregnant, yet this secretion was scanty. An ordinary digital examination was made, but no diagnosis was arrived at. Advised the patient to call again, which she did in two months. Examination a second time resulted unsatisfactorily in ascertaining the true state of her condition. Dr. W. H. Byford, who in consultation also made a careful physical examination, was inclined to pronounce her case one of pregnancy, as the patient expressed herself that she felt very decided fœtal movements, together with the other characteristic symptoms that were present, although her menstrual flow appeared scantily each month. Five months subsequently the writer was again consulted. In company with Dr. R. W. Bishop, whilst the patient was anæsthetized, a very thorough examination by bimanual manipulation per vaginam and rectum was made. The small, undeveloped uterus was found crowded close behind the symphysis pubis, and inseparable from a large, firm-walled tumor about the size of a five-months gravid uterus, occupying Douglas's cul-de-sac, and extending upward nearly to the umbilicus, and occupying a position a little to the left of the median line. Owing to the corpulency of the patient and thickness of her abdominal walls, it seemed impossible to make an accurate diagnosis. The uterus measured two and one half inches in length. The patient was again taken to Dr. Byford, and after a careful examination at this visit he pronounced the malady a fibroid tumor of the uterus. However, with commendable conservativeness, he advised that an operation be delayed, although the patient was suffering greatly from pressure of the tumor on the bladder and rectum, from intense backache, and other reflex manifestations. In two months' time her suffering had greatly increased, and she implored that something radical be done to afford her relief.

Operation, May 15th, assisted by Drs. R. W. Bishop, L. L. McArthur, E. L. Hollister, L. T. Potter, S. Black, T. H. Swayne, and E. J. Doering. All necessary antiseptic precautions were observed. Abdominal section was made. Incision eight inches in length, extending from quite near the umbilicus to symphysis pubis. Omentum firmly adherent to the tumor, adhesions covering a space three or four inches in diameter. These were ligated and carefully separated. Not until the omentum was separated was the true nature of the tumor revealed, which proved to be a large dilatation of the left Fallopian tube with thick, firm walls. Tumor so generally adherent to the surrounding tissue that it resembled a fibroid or other solid tumor. Fluctuation was very indistinct, and only by introducing the needle of an aspirator was all doubt of it removed. Upon deeper examination the tumor was found to develop from the left horn of the uterus. On the opposite side of its attachment were the remains of the fimbriæ of the tube and ovary of the left side, the walls of which were muscular in character and very smooth. The operator intended to remove the tumor in its entirety, clamp the small pedicle, and attach it to the inferior angle of the wound, but this was found to be impracticable because the tumor was so universally adherent to the surrounding tissue; the intestines were firmly adherent upon almost the entire surface above. The rectum was so involved as to appear almost as if it were part of the tumor. Hence Volkmann's method of treating abscesses and similar tumors was resorted to, namely, stitching the walls of the tumor or abscess to the peritoneal edges of the abdominal wound, and treating it after union has taken place as an external abscess. The opening in the abdomen was closed with the exception of the lower angle, where about three inches were left patulous. The tumor was stitched to the peritoneal edges of the open wound so that about two inches in diameter of its upper surface remained exposed. The wound, of course, was dressed antiseptically. Examination on the fourth day after the operation revealed the tumor firmly adherent to the abdominal wound. A free incision was now made into the tumor, and a double half-inch drainage tube inserted sufficient to reach the bottom of the abscess. More than a quart of healthy pus was evacuated. The cavity was then thoroughly cleansed with a two per cent. solution of carbolic acid, and again, immediately after, with a saturated solution of thymol to prevent any tendency to carbolic-acid poisoning. Then at night and morning the cavity was cleansed with a solution of corrosive sublimate, one part to three thousand, and the external wound dressed with corrosive-sublimate gauze, one part to two thousand. During the succeeding ten days the patient's condition was favorable, when the temperature suddenly rose to 102° F. Eleventh day it reached 103½° F. Respiration irregular and frequent. Pulse 160. Dr. C. Fenger saw the case at this stage. He decided that the lining of the abscess was absorbing purulent matter, which produced the general constitutional disturbance. The opening of the abscess was enlarged by blunt pressure, and the inner surface scraped with a dull curette and cauterized with a twenty per cent. solution of chloride of zinc. Further search revealed an abscess in the thick abdominal walls, which was opened and drained. After this procedure the temperature became normal. She continued to improve until the abscess entirely discharged itself, wound closed, and perfect recovery ensued.

Dr. J. H. Etheridge inquired of the author what his diagnosis was before as he stated "it was confirmed while operating." He thought the case had been managed in a most consummately skillful manner, and was much pleased to hear the report. The speaker believes that great advancement has been made in treating these cases to ward off suffering and save life, and that the disease is extremely common, only we cannot diagnosticate it. A physician of Denver introduces the whole hand into the vagina of a patient whilst she is under the influence of an anæsthetic, and by conjoined manipulation he is rendered more able to arrive at a conclusion in the differentiation of this from other disease of the pelvic cavity. He would also inquire what was the result of a rectal examination. This gentleman then presented the history of a case of pyosalpynx, and exhibited the *pathological specimen* that he removed from a case that had recently been under his care. There is nothing particular that needs mentioning about the operation. The case is the ulterior result of perimetritis, which extended and brought about salpingitis. This author stated he had no doubt but what an old gonorrhœa, where it is latent and the discharge scarcely, if at all, perceptible, was often one of the causes of it. A long-continued, chronic orchitis also may produce it. Yet upon inquiring of Dr. A. H. Burr if such difficulty was traced to the husband of the patient in the case he now presented, he was answered negatively. The pathological conditions, as he stated them verbally, are as follows: The right ovary was free from adhesions, and was in a comparatively healthy condition. The right Fallopian tube was inflamed and enlarged. Its fimbriated extremity was so changed and enlarged by previous inflammation that its fimbriæ were obliterated and the canal stenosed absolutely. The fimbriated extremity was free. The left ovary was imbedded in an accumulation of inflammatory exudate, which involved the broad ligament and tube in an indistinguishable and non-separable mass. The left Fallopian tube was inflamed and enlarged throughout its whole length. Its fimbriæ were enmassed and indistinguishable. Its canal was patulous, the distal mouth opening into the abdominal cavity. The outer third of the tube was inseparably agglutinated to the upper surface of the ovary. It was impossible for the free end of the tube to be brought in contact with the ovary because of the obliteration of its fimbriæ, its universal enlargement, and of the complete encapsulation of the ovary. A serous cyst, the size of a pullet's egg, was developed in the inflammatory adhesions of the broad ligament and tube. It was simply a serous accumulation from the perimetritic inflammation. A minute parovarian cyst had commenced, developing beneath and outside of the broad ligament cyst. The condition of the tubes showed that the patient was irremediably and hopelessly sterile. The inflammation and patulous canal (opening into the free abdominal cavity) of the left Fallopian tube constituted the chief source of danger to life. Pus and inflammatory product extruded from the fimbriated extremity was constantly liable to start up renewed attacks of inflammation, which would soon have fatally exhausted her. From this source she has had, doubtless, many minor attacks of perimetritis already, each in turn increasing the exudate which encapsulated the left ovary. The irritation from incarceration of the left ovary in menstruations is probably what led to the menorrhagias which were progressively blanching her. The condition of the pelvic peritonæum which produced a hæmatocele nineteen months ago, together with the salpingitis, perimetritis, and menorrhagia, resulting in progressive anæmia, emaciation, and debility, seemed to demand imperatively the entire removal of the uterine appendages. Death followed in a few days.

Dr. H. P. Newman's experience in these cases was that they are difficult to diagnosticate, and are very troublesome ailments. He thought the successful case as reported was extremely well managed, but would like to ask the writer to explain more minutely his means of diagnosis during the earlier stages of the disease.

Dr. L. L. McArthur, regarding Volkmann's method. He had seen it carried out in the treatment of three cases of abscess of the liver and one case of abscess of the spleen with slight modifications. This was done in the service of the City Hospital, and is there approved.

Dr. L. T. Potter inquired, if the neck of the uterus was the normal length would he have been justified in passing a probe earlier? If the tumor pressed the uterus to such degree that the uterus resembled a uterus containing a fœtus?

Dr. Martin replied as follows: That he did not discover the exact nature of the tumor until the time of the operation, and not until after he had entered the abdominal cavity and introduced an aspirating needle; fluctuation was very indistinct. The tumor seemed very dense, the abdominal walls were at least three inches thick, so that great difficulty was had in trying to outline any form of tumor, even by the minutest examination. The cause of it could not be ascertained. He was in doubt for months whether pregnancy existed or not. Thought perhaps one cause of these tumors might be from stoppage of the uterine orifice of the Fallopian tubes. It was utterly impossible to diagnosticate the case at any stage. Bi-manual manipulation through the rectum and otherwise availed nothing. The rectum was adherent in every direction to the (as supposed) uterus or tumor. Other physicians who saw the case from time to time were in doubt, as was stated in the paper, in their diagnoses, and several different opinions were offered by them. He was afraid to manipulate the womb to great extent or to introduce a probe, as the woman was very desirous of bearing a child, and nearly all the evidence showed that the uterus contained a fœtus, and yet two or three examinations were made before the uterus was found. It was crowded close to the symphysis pubis. The neck of the organ was not in the position it usually occupies when a woman is pregnant.

FRACTURE OF THE CLAVICLE AND ITS RATIONAL TREATMENT,

by **Dr. S. W. Wetmore**, was an unusually carefully prepared and finely illustrated paper. Many of the methods of treating this accident were alluded to. Only two, however, were described minutely and indorsed by him. We append the following synopsis: —

The writer demonstrated first the method introduced by Dr. E. M. Moore, of Rochester, N. Y., having a student on whom he adjusted the dressings. As the literature of clavicular fractures is replete with a multiplicity of appliances having for their object the restoration, coaptation, and retention of the fragments during the process of repair, surgeons during the last half century have very closely followed the ways of the old masters, but the introduction of the most effective, simple, practical, and satisfactory retentive measures is to be accredited to men of our day.

Causes. After discussing how fractures of the clavicle are most frequently produced, describing the solution of continuity, etc., etc., he thus continued: If the fracture is complete the shoulder is depressed and drawn forward by the action of the pectoral muscles, while the inner portion of the sternal fragment is salient, and sometimes perforates the tissues sufficiently to constitute a compound fracture, though happily this complication rarely occurs. To better comprehend the obstacles with which we have to contend, the reader should be familiar with the origin, insertion, and action of the great pectoral and sterno-cleido-mastoid muscles. The peculiarity of the pectoralis major is that its upper fibres become undermost at its insertion, and its under fibres become uppermost.[1] The clavicular fibres of this muscle are direct antagonists of the sterno-cleido-mastoid, and the further the humerus is carried backward the greater the tension of these fibres and the more perfect the restoration of the fragments. The elbow figure-of-eight bandage meets all the requirements in a simple fracture of the clavicle in the middle third, the one under consideration, by using a shawl, or piece of cotton cloth, or muslin, folded like a "string neck-tie," or cravat, but eight inches in breadth, and two yards long. Placing this wide folded bandage across the palm of his hand, the surgeon then seizes with this hand the elbow of the patient which corresponds with the broken clavicle. The two ends of the bandage hang to the floor. The one falling inward towards the patient is carried upward in front of the shoulder and over the back, making a spiral movement in front of the shoulder. This is intrusted to an assistant. The outer end is then carried across the fore-arm, behind the back, over the opposite shoulder, and around the axilla. This meets the other end, which may be carried under the axilla and over the shoulder of the opposite side, thus making the figure-of-eight turn around the sound shoulder.[2] This twist, it will be seen, makes also the figure-of-eight turn around the elbow of the affected side. The fore-arm should be sustained by a sling which raises it to an acute angle, in order that gravity may assist in moving the whole arm backward. This is best done by a simple strip three or four inches wide, which may be pinned to the fabric or bandage at the shoulder, or by a sling across the opposite shoulder and behind the back. It will be observed that the bandage, as it passes in front of the arm, does not press on the axillary border of the pectoral muscle, and therefore avoids the objection of the ordinary figure-of-eight. The writer has treated a number of cases during the past ten years by this method with no unsatisfactory result, and heartily commends it to the profession. Its advantages are: (1.) The apparatus is readily obtained and found in every well regulated household. (2.) It can be applied over the ordinary clothing. (3.) It is readjusted easily when it becomes disarranged. (4.) Any attendant can be instructed so as to readily keep it in place.

The next method described was that of Dr. Louis A. Sayre, of New York City, who treats fractures of the clavicle upon the same principle, namely, ***putting the clavicular portion of the pectoralis major muscle on the stretch***, and compelling it to pull the clavicle into place by means of adhesive plaster cut in two strips three or four inches wide (for an adult), one piece long enough to surround the arm and go completely around the body, the other to reach from the sound shoulder around the elbow of the fractured side and back to the place of starting. The first piece is passed around the arm just below the axillary margin, and pinned or stitched in the form of a loop sufficiently large to prevent strangulation, leaving a portion on the back incased by the plaster. The arm is then drawn ***downward*** and ***backward*** until the clavicular portion of the pectoralis major is put sufficiently on the stretch to overcome the sterno-cleido-mastoid, and thus pull the inner portion of the clavicle down to its level. The plaster is then carried smoothly and completely around the body, and secured with a safety pin to itself on the back to prevent slipping.

The first strip of plaster fulfills a double purpose: first, by putting the clavicular portion of the pectoralis major muscle on the stretch, it prevents the clavicle from riding upward; and, secondly, acting as a fulcrum at the centre of the arm when the elbow is pressed ***downward***, ***forward***, and ***inward***, it necessarily forces the outer extremity of the humerus (and with it the shoulder) ***upward***, ***outward***, and ***backward***. It is kept in this position by the second strip of plaster, which is applied as follows: Commencing on the front of the shoulder of the sound side it is drawn smoothly and diagonally across the back of the elbow of the fractured side, where a slit is made in its middle to receive the projecting olecranon.

Before applying this plaster to the elbow an assistant ***should press the elbow well forward*** and ***inward***, and retain it there while the plaster is continued over the elbow and fore-arm, pressing the latter close to the chest, and securing the hand near the opposite nipple, crossing the shoulder at the place of beginning; it is there secured by two or three safety pins. When this has been done the deformity will have entirely disappeared, the fractured bone will be accurately adjusted, and as long as the strips of plaster maintain their position no amount of force can displace them. It will thus appear obvious to any one interested in the treatment of this most interesting lesion that the key to its successful management is in making the clavicular fibres of the great pectoral muscle tense, and keeping them so during the period required for repair. ***No method can be successful if the humerus be allowed to maintain a perpendicular position.*** The plaster method of retention has some advantages over the "neck-tie" bandage method. It is evidently the more secure, firm, and unyielding ***at first*** (very desirable qualities, particularly with children), and the patient presents a more comely appearance when dressed. Its disadvantages are that the surgeon and particularly the country practitioner do not always have with them the plaster. In hot weather the plaster is apt to excoriate and become irksome and unpleasant. Again, if sufficient traction be made upon the humerus to be of utility as a lever, it necessarily becomes tedious to bear, and the patient tires of the constant tension. The writer did not feel qualified to criticise very closely the plaster method; each of the above two modes has been before the profession for several years, and it is to keep before the medical world those remedial measures which the writer's experience has proven to be the most perfect in their results that the subject is brought forth, although not as advancing anything new.

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[1] See [illegible] work on Surgical Anatomy [illegible]

[2] [illegible]

The paper elicited a free discussion, which was participated in by many of the members.

Dr. R. W. Bishop briefly cited the main points of a case of double fracture of the clavicle that he was recently called to attend. He found a three-cornered piece of the bone broken off that was wedge shaped and turned "up" edgewise under the skin. The best dressing he could devise did not retain the fragment in position, yet the case appears to be progressing favorably.

Dr. C. E. Webster visited Bellevue Hospital, New York, last year, and through the courtesy of a friend, who was an interne at the place, he was shown a number of cases of fracture of the clavicle, and noticed that Sayre's method of dressing was applied to but very few of them. Upon inquiry how this happened, the reply was, Sayre's method is applied to a good many of these cases at first, especially if treated in the lecture room, but excoriation results, and the dressings become loose, and others are applied, which the gentleman explained, and which were found to be those generally familiar to physicians.

Dr. W. L. Axford had listened to the instructions advanced by the author with much interest and pleasure. The solution of continuity or fracture of the clavicle generally occurs at the middle and outer third, and there is deformity either of the acromial or sternal fragment, or both. The philosophy of dressing a fracture of this kind is to raise the outer or acromial end or lower the sternal fragment, or do both. The former is more acceptable, and yet more or less deformity will result. There are a multiplicity of devices by which to dress these injuries. He held it to be axiomatic that the case will pursue its own course with any method, and union take place. He was therefore skeptical of any one method as being better than all others. He would, before closing, like to ask the reader of the paper if his cases that he treated resulted with no deformity?

The **Chairman** saw the case cited with Dr. Bishop. There was a comminuted fracture of the bone, and a small piece of spicula with tilted edge that could not be retained in position. The method the author has dwelt so elaborately upon is known here as Dr. R. N. Isham's plan. That is to say, the sound shoulder is made a hitching post and a double figure-of-eight bandage is applied. It gives as good results as any unless it is a plaster-of-Paris dressing, which is irksome and difficult to apply to little children. His success with all methods resulted in more or less deformity. Nature would give admirable results by placing the arm of the affected side in a sling and securing this to a tightly fitting knitted shirt. Long ago be abandoned the adhesive plaster method.

Dr. A. B. Strong was profited by the author's remarks and the illustrations of the paper. The "cravat method" is new to him. Regarding the anatomy of the parts concerned, he said that while the subclavius muscle was not mentioned as having anything to do with the deformity, he thought, however, it did increase it by being excited to contraction, or by its being irritated; the dense fascia also increases the deformity from a like cause. He never saw a dressing give satisfactory results, and thought that placing the arm in a sling, and having the patient lie on a hard mattress, was the best possible known method; all are irksome, but upon a man any kind of appliance would do.

Dr. L. H. Montgomery had treated a number of fractures of this bone; all have recovered, and were as strong as before the accident occurred, so far as he knew. He could state positively that in two no deformity existed at the end of a few weeks. One of these occurred in a little boy, being the so-called "green-tree fracture." The other case occurred to a young man eighteen years of age, a clerk; he was anxious that no deformity should result. The speaker told him the only way to avert this was for him to lie in bed for three weeks. He did so for nearly this length of time, with the fracture dressed as any one ordinarily dresses such cases with the addition of a bag of sand over the seat of fracture, and a perfectly satisfactory result was obtained. This method in the treatment of a case of this kind is especially indicated if the patient is a lady.

Dr. W. H. Curtis thought considerable danger might occur from a tightly adjusted sticking plaster dressing around the arm, of strangulation of the brachial artery, especially if it were a long time applied and swelling of the part occurred.

Dr. Wetmore closed the discussion, and replied first to Dr. Axford, by stating that he had, as stated by him in the paper, treated a good many cases occurring in children and females by the plan he recommended and no deformity existed. In strong, athletic men he also could recall more than one instance in which there was a satisfactory result and no deformity. During the year 1857 he saw his preceptor treat a case by having the patient (a man) lie in bed upon a bolster, that the weight of the shoulder might pull back the clavicle, and the man recovered perfectly.

The next paper was a very comprehensive one on

RHINOLITHIASIS, WITH A REPORT OF A CASE OF ABOUT FORTY YEARS' DEVELOPMENT,

and exhibition of the specimen, by **Dr. Jefferson Bettman.**

The following brief synopsis taken from the voluminous article, is here appended: —

The comparative rarity of this affection, the interesting features connected therewith, will be found in a short recital of a case of probably forty years' development. *Status præsens:* The patient is a gentleman, forty-nine years of age, who consulted the writer in June, 1883, for what he termed "chronic catarrh in the head," extending over a period of many years. Of late the annoying symptoms had become more aggravating. The nasal discharge was so copious as to necessitate a daily use of from four to six handkerchiefs. Periodical attacks of hemicrania extending over the right orbital and temporal regions also complicated the case; marked obstruction on the right side of nasal respiration. Physically he is of good dimensions, well proportioned, a picture of florid health. External nose appeared congested and slightly tumefied; borders of the nostrils somewhat excoriated. Introduction of the nasal speculum occasions violent attacks of sneezing. This exquisite hypersensibility of the mucous membrane quite precluded a thorough examination of the nares. There was limited fetor in the expired breath, yet sufficient to be imparted to the nasal secretion; this was also very viscid, slightly flocculent, and filled both nostrils, necessitating removal ere permitting a survey of the parts. Illuminating the nares, a marked vascularity and thickening of the mucous membrane was noticeable. The tissues covering the inferior turbinated bones were so thickened as to encroach upon and nearly obliterate the fissura respiratoria. . . .

The mucous membrane covering the septum presented almost a fungoid appearance. Both middle turbinated bones were enlarged so as to press upon the septum. The posterior part of the right nasal fossa was filled with an accumulation of creamy looking discharge, and attempts at its removal by a well-directed stream of tepid water were futile. The nasal lumen was so narrowed and encroached upon by the hypertrophied turbinated bone and a co-existing deflection of the septum that it was with difficulty a cotton-wrapped probe could be guided through the parts that were so sensitive. Palpation revealed the presence of a hard grating substance occupying the floor of the right nasal fossa, which was supposed to be necrosed bone as a result of a constitutional dyscrasia. Thorough inquiry in this direction, however, elicited negative replies. To allay the morbid sensibility of the parts a detergent nasal lotion was advised, to be used *ad interim.* In two days' time this proved effectual, as the hypersensibility and tumefied mucous membrane were markedly improved and reduced. Under a strong illumination the position of the foreign body was then defined; it lay on the floor of the nasal fossa in its posterior half and seemed to be impacted between the bony septum and inferior turbinated bone. The exposed surface of the body was rough, uneven, unyielding to the touch of the probe. To dislodge and remove it a pair of strong aural forceps bent at right angles were used. Upon traction being made a firm, resistance was met with. The fauces, too, were uncontrollably irritable, defeating all attempts at posterior rhinoscopy. The size of the body had been undoubtedly underestimated. Its removal in toto anteriorly was impossible on account of the narrowed lumen of the nasal passage. Attempts at removing it piecemeal were but partially successful after repeated trials. The feasibility of removing it through the naso-pharyngeal space presented itself. The patient being cautioned not to inspire deeply or swallow, while the operator guarded the faucial orifice, the foreign substance was then forced into the naso-pharyngeal space and in a moment the gentleman spat it out. It was darkish gray, almost black in color, conoidal in shape, and having a very disagreeable odor. Its weight, firm consistency, and the pebble-like uniformity of its unexposed surfaces were sufficient to indicate its calcareous constitution. Irregular in shape, the contours of the concretion conformed to the confines of the surrounding tissues. Its medial surface measured one and a half centimetres in length by one and a quarter centimetre in breadth; the inferior surface one and a half by one half centimetre. The exact weight was one and a half gramme, and imbedded in the mass was a cherry stone. Incidents of the patient's early childhood were vividly impressed upon his memory, but in no possible manner could the presence of the cherry stone be accounted for. Free nasal respiration was fully restored and great relief followed. Subsequently, however, a small mucous polyp high up in the same nostril under cover and almost hidden by the middle turbinated bone was discovered, which was easily removed. . . .

The writer then minutely reviewed the literature on the subject of Rhinolithiasis. Stoerk avers that he has seen but one example of it. No mention of it is made in many works on general surgery. The term was first applied by Demarquay, and our French confrères describe the greater number of cases. Demarquay and Poinsot have written brochures on this subject. The determining cause is the presence of a foreign body which forms a nucleus for the deposition of lime salts. Nasal concretions have, however, developed independently, and where not due to the presence of any extraneous substance, congenital or acquired atresia, stenosis of the nasal lumen favors the retention and subsequent dessication of nasal secretion, and offers a nidus for a concretion. A gouty diathesis may also be a predisposing cause. Virchow describes a "diathesis ossifica" as a cause. This is an entirely different process, yet somewhat similar to the subject under consideration. During an act of vomiting or retching, undigested particles of food may be forced through the naso-pharyngeal space and lodge in the posterior nares, and may be the nidus; barring this possibility, in the foregoing case the concretion may be presumed to have been one of more than forty years' development. . . . Jacquemart lately described a case where the trouble existed over twenty years.

Multiple rhinoliths have been found in rare instances. Their concentric deposition was next described by the writer at considerable length, also their chemical composition. The *symptoms* excited by their presence are frequently not marked, and hence they are doubtless often overlooked, the rhinorrhœa being regarded and treated as catarrhal congestion of the tissues, which often may result in epistaxis. "The chronic vascularity induces a state of hyper nutrition and cellular activity in the surrounding tissues favoring redundancy and neoplastic changes." (Billroth.)

Hemicrania or nervous headache is a noteworthy symptom that is present in many cases. This may be periodical and checked by spontaneous expulsion of minute concretions (Axmann). "Also other reflex neuroses may be present" (Hack).

Posterior rhinoscopy occasionally renders valuable service in this direction. In Jacquemart's case, already alluded to, himself and more than ten consultants had made a previous diagnosis of osteo-sarcoma. A few cases are on record in which rhinoliths were expelled spontaneously, as where the concretions were very small. A stream of hot water injected through the opposite nostril may in some cases prove effective in dislodging the concretion. "Sternutatories may be worthy of trial" (Frankel). The dental drill might render signal service. In post-nasal extraction of a calculus strict precautions must be adopted to prevent it from falling into the larynx.

The remainder of the paper contained many useful hints on the part of the surgeon as well as the patient, and the humane precautions to be taken, but which are often neglected in treating nasal disease.

The paper was discussed by Dr. F. O. Stockton, who stated that one very simple method the essayist omitted to mention in treating these cases, was by strong pressure from the posterior part of the throat to expel the rhinolith through the anterior nares; this was far the more preferable method of extracting them. The opposite nostril should not be closed when this method is essayed. Another way to remove this form of calculus is by a small loop of iron wire to secure the calculus and rotating the wire upon the stone.

He then cited a case coming under his observation where there was absorption of the small bones, where the stone had pierced some of the small bones of the face. He employed an engine with a diamond drill, or a dental drill with a diamond point, and bored in different directions, and removed it in this manner piecemeal; the mucous membrane and other soft tissues were not in the least injured by the operation. He knew of no other case ever having been treated in this manner. The engine is the invention of Dr. Goodwillie, of Philadelphia, and is used by him in dentistry. The patient operated on was an English gentleman in London, England.

At a late hour the Society adjourned.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

Thursday evening, June 26, 1884. The President, Dr. Tyson, in the chair.

SPECIMENS FROM A CASE OF RESECTION OF THE HUMERUS.

Presented by Dr. Nancrede.

Mary D., aged seventeen years, from whom these specimens were removed, received a severe compound comminuted fracture of the left humerus by having her arm wound around the main shaft of a spinning mill's machinery on January 2, 1884. She also at the same time received several severe scalp wounds. Irrigation with bichloride of mercury solution resulted in the salvation of the arm, although in the effort the girl nearly lost her life. At the end of six weeks, no union having taken place, the ends of the fragments being necrotic, I cut down, removed the small fragments here presented, and after sawing off the ends of the main fragments drilled and fastened them together with two stout silver wires. The whole extremity was then put-up in a fixed apparatus, plaster, which was not disturbed until irritation of the skin from pressure, etc., required it. Now, at the expiration of about five months, the fragments seem firmly consolidated, with the line of the bone apparently perfect.

MICROSCOPIC SLIDES FROM A CASE OF SPINDLE-CELLED SARCOMA OF THE BREAST.

Presented by Dr. G. de Schweinitz.

I desire to exhibit a few sections this evening cut from a tumor of the breast removed by Dr. John Ashhurst, in the University Hospital. The history of the case, in brief, is as follows: Annie S., married, aged thirty-five, the mother of four children. Family history good. Her own health good until two years ago, when she began to suffer from malaria. The tumor of the breast first began to be manifest one year ago, and grew gradually without much pain until the date of operation, when it had attained the size of an orange. There was no enlargement of the axillary gland. The nipple was not retracted. The growth, to the touch, was hard, and in spots the skin had become adherent, giving rise "to the pitted, somewhat brawny or lardaceous appearance" which is described by surgical writers as rather indicative of scirrhus of the breast. This appearance was sufficiently marked to cause the diagnosis of hard carcinoma to be suggested as probably correct. After removal, when the mass was laid open, both cut surfaces did not appear concave as is usually the case in a scirrhus. Microscopic examination cleared up the diagnosis, for, as you will see by examining the specimens, they show the typical appearances of a small spindle-cell sarcoma. It seemed a good case to illustrate the difficulties sometimes encountered in correctly diagnosticating tumors of the breast, and for this reason I have briefly placed it upon record.

Recent Literature.

Brain Exhaustion, with some Preliminary Considerations on Cerebral Dynamics. By J. Leonard Corning. New York: D. Appleton & Co. 1884. 234 pages.

Brain exhaustion, nervous exhaustion, neurasthenia, etc., are the diseases from which just now very many are suffering or think they are suffering. There is a real danger for business men, fashionable women, and those who cannot follow fashion and society, a danger that the cares and worries of life, irregular hours, loss of sleep, and the hundred other unfavorable influences of modern civilization should break down the nervous energy and power. It is well, perhaps, to have these dangers presented anew in order that those not heretofore influenced may be led to see their danger.

Dr. Corning has presented some facts very well, and there are many chapters in his book well worth reading. The incapacity shown by most persons for mental work and great muscular activity at the same time is happily mentioned on page 45. There are many good points in regard to "false educational conceptions and methods," "the exciting causes of brain exhaustion," also as to the influence of emotions, the bad effect of changing life-long business habits, etc.

Many chapters are incomplete, and contain one idea spun out at considerable length instead of giving a more complete but short résumé of the subject. The result is that certain subjects have an undue prominence, and their importance is exaggerated.

The term "cerebral softening" is used several times in its popular sense rather than as a medical term. The popular ideas of cerebral softening are vague, and too many physicians use the expression loosely. In a medical treatise there should be a more exact use of terms. The impression conveyed by the book as a whole, however, is less scientific than popular.

The need of sleep, of brain rest, the general outline of treatment is good. Compression of the carotids is again advocated.

We cannot give the book warm praise as a whole. Much in it has been said as well or better by others; it gives emphasis to facts which are less noticed by other authors, and time spent in reading it would not be wasted.

The Principles of Ventilation and Heating, and their Practical Application. By John S. Billings, M. D., LL. D., Surgeon United States Army.

While disclaiming any intention of writing a systematic manual on the subjects of ventilation and heating for the use of skilled architects or engineers, Dr. Billings has nevertheless presented the subject in a plain and practical manner, the general principles being clearly stated in the opening chapters of the work.

The text is amply illustrated with many diagrams of systems in use in public edifices and hospitals, both American and foreign. The style is clear and free from useless technicalities; formulæ, when necessary, are stated in an intelligible manner. The writer is unsparing in his criticism of faulty methods.

Physicians, architects, engineers, and teachers will all find in it a valuable assistant.

Medical and Surgical Journal.

THURSDAY, AUGUST 7, 1884.

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SUGGESTIONS CONCERNING CHOLERA.

Since our previous remarks on cholera, in which reference was made to the circulars of the Boards of Health of New York and Illinois and to the steps taken by the State and Treasury Departments at Washington, additional circulars have been issued by the health boards of three New England States — New Hampshire, Massachusetts, and Connecticut. Of the other three New England States, Maine and Vermont have no boards of health, and from Rhode Island we have seen no official announcement of policy. The circulars issued by the three New England States are, in the main, sound, sensible, and timely papers, and, as those Boards have not only sent them to all local authorities concerned in the question of cholera but are ready to mail them to all citizens requesting copies, the local health authorities and inhabitants at large cannot plead ignorance either of the nature of the emergency or of the proper prophylactic measures to be adopted should they fail to prepare themselves for a possible visitation of the disease.

The comparatively moderate character of the epidemic thus far in Toulon and Marseilles, where it first manifested itself, and the absence of the disease thus far as an epidemic from other populous centres in Europe, are not reasons for remitting in any way our own efforts in this country to guard against or prepare for an invasion. Nothing will be lost by a vigilant inspection of vessels and cargoes, whether at the point of departure or arrival, to which suspicion in any way attaches; and a positive gain will in all events arise from whatever measures of cleanliness and general hygiene are enforced in public and private places without and within doors.

Let all classes, the layman as well as the physician, distinctly understand and bear in mind that cholera does not arise *de novo*, but is a filth disease in the sense of being propagated by filth and moisture; that the poison is generally spread by the alvine discharges and absorbed by the alimentary canal; that just as it multiplies most readily in ill-kept places so it is absorbed most readily by ill-kept systems; that though infectious it is not contagious; that whether the active principle be represented by a comma-tipped bacillus or any other micro-organism — and Koch's commission to the contrary notwithstanding, its nature has not yet been demonstrated — the poison finds an abode in drinking-water, on food, in clothing, and may be avoided by sufficient care or destroyed by active germicides.

Bearing these points in mind we may protect ourselves against an epidemic, or, behaving ourselves with discretion in its presence, avoid those lamentable and ridiculous occurrences exhibited where fear and ignorance direct men's actions. Of such occurrences the reports from the South of France afford extreme examples, and the following extract from the London *Lancet* (July 26th) exhibits instructively some of the follies of senseless fumigation and red-tape quarantine: —

"One instance is from Geneva, where impecunious people get into the train, and having given passengers an exaggerated account of the process of disinfection they will have to go through they exchange tickets, and for a substantial consideration they undergo the fumigation discomforts instead of the genuine travelers. The other comes in the form of a protest from the passengers of the homeward-bound steamer Mira from Calcutta. Before touching at Colombo, on April 21st, one of the crew died of cholera. All necessary precautions having been taken the vessel reached Suez, and though sixteen days had elapsed, and all on board remained well, she was ordered to El Tor to perform seven days' quarantine. No proper arrangements had been made for their reception, and a few wooden huts, with some disgustingly offensive privies, afforded the only accommodation available for a large number of first-class passengers of both sexes. Such an arrangement is discreditable in the extreme to the Sanitary Council of Alexandria. But what follows is worse than discreditable. The death had occurred amongst the crew, who occupied an entirely distinct part of the ship from that which was reserved for passengers. And yet it was the passengers who were thus compelled to leave the ship and to go into quarantine, the crew being allowed to remain on board."

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ANTISEPTIC MIDWIFERY AT THE DUBLIN ROTUNDA HOSPITAL.

A report of the Dublin Rotunda Hospital by Dr. Macan for the year ending November, 1883, deals chiefly with the application of antiseptics to midwifery. This was the first year that Dr. Macan occupied the responsible position of Master at that well-known lying-in Hospital, and the results of the year's work, although only for one year, unquestionably confirm the wisdom of the antiseptic precautions and methods adopted, whilst supporting the correctness of the theory that puerperal fever is caused by the absorption of animal matter in a state of decomposition, such matter in one class of cases being introduced from without, and in the other class being derived from the patient herself.

Any one acquainted with the wonderful diminution achieved in the death-rates of lying-in hospitals on the European continent, and especially of those at Prague and Vienna, by a simple attention to cleanliness and antisepsis, need not be surprised at the remarkably favorable results exhibited by this report. Dr. Macan himself, being, as we know, personally cognizant of the continental experiences, could have entertained doubts only as to the feasibility of practically enforcing his methods, but not as to their abstract desirability. The figures given, even though happening to apply to a favorable year, must therefore be regarded not only as a tribute to good judgment, but also to unusual executive ability and good discipline.

Six deaths comprise the total mortality from all causes of 1090 women during the entire time they were at the hospital. This mortality of 0.55 per cent., or one in 181.6 patients, represented, therefore, not only the puerperal mortality, but the total mortality of the puerperal state. The puerperal mortality of private practice is estimated by Dr. Matthews Duncan and Dr. McClintock as not less than one in 120 cases, and the Master of the Rotunda may properly take pride in the reflection that a patient delivered in that institution during the past year ran far less chance of dying than if she had been delivered in her own home by a private practitioner.

To prevent hetero-infection the following are among the important precautions adopted: Students engaged in dissecting are not admitted to the lying-in wards; all students and nurses, before examining any case of labor, are compelled to wash the hands with a nail-brush in a carbolic-acid solution, and to dip them subsequently for half a minute in a solution of corrosive sublimate, one in one thousand; to lessen the necessity of making vaginal examinations abdominal palpation, as at Vienna, is taught each student; every person who examines a woman *per vaginam* must write his or her name on the patient's card, that the origin of an infection may be traced; as soon as the child is born the woman is made to lie on the back to prevent the entrance of air into the vagina or uterus, and the genitals may not be touched with the fingers after delivery except in cases of ruptured perinæum, post-partum hæmorrhage, or retained placenta; before stitching up a ruptured perinæum the vagina is injected with carbolic-acid solution (one in forty); the vagina is irrigated, and the external genitals are carefully washed before every operation, the uterus syringed out afterwards, and a pessary containing ʒiss. of iodoform is then passed to the fundus and left there. All vaginal and uterine tubes are made of glass; a separate tube is provided for each patient, which is kept in carbolic solution and boiled in the same before being used for another; only silver catheters are used, and these subjected to the same treatment.

The prophylactic precautions adopted during labor being sufficient Dr. Macan sees no necessity for any prophylactic antiseptic injections, whether vaginal or uterine, in the puerperal state. The external genitals are washed twice daily with plain warm water and a piece of oakum instead of sponge.

To guard against auto-infection the entrance of air to the uterus is prevented by attention to position; any fetid accumulation is quickly removed; the cavity is disinfected; an iodoform pessary, which exerts its antiseptic action for three or four days, is introduced, and free drainage is provided for.

During the last few months covered by the report the temperature of every case was taken regularly twice daily without indicating any constant rise, even to the extent of one degree, accompanying the first secretion of the milk; these observations tending to show that the temperature curve, in a typical normal case, does not differ from that in the non-puerperal state, and Macan is inclined to regard any temperature above 100° F., except immediately after delivery, as indicative of something abnormal, though it may not always be possible to explain the exact cause of the rise.

Such care as is now exercised at the Rotunda deserves the reward of good results, and we hope such results may be continued there, and become less remarkable only by becoming more common elsewhere.

MEDICAL VERNACULAR.

Every physician is obliged to train himself in the oral examination of patients and to acquire something of a lawyer's shrewdness in cross-examination. Sometimes he must draw out an unwilling witness; oftener he must help, without influencing, a patient whose mind is untrained to close examination and nice distinctions, to give as accurate a history as may be of symptoms he cannot appreciate, and of whose significance he is ignorant. Oftentimes the patient's vocabulary is too limited to supply proper words to express his ideas, and sometimes, we fear, the physician is unable to comprehend the poorly-expressed ideas of the willing but incompetent witness who uses words and phrases which have a more or less definite meaning to the narrator, but are unknown to the physician. In fact, a physician connected with a charitable institution of one of our larger cities is brought face to face with every dialect of English and the broken English of the natives of every country on the face of the globe. A study of the pseudo-medical and unusual words in use among the uneducated classes is not without its interest, and by no means devoid of profit to the man desirous of properly understanding the people with whose physical welfare he is concerned.

Some of these lay medical terms are wonderfully descriptive of the condition to which they are applied. Certain of them deserve perpetuation rather than the more modern but less graphic scientific terms for the same trouble. "Lock-jaw" is a common example of these terms. "Show" is almost as good. "Rupture" is moderately good as a descriptive term, but it is doubly good to describe a hernia which goes back with an audible gurgle as a "windy rupture." "Inward fits" and "dry belly-ache" are well-known terms of great antiquity, as is also the use of "itch" for "scratch." "He has *an upward and downward purging*, sir," will tell many a doctor during the coming weeks, in terms that he cannot misunderstand, that he is summoned to a case of cholera morbus. An "impression on his chest" or, in brief, "an impression" describes a difficulty of breathing from any cause, most commonly used of young children with severe bronchitis. "To heave off from one's stomach" is exceedingly common. Naturally an ineffectual retching is an "empty heaving." Only an Irishwoman can attain the poetic height of "heaving an empty stream."

In this category should also be included "the windy dropsy," which, if it means anything, ought to be an emphysema. This term has been met with but once, when a young woman was heard to inquire whether her mother's complaint was the "water dropsy" or the "windy dropsy."

A baby worn down by diarrhœa, unable to hold itself upright, is well described as "kinder *slack*."

The curious tendency to eke out a scanty vocabulary by frequent and vain repetition is by no means confined to the heathen nor to various forms of worship, but shows itself particularly in attempts to make plain to the medical man the symptoms which the patient considers he ought to understand so easily without explanation.

Ignorance of the proper meaning or the derivation of words leads to curious reduplications, as, for instance, "pneumonia of the lungs," "dysentery of the bowels;" the "yellow jaunders" is a similar reduplication, but the use of the adjective of color is justified, as it allows differentiation from the more terrible "black jaunders."

Some of these words seem to have acquired a perverted meaning when used in reference to matters of health. "Better" has acquired a meaning synonymous with well; for example, a physician asking his patient if he is better is answered in the negative; examination showing a decided improvement he says, "You are certainly very much better," and is answered, "Well, perhaps I am most better, but not quite," and he will announce his final recovery by saying that he is "all better."

A curious instance of this use of the comparative is found in William Black's Shandon Bells. The speakers are supposed to be exceptionally well-educated people. "I was almost forgetting to ask how your aunt is, — better I hope." "Oh, I think so. I think she is almost quite better." . . . "But she is not ailing now?" "Oh no, scarcely at all."

Backwoodsmen and sailors occasionally ask to have their teeth "hauled." One old lady took great delight not very long ago in telling her doctor that her leg did not "render," that is, discharge, so much as before commencing treatment.

The most interesting of these words are those which have dropped out of the written language and survive only in the vernacular. Most of these words have a history, and, like so many of the expressions of the vernacular, have seen better days; Archbishop Trench would describe them as drawing out a miserable existence in reduced circumstances. Many of them serve to perpetuate the pathology of former days or continue an inaccurate nomenclature. Many an interesting lesson in the history of medicine or the history of the language may be learned from them. One of the most curious of these survivals is the King's Evil, which has lost its royal title, and survives as simply an *evil*, a term occasionally heard applied to suppurating glands of the neck. The old word "poll," which survives in a few technical phrases, is still used by people of Celtic origin.

"Rising," for a swelling, occasionally used now for an abscess within the auditory meatus, survives from the time of King James's Version of the Bible. "Corruption," found in King James's Version as indicating putrefaction, now refers to pus. "Beal" is very commonly used to express suppuration. Rab's master said, "Our Ailie's skin 's ower clean to beil." To speak of a pharmacist to-day as "a 'potecary" marks the speaker as an individual of little learning, but that form is found in Chaucer.

Certain words show their derivation and are more expressive than their commoner forms. To *peaceify* a crying child seems a more maternal operation than simply to pacify it, and *ilement*, to one accustomed in his youth to the old form ile, is certainly a better word than unguent, while *restful* is certainly one of the most pleasing adjectives that can be applied to a surgical apparatus. If the surgeon finds the next day that the injured member has "swoll" during the night and made the patient "unrestful," he will perhaps pardon the poor fellow for *dis*remembering his instructions.

Different classes of men have peculiar forms of speech, drawn often from their habits of life. There are many peculiar expressions among sailors. The colored people always designate pain as "misery," and not unfrequently describe it as "lingering." "The almonds of the ears" is used by some colored people for the tonsils, a natural expression for Germans, as it is but a translation from their native language, but how a colored man should come to use it is not so plain.

It is amusing and even pathetic to hear the attempts of a foreigner, whose English has been picked up in the forecastle or "long shore," and consists principally of oaths, to express intelligibly his ailments. Such a patient will rub his hand over his abdomen and say, "Something bites me here", and in reply to attempts to elucidate the matter will explain by comparing the severity of his pain to the place of future punishment.

There are many curious misunderstandings and mispronunciations. Certain individuals are "caustic" in their bowels, while others with injured feet "gimp" as they walk. "Too regular in the bowels" is an occasional synonym for diarrhœa. One of the most puzzling problems for an ordinary tongue is to express one of a pair of twins. "He 's the one half of a twin," "the half of a pair of twins," are some of the forms of expression used. A complaint often made is that "the palate is down," which refers to any trouble in the fauces, but most appropriately to a lengthening of the uvula. How to explain the complaint of the woman who said that "the spoon of her breast was down, that the doctor had tried to put it up but could not," remains a mystery. "A flag in the breast" means an induration of any kind. "A chamber-doctor" is an obstetrician. "Whittle" is in common use for whitlow.

A story in a recent newspaper makes a valuable addition to anatomical nomenclature, and illustrates the habit of patients to attribute curious sayings to their doctors. According to the newspaper a man in a little town in Connecticut caught his foot in a mowing machine, and the accident restored to him the power of movement in the ankle-joint, which had been lost forty-six years before, when his foot had been caught under a roller that was in use in moving a barn. "Every one at that time thought he would lose his leg, but after some six months he so far recovered that he was able to walk, going upon the toe of that foot. He consulted a physician, who told him that the heel-pin had been driven up between the bones of the ankle, but advised letting it remain, as breaking it up would cause great pain. It was a bad place to work, and they might not get it right after all. So for forty-six years he has walked with a limp, but it would seem as though that mowing machine wheel had done the business, and brought the heel-pin to its right place."

Undoubtedly many more of these words have histories of their own which individuals learned in the history of the language could retail. Doubtless the new English Dictionary on Historical Principles, by Dr. Murray, now in process of compilation, will throw light upon the use of many of these words and make their study more easy and entertaining.

"The right word is always a power and communicates its definiteness to our action," and the study of the difficulties of the unlearned ought to aid the physician in the use of simple and unambiguous language.

◆

MEDICAL NOTES.

— We are glad to state that at the request of the Board of Trustees of the Massachusetts General Hospital Drs. H. J. Bigelow and R. M. Hodges have withdrawn their resignations from the staff of visiting surgeons.

— The National Board of Health held an annual meeting in Washington, Wednesday, July 30th, and elected the following officers: President, Dr. James L. Cabell, Virginia; Vice-President, Dr. Stephen Smith, New York; Secretary, George E. Waring, Esq., Rhode Island.

— The British Medical Association held its annual meeting at Belfast, Ireland, July 29th to August 1st. The flourishing condition of the Association is shown by the fact that the increase in membership during the last year amounted to 1000, and the number of names now on the roll of the Society is 12,000. Addresses were made by Dr. Waters, the retiring president, and Dr. Cuming, the president elect. Numerous papers were presented in the various sections by distinguished writers.

— The announcement is made that the British Government have appointed a cholera commission consisting of Dr. Klein, F. R. S., and Dr. Heneage Gibbes, who have been directed to proceed forthwith to India to pursue a scientific inquiry into the nature of cholera. It is understood that these gentlemen will act in conjunction with the commission nominated a few weeks ago by the Indian Government for the same object. "In the prosecution of their labors," remarks the *Lancet*, "Drs. Klein and Gibbes may be assured of the hearty good wishes of all Englishmen, and the results of their mission will be awaited with great interest. The government in arriving at this decision have only done that which ought to have been done twelve months ago; and it cannot fail to touch the national pride that the country which has the largest interest in arriving at a sound conclusion upon the nature of this disease should have allowed Germany and France to have preceded it in the research. It is better, however, to be late in the field than to ignore the value of such an inquiry altogether."

— Professor Jäger, of Vienna, the distinguished ophthalmic surgeon, has recently died.

NEW YORK.

— At the suggestion of Dr. Cyrus Edson, of the health department, an ordinance has been passed forbidding the use of vessels made of brass, lead, copper, or other metallic substance in the sale of beer, soda water, syrups, and other beverages or flavoring materials, on account of the danger of the formation of compounds detrimental to health. An investigation into the character of the lining of the soda-water fountains of Brooklyn is at present being made by Health Commissioner Raymond.

— The executive committee of the commission appointed at the recent session of the Legislature to investigate the sanitary condition of the tenement houses of New York commenced the work of inspection during the last week of July. It consists of Drs. Moreau Morris and Abbot Hodgeman, Charles F. Wingate, sanitary engineer, and William P. Esterbrook, superintendent of buildings.

— A public meeting was held in Hoboken on the 27th of July for the purpose of taking some action in securing a better and purer supply of drinking water, which for the past ten years has been obtained from the Hackensack River. Professor Leeds, of the Stevens Institute, who had been employed by the mayor to make an analysis of the water, stated that he had found in it large quantities of vegetable matter, which, while it might not be injurious to health, rendered it objectionable. This accumulation of vegetable matter, he thought, was due to the recent heavy rains, and he expressed the opinion that the evil would not be abated until the reservoir was thoroughly cleaned. This one of the engineers in the employ of the water company promised would be done, and the meeting adjourned without taking definite action in regard to the matter.

— A conference was held July 30th between Col. Emmons Clark, secretary of the Board of Health, Dr. Day, sanitary superintendent, and Superintendent Walling, of the police department, with a view of adopting a plan of police surveillance over all vessels landing cargoes on the water front of the city, in order to prevent the unloading of infected goods which may have been smuggled through quarantine. It was held in consequence of the discovery that a vessel, which had been passed through quarantine, on the declaration that there were no rags on board, was landing rags at a Brooklyn dock.

— The annual appropriation by the Legislature of $20,000 for the assistance of the worthy blind in New York City has just been distributed. Those who are eligible to the benefits of this fund are men and women who have resided at least two years in the city, who are totally blind, and who have never been inmates of a public institution, and its object is to encourage them to help themselves and keep out of almshouses and asylums.

— From the annual report of the Railroad Commissioners it appears that during the last year twenty-four persons were killed and ninety-one injured by accidents on the street railways. Of the number killed, six were passengers, two were employees, and sixteen were persons in the streets. Of those injured, forty-six were passengers, and forty-five persons in the streets.

— Mollie Lee, who is said to be the only full-blooded Indian squaw of the Shinnecoch tribe now living, is more than a hundred years old, but is in feeble health. She is a resident of the Indian reservation near Southampton, Long Island.

Correspondence.

TREATMENT OF ASIATIC CHOLERA.

Mr. Editor, — The German commission, of which Dr. Koch was chairman, announce that Asiatic cholera is due to a living bacillus existing in the intestines. It also announced that these bacilli cannot live in the presence of acids. If these views are accepted it would seem that cathartics accompanied with acids are strongly indicated in this disease.

When Dr. George Johnson, of King's College Hospital, London, advocated the castor-oil treatment, in 1855, his views were very generally pronounced fallacious. Now it would seem to be established that his treatment was based upon a pathology very nearly correct. His method was to give the castor oil in doses of an ounce every hour, or thereabouts, till the character of the discharges changed, at the same time not neglecting other treatment. He severely denounced the use of astringents and brandy in such cases because he believed that the intestines contained a "morbific agent" which must be removed.

I once conversed with a gentleman who had passed through a cholera epidemic in Havana, Cuba. He had seen great benefit from the use of large doses of olive oil. This would also be rational treatment in view of the pathology.

Instead of advising the public, therefore, to use brandy and laudanum in this disease, as I see the daily papers doing, a contrary treatment should be urged. We should advise full doses of castor oil or larger doses of the olive oil. At the same time the patient should take an acid in sufficient quantity to overcome for the time being the alkalinity of the intestinal juices. For this purpose vinegar, lemon juice, or, better, the dilute hydrochloric acid might be given.

These views seem to follow logically the announcements of Dr. Koch and his colleagues.

Yours truly, WM. H. LATHROP, M. D.
LOWELL, MASS., *August* 4, 1884.

Miscellany.

THREE DOCTORS IN FICTION.

THE fact that such writers as Mr. Howells, Miss Phelps, and Miss Jewett should within four years so carefully study what is practically the same subject, makes it worth while to compare their stories closely, says the *New York Evening Post.* Passing any question of relative literary merit, and taking them all as widely read and much liked books, there are remarkable points both of likeness and difference between them. In the first place no one of the heroines works for her living. Dr. Breen "was rich enough to have no need of her profession as a means of support." Of Dr. Zay it is said "loftily" by the old lady, "Doctor is quite independent of her practice." Between Dr. Leslie and her aunt, Nan Prince is sure of a fortune. They are all beautiful. Mr. Howells gives us "the tender curve of her cheek, the soft round of her chin." Dr. Zay "was the eidolon of glorious health." "There was a sort of golden halo round Nan's pretty head." In costume and carriage they are all of the choicest. Dr. Breen only studied simplicity, but "she did not finally escape distinction in dress and manner." Dr. Mulbridge "grew more and more conscious of her elegance and style, now that she stood before him." Dr. Zay has almost a superfluity of violet muslin, of skin of seal and leopard; she has "a glorious poise," and moves "with a swift and splendid motion." As Nan walked up the broad aisle of St. Anne's Church "the rows of heads all looked commonplace by contrast. . . . There was something so high and serene in Anna Prince's simplicity and directness." They are further alike that each has had the best special training for her career that the times afforded. That they count two out of three for homœopathy may go for what it is worth.

As to motive, we come to marked differences. Dr. Breen turned to her study in the heart-sick reaction from the treachery of her friend, the faithlessness of her affianced. She is watching her first patient at Jocelyn's. Dr. Zay "always had a taste for science, she inherited it besides." Her father was a physician, but died when she was only fifteen. She has practiced four years in a Maine village. "She don't fall short of three thousand every year of her life," is the assertion. Nan's father, whom she never knew, was also a physician, but it was her constant sympathy, her affectionate admiration for her guardian, the "country doctor," which determined the restless longing of her finely endowed nature toward the same career as his own. Either motive is a likely one, but the last is the more natural and more healthful.

Once more a difference, Mr. Howells may not quite have intended it, but his heroine first turns to her lover in the profound dejection of the discovery of failure in herself — her heart, her strength, are not equal to her demand upon them. Dr. Zay's lover gains his advantage when she is physically exhausted with a night of watching and a struggle with delirium tremens. Does this mean that neither would have yielded if she had been strong? Nan stands waiting in all the success of her hope. Yet Miss Jewett has felt obliged to supply even her with another motive than the love of her profession for refusing marriage. Nan believes that inherited tendencies bar her from it. "*Qui s'excuse, s'accuse.*" Does not this amount to an agreement among the three that home and hope of children draw a woman more strongly than anything else can.

Space fails us for the inferences this extended comparison suggests. Supposed cases are not logical arguments: they are only illustrations; but when independent illustrations strikingly agree, it is more than an accidental coincidence. To put the case fully in all its bearings, Dr. Breen should be successful; Nan's lover should be a strong, masterful, yet tenderly sympathetic man. But the great fact remains, no one yet ventures to represent a woman struggling as most men struggle to gain a footing in the professions. No one ventures to present her without the attractions that are distinctly feminine, and the want of which (that is, those that correspond) would be only a temporary hindrance to the man. There is a deep and — considering the future — an almost painful significance in the conviction, put concretely in Dr. Breen's case, implied throughout "Doctor Zay," and stated so plainly and so appealingly by Nan, that the duties of home, as falling upon the wife and mother, are incompatible with the practice of a profession. We believe all experience proves it, and what may seem examples to the contrary are either where the possession of wealth or powers so exceptional as to be outside all rules have smoothed the way, or where the profession has been taken up after the home had been made, its traditions developed, its happiness secured.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 26, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Whooping-Cough.
New York	1,340,114	888	480	41.22	11.31	28.22	3.14	1.57
Philadelphia	927,995	417	218	29.04	10.32	20.16	6.72	3.36
Brooklyn	644,526	377	207	43.74	9.53	24.83	1.35	3.78
Chicago	632,100	382	261	44.20	4.16	33.80	2.86	.78
Boston	423,800	213	143	37.35	5.85	30.15	.90	3.60
Baltimore	408,520	190	108	43.99	10.60	34.45	3.18	3.18
St. Louis	400,000	180	97	23.65	8.27	14.30	1.66	—
Cincinnati	272,400	118	44	22.95	12.75	14.45	1.70	1 70
New Orleans	234,000	145	46	30.10	11.90	14.70	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	102	44	24.50	17.64	22.54	.98	—
Pittsburg	180,000	85	56	42.48	5.90	15.34	3.54	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	53	33	52.92	9.45	47.25	1.89	3.78
New Haven	62,882	39	22	30.72	5.12	30.72	—	—
Nashville	54,400	30	11	43.33	13.33	23.33	3.33	—
Charleston	52,286	42	20	28.56	13.28	21.42	—	—
Lowell	71,447	34	21	49.98	5.88	44.10	—	—
Worcester	69,442	25	12	32.00	16.00	28.00	4.00	—
Fall River	62,674	51	41	64.68	—	60.76	—	—
Cambridge	60,995	24	7	12.48	20.80	4.16	4.16	4.16
Lawrence	45,516	15	6	33.33	13.33	25.55	—	—
Lynn	44,895	14	5	7.14	28.56	—	—	7.14
Springfield	38,090	21	11	57.52	9.52	47.60	9 52	—
Somerville	31,350	7	6	85.68	28.56	28.56	—	43.84
Holyoke	30,515	10	5	10.00	30.00	10.00	—	—
New Bedford	30,144	9	5	22.22	22.22	22.22	—	—
Salem	29,503	11	—	27.27	18.18	18.18	—	—
Chelsea	24,347	12	4	16.66	16.66	16.66	—	—
Taunton	22,693	6	2	16.66	16.66	—	—	—
Gloucester	21,400	6	2	66.66	66.66	50.00	—	—
Haverhill	20,905	11	6	36.36	36.36	27.27	—	—
Newton	19,421	6	1	16 66	16.66	16.66	—	—
Brockton	18,323	10	5	10.00	10.00	10.00	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	10	4	30.00	—	20.00	—	10.00
Fitchburg	13,433	3	1	33.33	33.33	33.33	—	—
Ninety-two Massachusetts towns	—	114	72	—	—	—	—	—

Deaths reported 3660 (no reports from Buffalo and Milwaukee): under five years of age, 2006; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases), 1333, diarrhœal diseases 986, consumption 357, lung diseases 164, diphtheria and croup 86, whooping-cough 61, measles 51, scarlet fever 39, typhoid fever 36, malarial fevers 42, cerebro-spinal meningitis 15, erysipelas seven, small-pox five, puerperal fever four, yellow fever one. From *measles*, New York 33, Chicago 12, Brooklyn and New Orleans, two each, Philadelphia and St. Louis one each. From *scarlet fever*, New York 10, Philadelphia, Chicago, and Boston six each, St. Louis three, Cincinnati and Pittsburg two each, Lawrence, Somerville, Salem, and Gloucester one each. From *typhoid fever*, New York 10, Baltimore, Cincinnati, and New Orleans four each, Chicago and Nashville three each, Philadelphia, Brooklyn, and St. Louis two each, District of Columbia and Charleston one each. From *malarial fevers*, New York 11, New Orleans 10, Brooklyn and St. Louis eight each, Baltimore and Charleston two each, Nashville one. From *cerebro-spinal meningitis*, New York five, Chicago three, Lowell and Fall River two each, Philadelphia, Nashville, and Haverhill one each. From *erysipelas*, New York five, Philadelphia two. From *small-pox*, New Orleans five. From *puerperal fever*, Brooklyn and Chicago two each. From *yellow fever*, New Orleans one.

Cases reported in Boston: scarlet fever 53, diphtheria 14, typhoid fever 14, and measles one.

In 112 cities and towns of Massachusetts the total death-rate for the week was 21.54 against 17.68 and 15.35 for the previous two weeks.

For the week ending July 5th in 170 German cities and towns, with an estimated population of 8,753,688, the death-rate was 29.1. Deaths reported 4902; under five years of age 2734 consumption 613, lung diseases 498, diarrhœal diseases 354; diphtheria and croup 147, whooping-cough 64, measles and rötheln 57, scarlet fever 51, typhoid fever 41, puerperal fever 15, small-pox (Metz two, Dresden one) three. The death-rates ranged from 10.1 in Rostock to 44.9 in Aachen; Königsberg 29.4; Breslau 36; Munich 32.1; Dresden 31.9; Berlin 32.7; Leipzig 25.6; Hamburg 29; Cologne 35.7; Frankfort a. M. 30.9; Strasburg 27.7.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending July 14th, the death-rate was 22.2. Deaths reported 3726: acute diseases of the respiratory organs (London) 206, diarrhœal diseases 495, whooping-cough 103, measles 102, scarlet fever 71, fevers 51, diphtheria 22, small-pox (London 21, Liverpool six, Sunderland two, Sheffield, Hull, and Cardiff one each) 32. The death-rates ranged from 11.1 in Plymouth to 25.9 in Halifax; Birmingham 18; Bradford 21.4; Leeds 23; Leicester 20.4; Liverpool 24.9; London 24; Manchester 23.3; Nottingham 25.2; Sheffield 18.2; Wolverhampton 20. In Edinburgh 16.5; Glasgow 23.1; Dublin 22.3.

For the week ending July 12th, in the Swiss towns, there were 36 deaths from consumption, diarrhœal diseases 26, lung diseases 16, typhoid fever nine, diphtheria and croup five, scarlet fever two, whooping-cough one, erysipelas one, puerperal fever one. The death-rates were, at Geneva 15.3; Zurich 15.8; Basle 11.6; Berne 23.3.

The meteorological record for the week ending July 26th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
July, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11 23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 20	29.768	65	75	57	69	39	70	60	NW	W	W	10	17	9	C	C	C	—	—
Mon., 21	29.799	63	70	54	68	53	80	67	W	W	SW	11	14	4	C	F	C	—	—
Tues., 22	29.847	70	80	57	66	50	78	65	W	W	W	12	15	6	C	C	C	—	—
Wed., 23	29.803	75	89	63	70	48	92	70	W	SW	SW	3	9	16	C	F	O	—	—
Thurs., 24	29.792	77	85	67	76	44	59	60	W	NW	NW	12	12	4	C	C	O	—	—
Fri., 25	29.890	70	81	65	81	60	73	71	N	SW	NW	3	8	4	R	F	C	—	—
Sat., 26	30.007	63	69	56	66	74	92	77	NE	SE	SE	6	10	5	C	C	C	—	—
Mean, the Week.	29.824	69.0	78.4	60.0				67.1										6.34	0.07

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM JULY 26, 1884, TO AUGUST 1, 1884.

Head, Jno. F., colonel and surgeon. Ordered to Portsmouth, N. H., to meet the Greeley party, and consult upon the proper course of treatment, with a view to the entire restoration to health of Lieutenant Greeley and the men of his command. S. O. 177, paragraph 14, A. G. O., July 30, 1884.

Wright, Joseph P., major and surgeon. Sick leave of absence extended three months on surgeon's certificate of disability. By paragraph 12, S. O. 176, A. G. O., July 29, 1884.

McElderry, Henry, captain and assistant surgeon. So much of paragraph 12, S. O. 165, A. G. O., July 16, 1884, as assigned him to duty in Department of the East is revoked, and he is ordered to report in person to the Surgeon General of the Army for duty in connection with World's Industrial and Cotton Centennial Exposition at New Orleans, La. Paragraph 12, S. O. 173, A. G. O., July 25, 1884.

Finley, J. A., captain and assistant surgeon. Granted leave of absence for one month, with permission to apply for one month's extension, to take effect about September 1, 1884. Paragraph 2, S. O. 91, headquarters Department of Texas, July 22, 1884.

Reed, Walter, captain and assistant surgeon. Relieved from duty at Fort Sidney, Neb., and ordered for duty as post surgeon, Fort Robinson, Neb., relieving Assistant Surgeon Henry McElderry, U. S. A. Paragraph 2, S. O. 62, headquarters Department of Platte, July 22, 1884.

NEW ENGLAND METEOROLOGICAL SOCIETY.

The Council of the New England Meteorological Society desires to secure the coöperation of all persons in New England interested in its subjects of investigation, with the purpose of encouraging the observational study of meteorology and of uniting into a common plan the labors of those who make a practice of keeping records of the weather. The Council proposes at the outset to establish a simple system of observations under the direction of Prof. Winslow Upton, of Brown University, including for the present only records of rainfall and temperature range: other subjects may be added in the future, but it is thought advisable to attempt nothing more in the beginning than can be properly discussed and published. Among those who have already signified their willingness to join the Society's undertaking physicians form a considerable number; from their technical training and habits of close observation they will make members of especial value, and the Council therefore hopes to enlist among its observers all who have already kept weather records or who are willing to undertake such records under its auspices. A circular giving the plans of the Society in more detail may be obtained by addressing W. M. Davis, Secretary, Cambridge, Mass.

Died. — At Jamaica Plain, August 1, 1884, Benjamin Franklin Wing, M. D., M. M. S. S., aged seventy-nine years.

Original Articles.

MEDICAL DELUSIONS.[1]

BY ALBERT DAY, M. D.

The wonderful influence of imagination in the cure of disease is well known, and it has become a fruitful resort for all kinds of vile quackery and blasphemous pretentions. A motion of the hand or a glance of the eye will throw a weak and credulous patient into a fit, and a pill made of bread, if taken with sufficient faith, will operate a cure better than all the drugs in the Pharmacopœia. It is related by a medical historian that the Prince of Orange, at the siege of Breda, in 1625, cured all his soldiers who were dying of the scurvy by a philanthropic piece of quackery which he played upon them, with the knowledge of the physicians, when all other means had failed. The prince sent the physicians two or three small phials containing a decoction of camomile, wormwood, and camphor, telling them to pretend it was a medicine of the greatest value and extremest rarity, which had been procured with very much danger and difficulty from the East, and so strong that two or three drops to a gallon of water would impart a healing virtue. The soldiers had faith in their commander; they took the medicine with cheerful faces, and grew well rapidly. They afterwards thronged about the prince in groups of twenty and thirty at a time praising his skill, and loading him with protestations of gratitude. Many thousand of instances of a similar kind might be related, especially from the history of witchcraft, and even in our own time we see the work of religious pretenders as exhibited by the blasphemous shows at the gatherings at Old Orchard and other places annually. Such scenes are a disgrace in this age while they could be tolerated in the times of universal ignorance, before the laws of psychiatry and kindred sciences were developed. A few centuries ago the mummeries, strange gesticulations, and barbarous jargons of witches and sorcerers, which frightened the credulous and nervous woman, brought on all those symptoms of hysteria and other similar diseases so well understood now, but then supposed to be the work of the devil not only by the victims and the public in general, but by the operators themselves.

In reading the history of nations we find, like individuals, they have their whims and their peculiarities, — the seasons of excitement and recklessness, when they care not what they do. We find that whole communities suddenly fix their minds upon one object, and go mad in its pursuit; that millions of people become simultaneously impressed with one delusion, and run after it until their attention is caught by some new folly more captivating than the first. We see one nation suddenly seized, from its highest to its lowest members, with a fierce desire for military glory, another as suddenly becoming crazed upon religious scruples, and neither of them recovering their senses until the craze has shed rivers of blood and sowed a harvest of groans and tears to be reaped by its posterity. At an early age in the annals of Europe its population lost their wits about the sepulchre of Jesus, and crowded in frenzied multitudes to the Holy Land; another age went mad for fear of the devil, and offered up hundreds of thousands of victims to the delusion of witchcraft.

It is my purpose, however, to deal with medical delusions chiefly of the past and present, although I can but speak briefly upon this topic, for volumes would be required to record all these delusions with all the crimes and follies they have entailed upon our race. I will not go back to the ages of demonology, when all disease was considered the work of demons (and this delusion is still believed to an extent shameful to the present enlightened age), but will briefly recite the history of a few medical delusions over which people have gone mad within the last century or two, dwelling especially upon that of the Perkins tractors.

It is not a century since the Perkins delusion with its metallic tractors turned the heads of many wise and good people. Dr. Elisha Perkins, of Plainfield, Connecticut, invented his tractors (an identical set of which I now exhibit before you), and began a practice with them about the year 1796. One part is composed of steel, and the other seems to be of brass or some metallic compound. The operation consisted in uniting the large ends and then drawing the sharp points over the diseased parts, no incision being made. This being done several times completed the operation.

I hold in my hand a book containing the letters received by Dr. Perkins, giving the wonderful cures which had been performed by the metallic points. The persons giving these certificates were clergymen, physicians, and other distinguished persons. Some of these certificates are evidently false, and therefore the persons writing them did so under the most positive delusions.

EXTRACTS FROM LETTERS TO THE AUTHOR OF THE METALLIC DISCOVERY.

Pierpont Edwards, Esq., District Attorney for the State of Connecticut.

New Haven, *October* 7, 1796.

Dear Sir, — I should have written you last week, had I then been able to ascertain certain facts, the rumour of which I had heard. A Mrs. Beers, a near neighbor to me, the wife of Eber Beers, and daughter of Capt. Samuel Huggins, of this town, had been, for fourteen weeks, exceedingly distressed with the rheumatism, to such a degree, that for fourteen weeks previous to the 29th of last month, she had not been able to walk across her room even with the crutches, save only once, when she made out, with the assistance of crutches, to hobble part of the way across her room. On the 29th of September last, she procured a set of your Metallic Substances, and in less than an hour after she had begun to use them, in the manner directed by you, she rose from her chair, and walked about the house, and on the next day she went abroad to her neighbors, having thrown aside her crutches. I have this day paid her a visit, in company with her father, and Timothy Jones, Esq. who lives in the street where she resides and directly opposite to her residence, and with Captain Abel Burrett, who is her next neighbor, and lives within eight yards of her door. I requested her to relate her case over in their presence, which she did, and these gentlemen all, with one voice, supported from their own knowledge, her story. It is a duty which you owe yourself and the world to promulge this event.

I am respectfully, your most obedient servant,

Pierpont Edwards.

N. B. She says her fever has left her, her appetite has returned, and she is in a fair way to be restored to perfect health.

James Glover, Esq., Norwich, County of Tioga, State of New York.

September 19, 1796.

Sir, — Having lately purchased a set of your patent instruments to keep in my family, I have used them with great success on a person scalded with boiling lie: a man by the name of Welch, who was at work in my potash, when boiling down the lie, some of it flew into one of his eyes, which soon became very much inflamed, and swelled to such a degree, that he could not open it, and remained in that situation, for the space of three days, when after a few minutes operating with your patent instruments, he was able to open it, and with two operations only, his eye was almost entirely free from pain and inflammation, and in a short time was perfectly well, although so badly scalded, he had almost despaired of its ever recovering.

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[1] Read before the Suffolk County Medical Society, April 26, 1884.

James Glover.

Mr. Samuel Satterlee.

Williamstown, *November* 3, 1796.

Sir, — I was called on in the evening, by a gentleman with a cancer on his lips, which caused a severe inflammation in every part of his face; I furnished him with a set of your Metalic Instruments, until the morning following, when he returned so enraptured with their effects, that he readily purchased a set.

I am &c. Samuel Satterlee.

Mr. John Punchard.

Salem, *October* 19, 1796.

Sir, — I have operated repeatedly with your Metallic Points and have succeeded in removing rheumatic pains, agues, pains in the head, face, side and burns to my astonishment, and to the astonishment of all present. I cured a man burnt with powder, in less than half an hour, with the Points, without any other application.

John Punchard.

Bezaleel Woodward, Esq., Professor of Philosophy and Mathematics, Dartmouth College.

Hanover, New Hampshire, *September* 19, 1796.

Sir, — I have made use of your pointed Metallic Instruments in various disorders, and besides universally abating and generally removing pains in the head, face, teeth, &c., by application of them, I have found them useful in the salt rheum. Only one opportunity has presented for an effectual trial — that has cured the patient by three applications, which being noised abroad, sundry persons affected with that disorder, have been at my house this week, to have the operation performed on them; and the disorder has abated on the first application, so that the present prospect is, that cures will be effected for them, by further use of the Instruments. A violent pain proceeding from a sprain in the foot, has, by a few minutes application of the Instruments, been removed so as not to return.

I have the honor to be, Sir, your most obedient and humble servant,

Bezalell Woodward.

Gen. Elihu Marvin, Member of the Connecticut Medical Society.

Norwich, *December* 20, 1796.

Sir, — Since I have been in the use of your patent Metallic Points, which is about four months, I have, by way of experiment, made use of them in cases of inflammations of almost every kind, and in subjects, of all ages and descriptions, and as might be expected, with various success. One fact, however, I am fully convinced of (in opposition to former prejudices), viz. That in a variety of circumstances, a proper application of them is capable of operating a change in the human frame, which I can no more doubt, because I cannot assign a satisfactory philosophical reason therefor, than I can doubt the operation of opium, because, the properties of that gum, by which, and the modus operandi, in which it produces sleep, are to me wholly unknown. I am confident reasoning a priori, would as soon establish one fact as the other. Cases in which the points have, in my practice, appeared successful, are such as burns, headaches, agues in the face, opthalmies, pains in the limbs, breast, and sides, and in cynanche tonsillaris, yet candor requires I should say, success in these cases has not been universal.

One case of cynanche tonsillaris, or common inflammatory quinsey, I will relate to you. — I visited a young man late in the afternoon, found him exercised with all the usual symptoms of that disease, such as general inflammatory diathesis, the tonsils so tumefied as to be nearly closed together. His throat and neck externally enlarged, a constant discharge by spitting a glairy mucus, and complaining of excessive pain in the parts: by his account, these symptoms had been increasing for about three or four days. His mother informed me that he had not swallowed anything for thirty-six hours, except three or four spoonfuls of water, in which toasted bread had been soaked. I could not learn that any means had been used for his relief, except keeping within doors and making some external applications. I applied the Metalic Points externally in the usual way, very soon the spitting sensibly decreased. After some time, he observed the pain was wholly gone on one side, and much lessened on the other. I then desired him to make trial how he could swallow; he took a tumbler of sweetened water, and drank it with little difficulty, and immediately ate about half a pint of custard. I then left him, with directions to repeat the operations occasionally; and, in the intervals, to keep the throat covered with some emollient poultice. On visiting him the next day, I found him sitting at the fire, roasting oysters, and eating them without difficulty; he observed he was well. I made every enquiry, to discover whether the swelling had not burst, but could not learn anything from him which gave the least reason to think it had. I left him a dose of purgative pills, which he swallowed without pain, and in a few days regained his usual health.

One case of pain in the side, occasioned by the patient, while unwell, being exposed to a cold, damp atmosphere, attended with great interruption of locomotion and difficult respiration, was completely relieved by a few minutes' application of the Points. With every sentiment of esteem, I remain your sincere friend,

Elihu Marvin.

Dr. Samuel Willard, Member of the Connecticut Medical Society.

Stafford, *August* 6, 1796.

Since I returned to Stafford, I have made trial with your Metallic Instruments with very happy success, in a case of acute rheumatism, which had, for a long time, baffled all the remedies to which I myself and two or three other physicians had advised.

The wart which I burned down when at your house, gave me no trouble as to any sensation of fire, after you operated on the inflamed part; I felt a soreness for several days after, but the soreness was no greater than would have arisen from the destruction of so much skin from any other cause. It argues great folly to condemn any innovations, or new improvements in the arts and sciences, without due investigation. This is a kind of treatment, however, which you have already experienced, and which you must expect still to experience.

I am &c. Samuel Willard.

John Vaughan, M. D., State of Delaware.

Christiana, *July* 14, 1796.

Dear Sir, — I have operated in a few cases only, with your instruments, for but few have offered since I possessed them. One case of nervous or hysteric headache, perfectly cured — a case of odontalgia relieved. The third a young man, who had fallen ten or fifteen feet on the edge of an open ended hogshead, and received a considerable contusion in the umbilical region, with tumefaction. I bled him three times to little purpose. But after about two minutes operation with the instruments, he exclaimed in extasy, "I am well — I am well — my pain is gone." The pain, however, returned in a less degree, but in thirty or forty minutes went off entirely, and he went to work as usual.

I am &c. John Vaughan.

Rev. Dr. Morse, of Charlestown.

December 9, 1796.

Dear Sir, — I have made a faithful trial of your patent Metallic Points in a number of cases — such as burns, pains in the head, teeth, face, ears, side, back and limbs, arising from colds, and in one or two instances rheumatic pains have been relieved by them; and in one instance the painful effects of the sting of a wasp were entirely removed. In some cases I have been unsuccessful, particularly in a burn, where[1] oil had been previously applied, and in the tooth-ache, where the teeth were[2] very defective. On the whole, I believe the discovery to be a very useful one; I wish it cordially all imaginable success.

I am &c. Jedediah Morse.

Rev. Walter King.

Norwich, *October* 6, 1796.

Sir, — The fame and utility of your patent instruments have become subjects of so much notoriety and speculation, that almost all pained people are desirous of making trial of them. Their efficacy within my knowledge, appears to be increasing. I am more and more confirmed in the benefit of the discovery, and cannot think but they will continue as long as the pains of the human body shall need them.

I am &c. Walter King.

In the transfer of the patent right, one of which accompanies each set of instruments, are specified, the several disorders in which the treatment is useful; the mode of operation and the circumstances which prevent the genial effects. It is there observed —

[1] The efficacy of the means is prevented by all oily and greasy substances.

[2] It may not be reasonably presumed, that a cure could be made on teeth which were very defective.

Rev. Dr. Robbins, of Plymouth.

September 24, 1796.

Dear Sir, — Several persons, since you left us, have experienced immediate relief, in various complaints, by the Metallic Points.

I operated, day before yesterday, on a man's hand, which was prodigiously swelled and painful, by a wound he received on the back of it, which he neglected and got cold in. It was much inflamed; but was relieved by that single operation. The swelling subsided, and the inflamation went away, so that he went directly to work on board his vessel. He told me the last night it gave him no trouble. I am &c.

Chandler Robbins.

Rev. Dr. Stillman, of Boston.

October 6, 1796.

Dear Sir, — I feel myself much obliged to you for the important service you have rendered to Mrs. Stillman's eyes, after a distressing inflammation of eight months. If, through too much exercise, or being exposed to very cold air, a degree of inflammation returns, it is removed in a few minutes again, by the application of your points. I have in my walks among the sick, made use of them repeatedly with success; and cannot but think they will be of important benefit to mankind.

I am &c. Samuel Stillman.

Rev. Mr. Balch.

Georgetown, *May* 16, 1797.

Dear Sir, — A neighbor of mine, Mr. James Connor, was sorely afflicted with an inflammation in his left eye, and a pain in his head. His eye appeared like a ball of blood, and all the contiguous parts were much inflamed, and of a bloody color. I saw your Metallic Points applied to the affected part with such success, that, in the space of about ten minutes, he declared the pains were gone — he has told me since, he never felt any inconvenience from it afterwards.

Several of my neighbors who have been afflicted with pains, have testified in favor of your tractors.

That you may succeed in promoting the happiness of the human race, is the wish of,

Sir, your humble servant, Stephen B. Balch.

CERTIFICATES.

Capt. William Ladd.

I hereby certify, that for twelve or fourteen years past, I have been frequently exercised with severe paroxysms of the Gout. In the fall of 1795, I had a violent attack of this disorder, which had confined me to my room for six or eight days. At this time, when my foot was very much swelled, inflamed, and in such extreme pain, especially my great toe, that I could not walk nor set my foot on the floor, Doctor Hopkins called on me, and operated on my foot, with an instrument, as he said, according to Dr. Perkins' directions. Within five minutes the pain and inflamation ceased, so that I walked with ease. The swelling, within twenty-four hours, subsided so that I put on my shoe; and this foot, in two days became as well as the other. The pain has twice returned since, but has been soon removed by the same application. William Ladd.

Rev. Samuel Hopkins, D. D., Newport, R. I.

Newport, *August* 17, 1796.

I the subscriber, hereby certify, that I performed the operation on the foot of Capt. William Ladd, which is by him above related, and am witness to his being relieved and cured by said operation. I have had credible information of other persons being cured of pains by the same means in this town.

Samuel Hopkins.

Rev. William Patten.

The subscriber is a witness to the cure of Capt. Ladd as above related, and has reason to believe that in various other instances, persons in this place have been relieved, by the same application, from pains in the head, eyes, &c.

William Patten.

Newport, *August* 17, 1796.

Mr. Constant Freeman, Master of the Almshouse, Boston.

This certifies, that Docter Elisha Perkins, of Plainfield, Connecticut, visited the poor house of this metropolis, about three weeks ago, and performed operations on several patients, with his celebrated Metallic Points; among whom he performed his operation on one John Patterson; he had been in the poor house for six months, with the rheumatism — Two months of which he was confined to his bed — four months he had hobbled about with crutches, when Docter Perkins performed the operation; since which, he has thrown aside his crutches, and walks only with a staff, which he uses, not for the rheumatism, for he has none, but merely for a support, as his thigh bone was then and still remains dislocated.

Nancy Blake was also cured by the Doctor of the rheumatism in the small of her back, which had constantly afflicted her for more than three years. It has not yet returned. I myself cured Benjamin Ross of the rheumatism in the small of the back and hip. This was ten days ago; it has not yet returned.

Lewis Dumeth, a Frenchman, was operated upon by the docter, for the rheumatism in his lower extremities, which had confined him to his bed and crutches for months; but no sooner was he operated upon, than he threw aside his crutches — walked about the house — has walked about the town since, and has had no return of the rheumatism in either leg.

Constant Freeman.

Boston, *October* 5, 1796.

Mr. Edward Hill.

I Edward Hill of Dorchester, in the County of Norfolk and State of Massachusetts, hereby certify that I have been afflicted with the rheumatism and gout at times, for nine years past, and at length to such a degree as to be unable to walk. But upon the application of Dr. Perkins' Patent Metallic Instruments, I was in the course of two days, so recovered as to be able to walk without any pain. Edward Hill.

Perkins also invented a medicine, an antiseptic, and, being anxious to try it in yellow fever, he went to New York in 1799, where then the disease was prevalent, and after four weeks of unremitting toil he himself died of the fever.

About the time of the popular excitement occasioned by the wonderful cures by the "tractors," Dr. Benjamin Douglas Perkins, son of Elisha, went to England, the wonderful cures by the magnetic tractors having preceded him. He settled in Leicester Square, London, where he proposed to make good the fame of his father. He then took out a patent for the wonderful "tractors." The most wonderful stories soon obtained general circulation, and the press groaned with pamphlets all vaunting the curative effects of the metallic tractors, which were sold at five guineas the pair. Perkins gained money rapidly; gouty subjects forgot their pains in the presence of this new remedy; the rheumatism fled at its approach, and toothache, which is often cured by the mere sight of a dentist, vanished before Perkins and his marvelous steel-plates.

The benevolent Society of Friends, of whose body he was a member, warmly patronized the invention. Desirous that the poor, who could not afford to pay Perkins five guineas, or even five shillings, for his tractors, should also share in the benefits of that sublime discovery, they subscribed a large sum and built a hospital, called the "Perkinean Institution," in which all comers might be magnetized free of cost. In the course of a few months they were in general use, and their lucky inventor in possession of five thousand pounds.

Dr. Haygarth, an eminent physician of Bath, recollecting the influence of imagination in the cure of disease, hit upon an expedient to try the real value of the "tractors." Perkins' cures were too well established to be doubted, and Dr. Haygarth, without gainsaying them, quietly, but in the face of numerous witnesses, exposed the delusion under which the people labored with respect to the curative medium. He suggested to Dr. Falconer that they should make wooden tractors, paint them to resemble the steel ones, and see if the very same effects would not be produced. Five patients were chosen from the hospital in Bath upon whom to operate; four of them suffered severely from chronic rheumatism in the knee, ankle, wrist, and hip, and the fifth had been afflicted for several months with gout. On the day appointed for the experiments Dr. Haygarth and his friends assembled at the hospital and with much solemnity brought forth the fictitious tractors; four out of five patients said their pains were immediately relieved, and three of them said they were not only relieved but very much benefited; one felt his knee warmer, and said he could walk across the room; he tried and succeeded, although on a previous day he had not been able to stir; the gouty man felt his pains diminish rapidly, and was quite easy for nine hours, until he went to bed, when the twitching began again. On the following day the real tractors were applied to all the patients, when they described their symptoms in nearly the same terms. The same experiment was tried in other hospitals with the same results.

An account of these matters was published by Dr. Haygarth in a small volume entitled, Of the Imagination, as a Cause and Cure of Disorders, exemplified by Fictitious Tractors.

The friends of Perkins were unwilling to confess they had been deceived. They found at last that no one believed in them. The Perkinean Institution fell into neglect, and Perkins made his exit from England carrying with him about ten thousand pounds to soothe his declining years in the good city of Philadelphia.

Thus, for the time, magnetism was laughed out of England. It would seem that the Medical Society of Connecticut was purely orthodox, medically speaking, for we find on the records of the Society the following declaration made, at an adjourned convention of the Medical Society of the State of Connecticut, holden at Hartford on the 17th day of May, 1796: —

> *Voted*, It having been represented to this Society that one of their members had gleaned up from the miserable remains of animal magnetism a practice consisting of stroking with pointed metalic instruments, the pained parts of human bodies; giving out that such stroking will radically cure the most obstinate pains to which our frame is incident — causing false reports to be propagated, of the effects of such stroking, especially when they have been performed on some public occasion, and on men of distinction also, that an excursion has been made abroad, and a patent obtained from under the authority of the United States, to aid such delusive quackery, that under such auspices as membership of this Society, and patent above mentioned, the delusion is progressing to the Southward which may occasion disgrace to this Society and mischief abroad; wherefore this Society announce to the public, that they consider all such practices as barefaced imposition, disgraceful to the faculty and delusive to the ignorant; They therefore direct their Secretary to cite any member of this Society, practicing as above, before them at their next meeting, to answer for his conduct, and render reasons why he should not be expelled from the Society for such disgraceful practices.

At a subsequent meeting the following vote was passed: —

> Whereas Dr. Elisha Perkins, a member of this Society, having obtained a patent from under the authority of the United States for the exclusive privilege of using and vending certain pointed Metallic Instruments, pretending they were an invention of his own, and also that they possess inherent powers of curing many diseases which is contrary to rules and regulations adopted by this Society interdicting their members the use of nostrums, Therefore
>
> *Voted*, That the said Elisha Perkins be expelled from the Medical Society of the State of Connecticut.

This delusion was practiced in a generation not remote from the present. What is called magnetism has in ages past been a stronghold for quacks, and is to this day among certain classes. We hear men and women "*rubbers*" boasting of their magnetism, and even advertising themselves as doctors with special powers and gifts for healing. Of late these delusions have taken a new form, and even now we have Faith Schools in our midst. They blasphemously take the name of religion, and practice their impositions upon the weak-minded and gullible public. They pretend to be but little lower, if not a little above, angels, and contract with the Almighty for the healing of diseases. In these times we behold a ray of light. Science is coming forth in shining garments, with her hands unstained with human blood; when she shines in full effulgence these imps will hide in the dark recesses as the owls and bats do at noonday.

Did time permit, it would afford me pleasure to give a more full history of the magnetizers, whose feats have been regarded by the populace as *wonderful*, and so they are to one who cannot or does not understand the laws of mind.

One who understands psychological law can well comprehend why it is that a sick person who has little or no power to resist impressions from surroundings can be made to feel better or worse, when the bedside is surrounded by the praying band, who offer up one after another earnest prayers with certain gesticulations well known to the fraternity. The laws of psychiatry now explain the wonders of mental phenomena which were once attributed to supernatural agencies. The merest tyro now understands various phenomena which the wisest of old could not fathom.

The school-boy knows why, upon high mountains, there shouldon certain occasions appear three or four suns in the firmament at once, and why the figure of a traveler upon an eminence should be reproduced of gigantic stature upon another. We all know the strange pranks which imagination can play in certain diseases; that the hypochondriac can see visions and spectres; and there have been numerous cases in which men were perfectly persuaded that they were *tea-pots*, and I have cases under my care frequently who think they are somebody other than themselves. One thought he was his mother, another thought he was his horse, etc., etc. Science is lifting up the veil and rolling away all the fantastic horrors in which our forefathers shrouded these and similar cases. The man who now imagines himself a wolf, a dog, or a horse, or his mother, is sent to the hospital instead of to the stake, as in the days of the witch and devil mania; the earth, air, and sea are no more peopled by the grotesque spirits that were once believed to haunt them. It seems to me the duty of every physician to deal honestly with his patients, and, as far as possible, to remove these delusions from the public mind; when this is done our insane asylums and mad houses will be less full, and mankind will understand better how to handle nature's laws, and use them not for a curse, but for a blessing.

— The model "grateful patient" is the London art dealer, Mr. King, who at his death left half a million dollars to St. George's Hospital, and more than half a million dollars to his medical adviser, Dr. Roper.

THE PITCH OF THE PERCUSSION SOUND.[1]

BY LEONARD HUNTRESS, JR., M. D., OF LOWELL.

IN this paper I shall not have time to dwell long on the subject of pitch in general, as I wish to confine my observations to two special matters which seem to me of interest.

The pitch of the percussion sound has been regarded as of little consequence until lately, and I do not think that sufficient prominence is given it to-day, except by a few writers. Auenbrugger barely alludes to the pitch of the percussion sound. Neither Laennec nor Piorry mention it. Locher pronounces it chimerical. Skoda considers the variations in pitch as of little practical value, although he admits that "it occasionally happens that the presence of tubercles in the upper part of the lung may be diagnosticated by the different pitch of the percussion sound over the corresponding part of the other lung."

American and English writers lay no special emphasis on the importance of the pitch. French writers generally slight the subject, although Woillez considers it of more importance than the intensity or the quality of the sound. He says: "I place the pitch at the head of the important characteristics of the percussion sound." And again: "If up to the present time its importance has not been understood, it is because it has not been studied apart from its intensity."

Niemeyer expresses himself thus: "Although formerly this distinction (between high and low pitch) was treated in such a neglectful (stiefmutterlich) manner, it is of much use to modern workers in percussion."

Stern says: "To-day men of training are better fitted to distinguish differences of pitch than differences of sonorousness and intensity, and therefore it is evident that many medical investigators of abnormalities of sonorousness and intensity really perceive only the change of pitch."

The four elements of the percussion sound which should be studied with reference to diagnosis are quality, pitch, intensity, and duration. I know that this is an unusual classification, but I am sure that it is the correct one. I have found it in but one of all the writers I have studied on this subject. Some writers recognize only intensity and quality as elements of the sound; others add to these two a third, pitch. Seitz alone considers the duration of the sound of sufficient importance to classify it as a distinct element.

The duration is not to be confounded with the pitch of the sound. The latter depends upon the number of sound-waves which strike the tympanum of the ear in a given time. The former depends on the length of time these waves continue to strike upon the tympanum, and of course can be considered only when the sound is produced by a stroke or blow, and not where the sound is caused by a continuedly applied force, as in wind and string instruments. The duration of the sound depends in part, to be sure, on the pitch, a high-pitched sound being, *cæteris paribus*, of shorter duration than a low one. Two sounds of the same pitch may, however, differ greatly in duration, as in the case of the long-vibrating peal of the church bell as compared with the short beat of the drum, even though the pitch be alike in both cases.

The conditions, other than the pitch, which influence the duration of the sound refer in part to the substance of the body percussed, the duration being in direct proportion to the elasticity and homogeneousness of this body. The medium surrounding the body percussed also affects the duration of the sound. Strike a bell suspended in the air gently, and note the duration of the vibration. Now immerse the bell in water and strike it more forcibly, so that the intensity of the two sounds shall be equal, and see how much sooner the vibrations cease. A third factor is the movability of the point or points of support by which the body percussed is held in place. The duration is directly proportional to the movability of this point. So *one* reason for the long-continued vibration of the church bell is the fact that it hangs suspended in the air, with nothing but its weight to prevent it from swinging with every breeze.

I would urge upon instructors in physical diagnosis the importance of teaching duration as well as pitch, as an essential element of the percussion sound.

Of the three commonly recognized elements of the percussion sound, quality, pitch, and intensity, I admit that in many cases the quality may be the most important and significant, and differences in quality in two sounds may be so marked as to be more easily distinguished than the difference in pitch or intensity. I think it, however, no more than fair to claim that as between the two latter the pitch of the percussion sound is of more aid to us in diagnosis than the intensity.

If, for example, you are comparing the two sides of the chest, it is impossible to percuss them with equal force. Even if it were possible, no one could be sure from which side the louder sound is elicited. The force of the percussion stroke affects the pitch comparatively little. The difference in pitch is something that any one with (I will not say a musical ear, for happily our ears are all with few exceptions musical) an ordinary ear can distinguish. Let any one strike a note on a piano twice in quick succession, the first time somewhat more forcibly than the second, in the hearing of a company of unselected persons, and there will probably be by no means a unanimity of opinion in regard to the intensity of the note. Let him now strike two different notes, and probably the listeners can all distinguish the higher from the lower one. They certainly can if the two notes differ much in pitch. In the percussion sounds of the thorax it is not uncommon to have two sounds for comparison at least a fifth apart.

There are two characteristics always existing in the pitch of a sound, which aid us in our determination. A high sound is, as we have seen, of comparatively short duration. It is also of harder tone. A low sound is of longer duration and of softer tone. This always assists us in determining the pitch of a sound, whether we recognize the aid it affords us or not.

The first point to which I call your attention is the difference in pitch between the percussion sound of the right infraclavicular region and that of the left in the healthy thorax.

Several years ago I was taught by Dr. Guttmann, of Berlin, who follows Traube in this regard, that the pitch is higher on the left than on the right side of a healthy chest. All the instruction I had previously received on the subject had been the reverse. I therefore determined to ascertain what was generally taught by good authorities, and to make some experiments for myself.

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[1] Read before the Massachusetts Medical Society, June 11, 1884, and recommended for publication by the Society.

To show the teaching of Dr. Guttmann, I will quote from his Handbook of Diagnosis: "In the normal thorax differences in the pitch of the percussion sound at different parts may be recognized by a cultivated musical ear; thus, on the right it is usually found to be deeper than on the left, though occasionally the reverse condition is met with."

I will compare this statement with the teaching of Dr. Flint in his work on the Respiratory Organs. Referring to the infraclavicular region, he says: "In the majority of persons the resonance on the left side is somewhat more intense, the vesicular quality is more marked, and the pitch lower than on the right; per contra, the resonance and the vesicular quality are less and the pitch higher on the right side."

I have studied the literature of the subject with some care, and I generally find but little said concerning this point. By inference most of the authorities represent the two sides as alike in pitch; for example, when every region of the thorax is carefully discussed, and such a special point as the difference in pitch between the inner andr and outer parts of each infraclavicular region is brought out, no allusion whatever is made to a difference between the two sides.

We should not expect this point discussed by so early a writer as Auenbrugger, but I will call your attention to what he has to say bearing upon it: "If a distinct sound, equal on both sides and commensurate with the degree of percussion, is not obtained from the sonorous regions above mentioned (the thorax), a morbid condition of the parts within the chest is indicated." Corvisart, in his Commentaries, says: "It is a circumstance too obvious to be much insisted upon, that the percussion must be strictly similar and equal on both sides. The least sonorous side is certainly diseased." Of the American writers, DaCosta agrees with Flint. The others are silent on the subject. Most of the English writers whom I have consulted say nothing. Dr. R. Douglas Powell, however, affirms that "in the clavicular and infraclavicular regions the note should be even on the two sides as low as the third rib on firm percussion." French writers generally ignore this point, although Mailliot says: "The lungs percussed with equal force on the right and left side give the same result on one side as on the other, from the apices down to the fourth rib." German writers, so far as I have studied them, are also silent here, except Traube, Guttmann, and Seitz. The two former generally find the right side of higher pitch than the left, while Seitz finds that "in the axillary region in many cases the sound is relatively deadened (pitch raised) on the right side," thus agreeing rather with Flint.

On which side should we expect, *à priori*, to find the pitch the higher?

The height of the sound depends upon the volume of the air-containing body percussed (the lung), and also upon the tension of the chest wall and parenchyma, being inversely as the volume and directly as the tension. We may represent this by $H = \frac{T}{V}$. There is, I think, no doubt of the correctness of this formula, although Skoda says that the pitch is dependent entirely upon the quantity of air in the lungs, and Woillez thinks that he has demonstrated by the spiroscope that the pitch is not influenced, at least in every case, by the tension.

Other conditions may affect the pitch; as, for example, the condition and thickness of the chest walls, and the size and substance of the organs lying in juxtaposition to the diaphragm.

Flint, with regard to the infraclavicular, and Seitz, with reference to the axillary region, both think that the increase in intensity and the lowering of pitch on the left side may be accounted for, at least in part, by the transmission of sonorousness from the tympanitic stomach.

I do not see how Flint can consistently make use of this argument, for two reasons: First, the tympanitic sound which he thinks tends to a lowering of the pitch here, he asserts emphatically is always higher pitched than the normal vesicular resonance. Secondly, he teaches in the same work that whenever the intensity of the percussion sound is morbidly increased (here by the tympanitic sound, as he says), the pitch is always raised.

All of the conditions, aside from the tension of the chest wall and parenchyma and the volume of the lung, exert upon the pitch a comparatively slight influence, I think.

There is no uniform difference between the tension of the two lungs recognized by authorities and laid down in text-books. There is a difference in the volume, the right lung being the larger. Hence we should expect to find the pitch lower in the right lung in the majority of cases. Should we find the reverse to be true, we should conclude that the tension was greater on the right than on the left side, and, too, that the difference in tension exceeded the difference in volume.

I have been experimenting upon this matter for several years, and have given careful attention to the work. It is needless to say that all the subjects examined were in good health, and that special care was taken with reference to pulmonary disease. All cases of deformed and unsymmetrical thoraces were discarded; also all abnormally large or small ones. I percussed in every case both with and without the pleximeter, and I attended to two points which are often overlooked in comparing the percussion note of the two sides. First, care was taken in every case to percuss on points equally distant from the sternum, for in the regio-infraclavicularis externa the pitch is higher than in the regio-infraclavicularis interna. And secondly, percussion was made at the same period of the act of respiration, always at the close of a full inspiration.

Referring to the formula $H = \frac{T}{V}$, in inspiration, both numerator and denominator are increased, but the increase in tension of parenchyma and chest wall is greater than the increase in volume of the lung, and as a consequence the pitch is higher at the time of full inspiration than at any other period of the act of respiration. At the close of a forced expiration the pitch is slightly lowered, although Stokes says: "A full inspiration makes the sound clearer, full expiration the contrary, but they both raise the tone a little, they render the pitch higher. Why is this? For the simplest reason in the world, — both actions tighten the drum. They strain the walls of the chest and render their vibrations quicker, and therefore the sounds higher." This, by the way, is the only allusion to the subject of pitch that this writer makes in his work on the chest.

I have had opportunity to examine only two hundred subjects; not enough, I know, to determine the matter satisfactorily, but still enough, I think, to be of interest to you. The persons were mostly men, thirty only being women. They were all between the ages of twenty and forty. I divided them, with reference to the results obtained, into five classes: (*a.*) Those in whom no difference was found in the pitch of the two infraclavicular regions. (*b.*) Those in whom the pitch was slightly higher on the right. (*c.*) Those in whom it was slightly higher on the left. (*d.*) Those in whom it was markedly higher on the right. (*e.*) Those in whom it was markedly higher on the left.

I will say here, that whenever I thought there might be a slight difference of pitch, but was in doubt about it, I placed the case in class *a*.

The result was as follows: —

(*a.*) No difference	72
(*b.*) Slightly higher on right	71
(*c.*) Slightly higher on left	26
(*d.*) Markedly higher on right	23
(*e.*) Markedly higher on left	8

At first glance this result might seem to be of little significance, but I do not so consider it. Out of two hundred cases in but seventy-two, or but little more than one third, is the pitch equal on the two sides. In ninety-four cases, nearly one half, the pitch is higher on the right than on the left. In thirty-four cases the reverse is true.

Now what is the practical bearing of this, supposing the work to have been well done, and considering the cases sufficient in number to be of value?

In the first place, a difference in pitch — and a difference in pitch means a difference in intensity and quality as well — at the apex of either lung, unless decidedly marked, does not necessarily indicate disease on the side where the pitch is higher. According to my investigation there is a difference in nearly two thirds of the cases. This, however, is not generally taught.

Secondly, although the right side is much oftener high-pitched than is the left, still out of two hundred cases we have thirty-four, seventeen per cent., in which the pitch is higher on the left. So, although it is much more significant to find the left lung showing dullness on percussion at the apex than the right, yet this by no means is proof of disease, as I think is generally taught by those who make any distinction between the two sides.

While I was conducting these experiments, a friend made the criticism that to have the result satisfactory a resonator should be used, so that the pitch could be accurately determined. I do not agree with him. In that way every variation of pitch could be discovered, to be sure, and probably a slight difference would be noticed in nearly every case, but it would be of no practical value. What I desired to show was what could be discovered by an ordinary ear, — an ear musically uncultivated.

. . . .

There are so many unsettled questions in medicine that it would seem worse than useless to call attention to any point simply because authorities differ concerning it. If we were to do that we should have our hands full. But there is so much loose writing, especially concerning strictly scientific matters, in even the best medical works, that I think a protest now and then is needed. I desire to call your attention to the pitch of the tympanitic sound.

Dr. Flint, in his work on the Respiratory Organs, teaches that the pitch of the tympanitic percussion sound is always higher than that of the normal vesicular resonance, and he affirms that there is no exception to this statement. In his Manual of Percussion he says: "If there are any exceptions they are very few."

Dr. Loomis, in his Physical Diagnosis, says that the pitch of the tympanitic sound is lower than that of the normal vesicular resonance.

These statements, unaccompanied by any explanation, are taught as facts by two of our most widely read writers. They are diametrically opposed to each other, and I think I can show that, although the latter writer is, from a scientific stand-point, nearer the truth than the former, they both offer good examples of loose and incorrect writing.

The normal vesicular resonance is a good illustration of a non-tympanitic sound. The sound elicited from pulmonary cavities under certain conditions, and also the sound obtained by percussing the intestines or stomach when not too tensely inflated, are good examples of a tympanitic sound. The latter is a clear, ringing sound, with a musical tone, the sound-waves striking upon the tympanum of the ear at regular periods. The non-tympanitic sound is not a musical sound, the waves striking the tympanum irregularly.

Percuss a freshly removed sheep's lung without inflation, and you obtain a clear musical tympanitic sound. Inflate the lung to the degree of tension maintained in life, and the sound becomes less clear, non-musical, and non-tympanitic. Here the pitch is raised. Or take a pig's bladder, just barely filled with air, with no stretching of the membrane, and on percussion the sound is clear and tympanitic. Now inflate the bladder until the walls are tense, and the percussion sound is non-tympanitic, with a higher pitch.

According to Skoda and Niemeyer, and in fact according to authorities generally until quite recently, the relaxation of the chest well and parenchyma was considered as the chief if not the only necessary condition of tympanicity of the pulmonary percussion sound, and the tension of these parts the sole cause of non-tympanicity. Tension of the membrane often destroys the tympanicity, to be sure, as the two examples just given illustrate, and as is seen in meteorismus of the bowels. In all these examples the pitch is raised. Tension does not, however, necessarily destroy the tympanitic sound, as is seen in the case of the drum. With this example before him, how could Skoda say that the stretching of the membrane necessarily destroys the tympanicity of the percussion sound? In many pulmonary cavities the tympanicity and also the pitch are dependent on other factors than the relaxation of the surrounding walls.

I have not space, however, to dwell on theories as to the cause of tympanicity, under all the different conditions with which it is met. I will call your attention to certain pathological conditions in which the percussion sound is tympanitic, and consider the question of pitch in each case.

Those conditions which favor retraction of the lung tissue often give rise to a tympanitic percussion sound, just as we have seen that the lung when removed from the thorax and allowed to assume its natural uninflated volume gives a clear musical tympanitic sound.

There are several pathological conditions under this head, but I will allude to only one, which is sufficient for illustration.

In moderate pleuritic exudations the lung above the level of the fluid shrinks in volume, and when this retraction reaches a certain point, which is variable in different cases, the percussion sound is tympanitic. In this case the pitch is lowered as the tension is diminished. Here the pitch of the tympanitic sound is lower than that of normal vesicular resonance.

If all cases where the sound is tympanitic could be thus easily disposed of, Dr. Loomis would be justified in his broad statement, for here the two sounds compared are both elicited from lung substance, and the tympanitic one coming from a lung of diminished tension is in consequence of lower pitch.

Without attempting to classify all the conditions which give rise to a tympanitic percussion sound, I will speak of a class of cases which are very different from that just discussed, and which obey different laws with reference to their pitch. I refer to the tympanitic percussion sound of pulmonary cavities.

In the first place, a cavity is either shut in completely by its walls, or it communicates by an opening with the adjoining tissue. If it is completely occluded, the air within cannot be set in vibration so as to produce an audible sound if the walls are stiff and unyielding. If the walls are sufficiently elastic to admit of the production of a distinct sound from the cavity, tympanicity will be present only in case the walls are not too tense.

The tympanitic sound obtained from a completely occluded cavity with elastic walls in a state of relaxation obeys the same law of physics with reference to pitch as the non-tympanitic normal vesicular resonance. The height is directly as the tension and inversely as the volume.

If the cavity communicates by an opening with the adjoining tissue, the sound may be tympanitic with either elastic or unyielding walls. If the walls are stiff and inelastic, the pitch of the percussion sound depends upon the volume of the cavity and the diameter of the opening of communication, being inversely as the volume and directly as the diameter of the opening. If the walls are elastic, the pitch of the sound depends on these two factors in just the same way, and also upon the tension of the walls, being of course in direct ratio with the tension.

There is also a general law with reference to the elasticity of the walls, that the pitch of cavities, *cæteris paribus*, is in inverse proportion to the elasticity of the walls. If a cavity is sufficiently long and narrow, that is, if in form it is a tube rather than a cube, the pitch does not depend upon the volume of the cavity, but upon the length of the air-vibrating column, being in inverse proportion to this length.

It is true that the tympanitic sound of the abdomen is higher pitched than the normal vesicular resonance. This is not because it is tympanitic. You could with more truth say it is in spite of that fact. We have seen that in tympanicity from lung retraction the pitch is lowered. We have also seen that in the case of the tympanitic sound of pulmonary cavities the pitch is sometimes high and sometimes low, according to the elasticity and tension of the walls, the diameter of the opening of communication, the volume of the cavity, or the length of the air-vibrating columns.

Perhaps Dr. Flint arrives at his conclusion by simply comparing the sound of a tympanitic abdomen with the normal vesicular resonance; and Dr. Loomis may arrive at his by thinking with Skoda that the sole cause of tympanicity is relaxation and decrease of tension of the tissues.

A CASE OF CHYLOUS DEPOSIT IN THE ABDOMEN.[1]

BY FRANKLIN NICKERSON, M. D., OF LOWELL.

THE subject of this sketch has been deaf and dumb from his birth, and his wife became so at the age of four years, the result of some injury. The two children of this union can both speak and hear. Our patient is fifty-five years old. He was born in Westford, Mass., in which place and Lowell he has spent his life. He has lived in Lowell thirty-two years, and for the past thirteen years in Bachelder's Place, which leads out of Walker Street at a point not far from Pawtucket Street, — a locality which is sufficiently healthy. Up to fifteen years ago he had worked in a bedstead factory. Since then, till a year and a half ago, his occupation had consisted in finishing doors, in which a good deal of heavy lifting is required, especially in the handling of the hard woods, but notwithstanding this he has never had hernia. For a year and a half he has been employed in a cash-carrier factory, where his work is much lighter. He knows of nothing peculiar in his family history except that his father died of consumption. His height is five feet and three inches. His weight has varied but little from one hundred and five pounds since he attained to manhood. His general appearance is fairly healthy; his carriage is erect and firm, and his movements are quick and nervous. His figure is not muscular, and, though spare, is well formed except that his abdomen is full for a person of his general build, and, as he says, has always been so. His complexion is light, and his hair has been white ever since the age of seventeen. He has been near-sighted for many years, has always been nervous, and has had only one testicle from birth. His general health has always been good, and he had kept steadily at work until the forenoon of January 15, 1877, when, on account of a sudden attack of pain shooting from the lower part of his back directly forward through his abdomen, and accompanied by vomiting, he was obliged to give up his work, and go to bed. The pain increased so that on the following day Drs. Savory and Fisk were summoned. They found the patient suffering from pain in a tumor, which, from its form, size, and situation led them to think that it was a distended bladder. The catheter was readily passed, but it withdrew only a few drops of limpid urine. Aspiration was then resorted to, which resulted in the extraction of about two quarts of milky fluid, with entire relief to the patient. After the aspiration the tumor collapsed to a level with the surface of the abdomen, and in a day or two the patient was about his work apparently as well as ever. Throughout this attack there was no febrile action, no symptoms pointing to any organ, and no affection of the general system except nervous excitement from pain and fear of the operation, and some slight weakness for a day or two. The evacuations, both of the bladder and rectum, were normal. An experience like that just narrated was repeated on March 21 and October 3, 1877, and July 28, 1878, respectively, except that every recurrence of the tumor was preceded by an exacerbation of pain lasting for about three days, while the quantity of fluid diminished so that by the last aspiration scarcely twenty ounces were withdrawn. I was present on this occasion, and can confirm the account of the case as given by the attending physicians. Some months after this the patient noticed a partial refilling of the tumor, and a subsequent retrocession thereof. The aggregate amount of fluid aspirated was about five quarts. After the first aspiration up to a year and a half ago he was subject to a dull ache in the lower part of the back, which was easily converted into a severe pain, shooting forward to the site of the tumor above described, by long walks or riding. This pain was also brought on when having a desire to go to stool he did not satisfy that desire at once. He had at times also some pain in the act of micturition. During the period just mentioned vomiting occurred at various intervals. The matter vomited consisted in the main of the same milky-looking fluid which was taken from the abdomen. When the vomitus was profuse general weakness followed for a few days. To these facts the patient, his wife and daughter testify with the greatest confidence. The patient has always had an aversion to milk, and has never used it except sparingly in coffee. He dislikes fat also.

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[1] Read before the Massachusetts Medical Society, June 11, 1884, and recommended for publication by the Society.

These are the only peculiarities observed in his diet. From the time of the first to the last aspiration the vomiting was less frequent and the milky vomitus less abundant than afterward, when these symptoms had increased to such a degree that the daughter called the attention of her physician to the fact. He asked her to bring to him a specimen of the vomitus if it should appear again, but this request was never granted. The pain and vomiting had been growing less marked up to a year ago last March, when his last attack of vomiting took place while he was at work. This attack was accompanied by a loose discharge from the bowels, in which, as well as in the vomitus, the milky fluid, as he says, reappeared. Ever since this time he has been well in every way.

A specimen of the fluid withdrawn by the first aspiration was brought to me a few hours after its extraction. Its general appearance was that of milk. After standing a few hours it exhibited a soft and generally diffused coagulum. Although some of the fluid remained in my office for a week in a temperature which ranged from 60° F. to 68° F., there were no signs of decomposition. It was odorless, and its taste was mawkish. The reaction was alkaline, and the specific gravity was 1018. Ether extracted from it largely a clear, yellow fluid, in which, on the addition of nitric acid, an albuminoid precipitate was thrown down. Under the microscope were seen large quantities of molecular granules, fat globules, occasional crystals of cholesterine and granular corpuscles of different sizes, in some of which nuclei were revealed on the addition of acetic acid.

A portion of the fluid was sent to Professor Edes, of Boston, who replied as follows: —

"January 19, 1877. I received your very interesting specimen yesterday. It is, as you suppose, an emulsion containing very finely divided fat, like chyle, and granular corpuscles of various sizes and shapes, and fat globules, single and aggregated. Dr. Fitz found a little cholesterine. I found no cells, except those mentioned, to indicate in any way its source. Chemically ether extracts a large amount of fat, bright yellow in color. It contains also a large amount of albuminous substance which precipitates with nitric acid, but also, after being boiled with alkali, with acetic acid, which would assimilate it more closely to

caseine. I was unable to get a trace of urea or anything like urinary pigment. There is also no urinary smell."

Professor Wood, of the Harvard Medical School, thus writes in allusion, as I think, to some oral observations which he had previously made on some of the fluid which had been taken from this patient: —

"December 7, 1878. I find nothing additional in my notes. The fluid was milky in appearance, and on being shaken with ether was rendered nearly clear. This clear fluid contained a large amount of albumen. The ether left, on evaporation, a large amount of fat. The microscope showed oil globules and lymph corpuscles in large numbers."

Unfortunately the fluid which was withdrawn by the last aspiration, and was sent to Professor Wood for a quantitative analysis, did not reach him till it was too old for examination.

In searching for precedents to the foregoing case I am mainly indebted to Professor Busey, of Washington, D. C., who has written two volumes, one entitled Congenital Occlusion and Dilatation of Lymph Channels, and the other, Narrowing, Occlusion, and Dilatation of Lymph Channels — Acquired Forms. A digest of the latter treatise, with some additions and modifications, may be found in the American edition of Holmes's System of Surgery.

Georgevic, in Langenbeck's *Archiv für Chirurgie*, vol. xii., p. 641, has written an article on lymphorrhœa and lymphangioma, and has illustrated his subject by a number of cases.

In Virchow's *Archiv für Pathol. Anat.*, vol. lxiv., No. 2, Dr. Weichselbaum, of Vienna, makes the discovery of a chylangioma cavernosum in the mesentery of the upper ileum the text for a summary of some contributions which had been made by different writers to the knowledge of lymphatic and lacteal pathology. There are also reports of cases relating to this subject scattered through various medical journals, but on the whole its literature is meagre.

In Professor Busey's work on the acquired forms of lymphatic disease is found the following classification: First, anomalies and lesions of the thoracic duct; secondly, rupture of the lacteals and receptaculum chyli; thirdly, chylous effusions into serous cavities. The vices of formation are mere curiosities of the dissecting room. It is stated, first, that diseases of the texture of the thoracic duct are usually the result of infection through the smaller lymph channels; secondly, that diseases of the lymphatic apparatus show a tendency to degenerative processes which have an enfeebling and wasting effect on the general system. It is evident, therefore, that we must look further than Professor Busey's first heading for analogies.

In an essay on dropsy by Donald Monroe, London, 1865, are found the following cases: (1.) In the body of a man who died after a large quantity of chylous liquor had been let out of his thorax was discovered, about the third or fourth vertebra, an orifice from which the chylous matter flowed as from a fountain. When the lower part of the thoracic duct was blown into the air came out at the above-mentioned orifice. (2.) A girl made too great an effort to raise a burden, and became hydropic soon after. Being frequently tapped there always issued from the puncture chylous matter. (3.) Hydrops lactea in a boy two years of age, which, after his death, was found to have been caused by a large number of indurated tumors which compressed the thoracic duct, and had been the cause of a rupture of some of the lacteals.

Percival, in his Essays Medical, vol. i., London, 1788, reports the case of a girl who had ascites, and was anasarcous. Four quarts of a milky fluid were withdrawn at the first tapping. After the second tapping she recovered her appetite and strength. Percival suggests that she probably ruptured some lacteal by unusual exercise after a full meal.

Quincke, in the *Deutsches Archiv für klin. Med.*, vol. xvi., p. 121, reports a case of effusion of chyle into the right pleura from a ruptured chyle-vessel in a man who had been run over by a wagon.

The *Gazette Medicale de Strasbourg* (see translation in *Jour. Amer. Med. Assoc.*, August 4, 1883) describes a case of abdominal dropsy in which there had been eight tappings in four months, and each time four gallons of milky fluid were withdrawn, which Professor Rechlinghausen decided to be chyle from rupture of lacteals of the intestines or mesentery.

Dr. Mastin, in a subject affected with chylocele (see *Amer. Med. Weekly*, Louisville, Ky., vol. ii.), found the patulous mouths of three or four lymph vessels which discharged the fluid that filled the cavity of the tunica vaginalis.

From the preceding summary and from sources elsewhere studied we find that effusions of chylous fluid have taken place in various parts of the body, and that ruptures of the lacteals have been either seen or diagnosticated, but that from an anatomical stand-point a distinction must be made between deposits of true chyle and what, for want of a better term, we may call chyloid deposits. Two classes of cases illustrate this point of distinction: First, milky deposits in parts near the lacteals, for example, the abdomen and thorax; secondly, similar deposits in parts remote from the lacteals, for example, the labia majora, thigh, and ankles. The anatomical difficulty of remote deposits is explained as follows: —

Roberts maintains that the secreting structures in these cases are anatomically related to the lacteal and lymphatic tissues, which, in consequence of their hypertrophic development, have acquired the property and function of the cells lining the lacteal ducts and glands. Petters offers the theory that the chyle-like fluid arises from the fatty degeneration of the endothelium and other form elements, and in the decomposition of protein substances, which processes are brought about by the stagnation of lymph. Fetzer ascribes the phenomenon to the absorption of the surrounding adipose tissue by the lymphatics.

A comparison of the chemical and microscopic analyses made in our own case and in other cases of chylous effusion, the proximity of the tumor to the chylous centres, the suddenness of its first appearance, and the locality of the pain, suggest the idea that the fluid obtained from our patient was chyle from ruptured lacteals, and that this rupture may have been due to a strain in the abdominal region, possibly on vessels already distended; for, although there is no history of any special wrench at this time, it is notorious that the patient's work had been altogether too heavy for him.

In only two instances do we find mention made of the aseptic character of the chylous fluid, namely, Quincke's case, above quoted, in which the fluid extracted by ether remained fourteen days without any change in looks or smell, and Dr. Weaver's case, reported in *Med., Surg., and Pharm. Repository*, August 1814, in which the milky fluid was kept for several weeks without any appearance of decomposition.

The symptom of chylous vomiting finds a single precedent in the *New England Journal of Med. and Surg.*, vol. xii., p. 4, in which we read the following record: "Dr. Sprague was called to see a man who, while on duty as a sailor, being previously in good health, had been suddenly seized with a severe pain in his stomach and bowels and across the lumbar region, accompanied with the puking of a great quantity of chyle looking like frothy milk. He was pulseless, deathly cold, and pale. The fluid was discharged without effort. The quantity was variously estimated, by some as high as one gallon."

As to the symptom of chylous discharge from the bowels, we have only the testimony of the patient himself, but it seems not improbable if we admit the simultaneous occurrence of chylous vomiting. There is no history of repeated loose discharges, as was the case in the diarrhœa chylosa of the old authors.

Perhaps the most remarkable features of our case are, first, the apparently perfect recovery after so long a continuance of chylous phenomena; secondly, the repeated drain of chyle from the system without any appreciable loss of flesh or strength. But perhaps the drain was not large enough to produce these effects. All other cases that we have examined where the loss of chyle or lymph has been abundant have been attended with marked prostration. By abundant loss we mean the repeated removal of quarts, for example, the case of Recklinghausen, above described, and that reported by Saviard, in which, from July 2, 1669, to March 4, 1670, paracentesis was performed twenty-two times, and 289 French pints of chylous fluid, in the aggregate, were withdrawn.

But into whatever speculations we may be led concerning causes and symptoms in the absence of that best of all diagnosticians, a post-mortem examination, we may safely decide that what we have to deal with here is not malignant or organic disease, but more probably a mechanical lesion.

In conclusion the case is submitted to the profession with the hope that it may be a stimulus to farther investigations in the department of pathology which it illustrates.

NOTES OF TWO AUTOPSIES.[1]

BY S. D. PRESBRLY, M. D., OF TAUNTON,

Medical Examiner.

I. Early in the morning of Wednesday, April 18, 1883, I was summoned by the police to visit East Taunton to investigate a sudden death, which the neighborhood had already dignified by the title of the "Squawbetty murder case." The dead body of a woman about fifty-five years of age had been found in a small house in "Bottle Row" (suggestive name), where, during the night previous, there had been a disturbance, and every indication of a drunken carousal. The house is a small one, having three rooms on the principal floor, a front, a middle, and a rear room. The front and rear rooms open from the middle room, and admission to the house is to the middle room through a small porch, which contains the kitchen sink, over which is a window, the sink and window being opposite the outer door.

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[1] Read at the annual meeting of the Massachusetts Medico-Legal Society, June 10, 1884.

This window and sink with its contents were stained with blood, much of which was in fine sprays as if caused by jets from a bleeding artery. The middle room contained many blood-stains of the same character upon the floor and walls, and even upon the articles of crockery on the table. On the floor, near the middle of the room, was a pool of blood. In the rear room was a bed, upon which lay an old man, his head resting upon a blood-saturated pillow, his hair and face covered with blood, and a large pool of blood was on the floor, under the head of the bed.

This man was living, but very weak from loss of blood, which had occurred from a cut in the forehead that had evidently divided a quite large branch of the temporal artery. The hæmorrhage had stopped, but the old man, feeble and bewildered, was unable to give a very clear explanation of his condition. The main idea with him was that he had interfered to prevent some one from being injured, and had himself got hit, he thought with a chair.

In the front room were a bed, a table, a stove, a lounge, and a few chairs. On the floor, in front of the lounge, was the dead body of the woman whose death was to be explained. She was dressed in her ordinary clothes. The body was prone. The face was inclined to the right, and rested in an iron wash basin containing, by estimate, six ounces of bloody water; the basin being slightly tipped by the weight of the head held this small quantity of water in such a way that the mouth and nostrils of the woman were completely covered by the fluid. The right leg was extended, the left flexed, the body resting upon the left knee and chest. The left arm was bent under the body; the right was extended by the side. On raising the body a little bloody water bubbled from the mouth and nose. A large bloody stain on the floor extended to the tipped edge of the basin; near the body on the floor were more marks of arterial bleeding, and on the table there was a cloth saturated with blood. There lay a pillow on the lounge with one blood-stain upon it. A pool of blood on the floor, near the head of the lounge, a bloody smooch on the wall paper near by, and a piece of blood-stained soap on the stove complete the sanguinary picture. An empty pocket-book was found on the floor, near the lounge.

The body was taken in charge by an undertaker, and conveyed to his rooms, while the proper steps were taken to prepare for an autopsy, which was made at three P. M. on the same day, with the assistance of Drs. Bassett and Galligan, of Taunton.

The record of autopsy was as follows: —

The body was that of a woman aged fifty-five to sixty years. Cadaveric rigidity was strongly marked. The skin was smooth. There was a slight abrasion one inch long on the right side of the forehead. There was a slight swelling on the right side of the head. Both of these latter, on incision, showed some ecchymosis. No other marks of violence was found. The nostrils and mouth were blood-stained. The tongue rested against the teeth.

The spinal cord was normal. The brain was normal. The sinuses and veins of the head contained rather more than the usual quantity of blood.

The mucous coat of the trachea was reddened and covered with a bloody, bubbling fluid. There was a bloody stain in the œsophagus.

The chest was quite filled by the lungs and heart. The large vessels, except the aorta, were filled with dark fluid blood. The heart and pericardium were normal. The right heart contained fluid blood. The lungs were healthy but dark in color and engorged. The liver was dark, and both liver and spleen were full of dark blood. Some bloody, bubbling matter was found in the stomach. The intestines were dark in color. The kidneys, uterus, and other abdominal organs were normal.

Diagnosis. Death by drowning.

As the body had been found in a house where it was known that there had been a drunken riot during the night it hardly seemed prudent to certify that the drowning had been purely accidental.

The public had become impressed with the idea that there had been a murder, and already two men, sons of the deceased, were under arrest. In consideration of these facts it was thought best to report the case for inquest as one of drowning, probably accidental, but possibly homicidal, that the facts and circumstances might be fully investigated.

The report of the inquest is as follows: —

The body of E. H. was found on the morning of the 18th instant lying dead in her own house, on the floor, near a lounge, with her face partly immersed in a basin of bloody water. The autopsy and other evidence in the case clearly show that her death was caused by drowning. There were no marks of violence upon her or wounds from which blood had flowed. The probability is that she fell from the lounge into the position in which she was found. That she was intoxicated may, perhaps, be inferred from the fact that a sober woman would not be likely to lie still and drown in a basin of water. The blood in the basin and about the house is accounted for by a drunken fight, which had taken place during the night between her two sons and one Flynn. At the time of her death the sons had probably left the house, and Flynn was asleep.

W. H. Fox, *Justice*.

April 20, 1883.

II. The second case is one of infanticide.

On the afternoon of Sunday, May 18, 1884, I was notified by the police that the body of an infant had been found floating in Taunton River. The body was at once removed to my stable, where it was kept carbolized till ten A. M. the following day, when, the proper legal formalities having been complied with, the autopsy was made, of which the following is the record: —

The body was that of a female infant. Weight, six pounds. Length, twenty-one inches. Umbilicus nearly in the middle of its length. Putrefaction advanced. Abdomen green. Head very soft; hair absent. Skin upon limbs hanging in shreds. Umbilical cord, three inches in length, cut but not tied. No ulceration of umbilicus. Incised wound in the front of the neck two and one half inches long, extending back to the spine, and dividing trachea, œsophagus, cervical veins of right side, and cervical veins and arteries of the left side. Incision marked by two serrations on the left side of the neck. Just above the left end of the cut a piece of skin of the size of a ten-cent piece had been smoothly removed. A slight superficial wound below and behind the left ear. Brain softened to a thick, pinkish fluid.

Thorax well filled by lungs and heart. Surface of lungs red and decidedly "marbled;" occasional bubbles on the surface from putrefaction. Lungs crepitate and spongy; edges rounded; a little bubbling, bloody fluid could be squeezed from cut surfaces. Contents of thorax, as a whole, floated high in water, and every portion of the divided lungs floated even after having been thoroughly squeezed.

Heart and large vessels normal and entirely empty. Ductus arteriosus patulous.

Liver dark in color and very soft.

Stomach contained a little grumous material, but no milk curds. Large intestine full of meconium.

The autopsy appears to justify the following conclusions: —

(1.) That the body is that of a full-time fœtus.

(2.) That the child lived and breathed.

(3.) That the child probably did not live more than twenty-four hours.

(4.) That the cause of death was hæmorrhage, possibly in part from the umbilical cord, but principally from the wound in the neck.

(5.) That the child has probably been dead at least two weeks.

Finding by W. H. Fox, Justice, May 22, 1884: —

"On the 18th of this month the body of a new-born infant, wrapped in a woman's skirt, was found floating in Taunton River, about a mile below Weir Bridge. The progress of decomposition indicated that it had been in the water perhaps twenty days. A deep gash across the throat showed that its short life had been abruptly terminated by the hand of violence. There is no evidence as to the author of this revolting crime."

RECENT PROGRESS IN GYNECOLOGY.

BY F. H. DAVENPORT, M. D.

SKENE'S DUCTS.

Klemwachter[1] refers to the two ducts opening on either side of the female urethra, which were first described by Skene in 1880, and later independently by Kocks in 1882. Skene considered them as the openings of ducts of glands, Kocks as the remains of the ducts of Gärtner. The author found the ducts present, but in two cadavers could not find gland structure at the end of the ducts; he therefore considers that they are not identical with the glandulæ vestibularis minores of Luschka, nor with the lacunæ in the neighborhood of the orifice of the urethra described by Henle.

The author saw a case of a young woman, twenty three years of age, unmarried, who had suffered for three years from pruritus vulvæ which had resisted all treatment. As a result of the scratching the patient had become addicted to masturbation. Under chloroform the hymen was divided right and left, and the vulva cauterized with the hot iron. As a result the itching was much lessened and confined to the vicinity of the urethra. On pressure he found that pus exuded from the canals in question. He therefore injected tincture of iodine several times, and the result was a complete cure. The author thought the affection of the canals the primary one.

DOUBLE UTERUS WITH DOUBLE VAGINA.

Dr. Dirner[2] describes the following interesting case: A woman, twenty-seven years old, began to menstruate at fourteen, regularly, but profusely, and with pain. She was married at seventeen, and had had no trouble until six months before consulting Dr. Dirner, when she noticed that urine escaped after every coitus. Examination showed that intercourse had been carried on per urethram, and that she had two vaginal orifices, so small that they would just admit a catheter. The physician who was at that time consulted enlarged the left opening somewhat, and advised that it should be used in coition. Pregnancy followed, but she miscarried at the fourth month.

A careful examination by the author showed a dilated urethra, easily allowing the finger to pass, hanging from the lower side of which was a small tumor the size of an almond, which was plainly the prolapsed urethral mucous membrane. The ostium vaginæ was apparently closed, as is seen in atresia hymenalis, but on either side under the labiæ minores two small openings were found. These were the entrances to the two distinct vaginæ, each with its uterus, the left rather larger than the right. These were connected, as was clearly made out by combined examination by bladder and rectum, by a membrane the width of two fingers.

An operation was performed to unite the two vaginæ and narrow the opening in the urethra, a detailed description of which is given. This was successful, and the patient, after one more miscarriage, became pregnant again, and was delivered of a living child from the right uterus. Both before and after birth the left uterus could be distinctly felt, somewhat enlarged and softened, and during the after-pains, when the right uterus contracted firmly, the smaller left uterus could be felt to grow smaller and become harder.

PARTIAL EXTIRPATION OF THE CANCEROUS UTERUS.

Dr. Ely Van de Warker[3] advocates in this paper a method for the partial extirpation of the cancerous uterus by the use of more powerful caustics than have heretofore been used. After destroying all the cancerous tissue possible with scissors, knife, or curette, he packs the resulting cavity with iron cotton. This is removed on the second day, and the uterus repacked with cotton soaked in a 100 per cent. solution of chloride of zinc. Should the walls be very thin at any point a weaker solution of ʒv. to ℥i. of water is used over this part. The resulting pain is easily controlled by morphia. In from two to five days the zinc cotton may be removed, and in from five to ten days the slough comes away. This is often a quarter of an inch thick, and in some cases seems to be virtually the whole of the uterus. Cicatrization is completed in from two to four weeks. Several cases are reported which show how much may be gained even in those apparently hopeless cases where the knife cannot reach all the diseased tissue.

CHANGES IN THE UTERINE MUCOUS MEMBRANE DURING MENSTRUATION.

Wyder[4] discusses this subject in an interesting article, and as a result of microscopic examinations of the uterus in cases of persons who have died suddenly during menstruation, and of examination of the uterine secretion of blood and mucus carefully aspirated on different days of menstruation (in one case removing portions of the mucous membrane with the curette), has come to the following conclusions: —

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[1] Prag. med. Wochen., No. 9, 1884.

[2] Arch. f. Gyn., Band xxiii., Heft 3, 1884.

[3] Amer. Jour. of Obstet., March, 1884.

[4] Zeitschr. f. Geburts. und Gyn., Band ix., Heft 1, 1883.

(1.) During menstruation a portion of the superficial layer of the mucosa is destroyed, the extent varying in different cases from a very thin layer to an almost complete destruction. These portions thrown off are sometimes found intact, and sometimes in a condition of degeneration, and as detritus.

(2.) The shedding is a consequence of the menstrual flow, not of primary fatty degeneration. The latter is rather a result of the loosening and destruction of the tissues by the hæmorrhage.

(3.) The superficial and middle layers of the mucous membrane keep their small-cell character, and have no resemblance to the decidua of pregnancy, while in the deepest layers we find a cell infiltration of the interglandular substance, which is evidently intended to serve to replace the destroyed tissue.

(4.) The regeneration of the lining epithelium proceeds as well from the glandular epithelium as from the small islands of the superficial layer which remain.

STUDIES OF THE UTERINE MUCOUS MEMBRANE.

Dr. Düvelius[1] in this article considers three questions in connection with curetting the uterus: (1) the possibility of making a correct diagnosis from the portions of uterine mucous membrane removed by the curette; (2) the possibility of so completely destroying the diseased mucous membrane by the curette that one can be safe from a return of the disease; (3) the possibility of a normal pregnancy occurring after this procedure.

To determine the first point the curette was used on twenty-two uteri from women who had died of other affections than uterine. This was done before post-mortem changes could have begun, and as carefully as if on the living subject. The uteri were then examined, and with the exception of the first three cases, in which the curetting was not so carefully done, the muscular layer was laid bare over the whole extent of the uterine cavity. There were, however, in all cases small isolated portions of the mucous membrane remaining attached, and the ends of the glands which dipped down into the muscular tissue were found. Enough, however, could be obtained to make a diagnosis easy. In nine cases of examination during life the diagnosis was made with the microscope, and confirmed by an examination of the uterus, which was in each case removed. Two were of carcinoma, two of malignant adenoma, one of sarcoma, and four of endometritis adenomatosa. The author considers the first point as sufficiently proven.

As regards the second point, namely, the return of the disease, while its possibility cannot of course be denied, yet the writer considers that energetic curetting, especially if followed by appropriate treatment at the time by caustics, etc., very much diminishes the probability.

Two points throw light upon the third question, that of possible conception. First, examination of uteri which have been the subject of thorough curetting, and have subsequently been removed, show microscopically a complete regeneration of the mucous membrane and an absence of cicatrices; *a priori*, therefore, we would expect the possibility of conception. Second, numerous examples of its occurring in persons who have been the subject of this operative procedure are on record. In the five years from 1879 to 1883 the reports of sixty such cases were found by the author.

IGNIPUNCTURE OF THE CERVIX UTERI.

L. Prochownick[2] refers to the almost complete abandonment of the use of the hot iron and galvano-cautery, and says that in most minor affections of the cervix uteri the knife, scissors, and the suture have rightly taken the place of the incandescent instruments. He, however, thinks that with reference to the wedge-shaped incision, and amputation of the vaginal portion, there is some doubt. In his experience he has had failures, and he has found a good many patients who were unable to devote the necessary time and means for the more elaborate operation. He has therefore devised the following method of dispensary treatment: Two or three times between each period four ignipunctures, two in the anterior and two in the posterior lip, are made with the pointed galvano-cautery, or the Pacquelin, the latter when greater depth is required. The direction of the punctures is centrifugal or centripetal, according to the nature of the case; the former for indurated hypertrophy without profuse catarrh or ulcerations, the latter for opposite conditions.

The patient should rest half an hour after the operation, and then may be allowed to attend to her ordinary occupations. There is some swelling of the cervix for a few days, and the granulating depressions heal in between two and three weeks. In general five or six operations suffice, and the result is cessation of cervical catarrh, healing of eroded surfaces, and a marked diminution in the size of the cervix. The author has in forty cases not had a relapse, and has observed no unpleasant consequences.

THE RELATIONS OF OVULATION AND MENSTRUATION.

Lawson Tait[3] in this article reviews again the evidence in this much-disputed question, and again expresses his well-known views of the complete independence of the two functions. He first refers to the statement that menstruation in woman is analogous to rut in the lower animals, and claims that this is not so, on the grounds that, first, both the congestion and periodicity are too faulty (?) in the lower animals to constitute an analogy; second, that while impregnation occurs in the lower animals only during the œstrus, "in the human subject (quoting Dr. Farre), whatever may be possible during menstruation, yet essentially the intervals of the menstrual act are the times of fertility in women;" third, that our limited experience goes to prove that so far from the sexual desires being strongest at the menstrual period the reverse is the case.

The author then asks the question, whether it is true that the so-called ovarian excitement, alleged to arrive at the ripening of a follicle, has anything to do with the process of menstruation. The facts which he considers to have bearing on this point are, that in new-born infants and children there are sometimes Graafian vesicles or ovisacs, in which at the fourteenth year ova may be detected, showing, therefore, the possibility, "*if rupture should occur*" (the italics are ours), of impregnation taking place without menstruation; that these vesicles "all through life discharge by circular-shaped capillary-sized openings in the peritoneal coat, the presence of the catamenia being thus no indispensable prerequisite to their rupture;" that Graafian follicles of some size are found for many years after the menopause; that as there is no analogy between menstruation in woman and the rut, the innumerable experiments on animals have been not only useless but misleading; that impregnation "occurs often in the absence of the catamenia, as in the amenorrhœa of lactation and other conditions; and, lastly, that in the experience of ovariotomists, "in many cases in which both ovaries have been removed, these organs have been found so thoroughly diseased as to preclude the idea that they could possibly have performed the functions of ovulation normally, if at all, and yet the regularity of menstruation has suffered no interruption, and also that after the removal of both ovaries, and even tubes, menstruation has occurred regularly."

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[1] Zeit. für Geb. und. Gyn., Band x., Heft 1, 1884.

[2] Am. Jour. of Obs., May, 1884.

[3] Med. Times and Gazette, May 10, 1884.

The author next relates his own experience from the opportunities abdominal surgery has given him of observing the ovaries during life. He has always found that during menstruation the tube is fastened on the ovary, whether there be a ripe follicle at the point of adhesion or not; that both tubes were generally fastened to their respective ovaries, though in one ovary there may have been no appearance of a ripe ovisac; that he has very frequently seen a ripe ovisac on the point of bursting, or just burst, when the patient was midway between two menstrual periods; and, finally, that in two cases he has removed ovaries with the tubes fastened on them during menstruation, in none of which were there any ovisacs approaching ripeness.

The paper closes with short records of forty-nine cases of abdominal section in which the condition of the ovaries was noted, with the following results: There were nine cases where it was evident that menstruation and ovulation were concurrent; fifteen cases of negative proof against the ovulation theory of menstruation; and twenty-five affording positive evidence against the theory. (This is an ingenious paper, and presents a long array of arguments in support of the theory advanced by the author, but we cannot but feel that many of them are faulty, and that the true significance of the facts is often perverted. It is, however, of value as expressing the opinion of one who has made a close study of the ovaries for many years, and as a contribution to this much-vexed question. No satisfactory theory of the connection of these two functions, ovulation and menstruation, has yet been given, but we do not feel that Lawson Tait has by any means satisfactorily demonstrated his theory to be the correct one. — Rep.)

A CONTRIBUTION TO THE PATHOLOGY OF HYDRO- AND PYO-SALPINX.

Dr. J. Kingston Fowler[1] gives a very interesting series of fifteen cases of hydro- and pyo-salpinx met with in the post-mortem room of the Middlesex Hospital in the course of the last three years. Clinical details are omitted, but at the head of each case an abstract has been placed of the changes found in the various organs, followed by a fuller description of the condition of the parts more immediately concerned. The cases as given are very interesting, but we have space only for the conclusions. "It is very probable," the author says, "that many cases of peritonitis which have been regarded as idiopathic, as secondary to abscess of the ovary or pelvic cellulitis, have been really due to rupture of a Fallopian tube, distended with pus, into the peritoneal cavity." In eight of the fifteen cases, all pyo-salpinx, the state of the tubes was the immediate cause of death. Of the eleven cases of pyo-salpinx death was due to peritonitis in seven, and in one case each to septicæmia, amyloid disease, cancer of the uterus, and scurvy. "There can be no doubt," the writer says, "that any inflammatory condition of the uterine mucous membrane, however induced, it may be by extension of a vaginitis, or some affection of the os or cervix uteri, by a retroflexion, by the presence of a fibroid tumor or polypus, or as a result of prolapse or malignant disease, may spread to the Fallopian tubes, and ultimately establish the condition of pyo-salpinx." He has noticed that in many cases there is an induration close to the uterine end of the tube, the lumen of which is at that point entirely obliterated. In three cases such obliteration seems to have been due to the presence of fibroids.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. H. WILLIAMS, M. D., SECRETARY.

April 7, 1884.

Dr. A. N. Blodgett read a paper on

SUBSCAPULAR ABSCESS.

Dr. Hooper mentioned two cases in infants. In the first case the scapula stood out at an angle with the chest wall like a wing, and the pus worked its way into the pleural sac; in the other an operation was done to allow the pus to escape and the child recovered.

Dr. F. Minot had seen two cases. The first looked like an effusion into the abdominal cavity, but an exploratory incision showed a collection of pus under the skin and over the abdominal fascia. The second was a young lady, twenty-two years old, whose health had always been good, noticed some pain in the upper part of the back, below the left shoulder, which was increased on motion of the arm. On examination a tumor was found just outside the edge of the scapula. It lay rather deeply, somewhat towards the axilla, at about the edge of the trapezius muscle. It was about as large as an egg, round, smooth, quite movable, and slightly tender. It was thought to be a fatty tumor, and an incision was made into the tissues over it extending through some fibres of the trapezius, when a sudden jet of pus showed the supposed tumor to be an abscess. An ounce of healthy pus was discharged through the enlarged opening. The abscess lay partly upon the lower portion of the scapula. The wound was brought together with sutures, a bit of rag being left in the lower part for drainage, and was completely healed in about ten days.

Dr. A. T. Cabot then showed the specimens from

A CASE OF DOUBLE OVARIOTOMY.

The patient, a woman fifty years of age, ceased menstruating five years ago. Four years ago she began to be troubled with frequency of micturition and occasional slight pains in the left side of the abdomen. She noticed at this time a swelling in the left hypogastrium. When seen by Dr. Cabot the tumor occupied the whole abdomen, reaching nearly to the ensiform cartilage.

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[1] Med. Times and Gazette, May 3, 1884.

The operation was done ten days ago. A cyst of the left ovary, with a long, twisted pedicle and a number of long adhesions, was readily emptied and removed. It was then seen that there was also a multilocular cyst of the right ovary. This latter tumor had been so held down by the superincumbent larger cyst that it had not been able to rise out of the pelvis and form a pedicle for itself, but was firmly imbedded behind the uterus and was fastened by a wide base to the right broad ligament, between the layers of which some of the cysts had grown.

Examination showed that Douglas's cul-de-sac was occupied by one large cyst which was so immovably fixed that it seemed as if it must be adherent somewhere, though no adhesions could be reached. After trying in vain to separate the tumor from the broad ligament the overlying cysts were drawn to one side and the large cyst deep in the pelvis punctured. It was found to be not adherent, but simply wedged in the pelvis. When empty it allowed the whole mass to be lifted out, and the tumor was then readily separated from the broad ligament. The hæmorrhage from the wounded surface in the pelvis was considerable, but was finally controlled.

The patient's temperature rose to 101° F. the night after the operation, but never reached that point again. Except a moderate abdominal soreness for the first twenty-four hours she suffered no pain, and her recovery was uninterrupted. The stitches were all taken out on the day of the report, and the wound found to be healed by first intention.

The cysts, with their fluid contents, weighed eighteen pounds.

The inner walls of several of the cysts were occupied by an extensive papillomatous growth with here and there yellow patches of fatty degeneration. The fluid, which resembled thick pea soup in appearance, was filled with large granular cells and granular matter.

Dr. C. M. Green showed a specimen of human ovum with a definite history as to age, of six to seven weeks. The villi of the chorion had begun to atrophy, leaving about two thirds free from villi.

Dr. Charles H. Williams reported

AN ALLOPLASTIC OPERATION.

The patient, a man twenty-two years old, received a severe burn of the left side of the face when a child. The lower lid has since then been everted, the ectropion involving the outer two thirds of the lid and exposing a strip of conjunctiva about five millimetres wide. An operation was done at the infirmary after Wolfe's method, by transplanting a piece of skin without pedicle from the arm.

The edges of both lids were first freshened, a cut was then made about five millimetres from the edge of the lower lid and parallel with it, and the cicatricial tissue which bound the skin to the underlying bone was dissected up so that the edges of the lids could be brought together by three sutures. A piece of skin about four by two centimetres was then taken from the anterior surface of the upper arm and inserted in the opening made in the lid. The subcutaneous tissue was trimmed off from the under surface of the flap before its connection with the skin was entirely severed, and the flap was then at once removed to its new place and secured by ten fine sutures, great care being taken to bring the edges well together and to avoid any rolling in of the epithelial surfaces.

While the sutures were being applied the flap was kept warm by a succession of sponges dipped in hot water, and finally the parts were thickly sprinkled with iodoform, a thick pad of absorbent cotton was laid on, and the whole secured by a long flannel roller bandage. This dressing was allowed to remain untouched for six days; at the end of that time the flap was found to be somewhat whiter in color than the surrounding skin and to be anæsthetic, otherwise the parts looked well and were in good position. The sutures were removed from the edges of the flap at this time, but those in the edges of the lids were allowed to remain one day longer, when they were also removed and the lids were found to be firmly united for three quarters of their length. At the inner angle a free space was left, through which the discharge from the conjunctival surfaces found exit.

Ten days after the operation a small blister was seen near the centre of the graft and another near the lower edge; the epithelial surface was slightly raised, and there seemed to be a slight serous effusion underneath. The blister at the lower edge continued to increase in size for several days, and the loose epithelium was finally peeled off with the forceps from about one tenth of the graft, leaving an uneven red surface underneath. A fresh layer of epithelium soon spread over this surface from the edges of the wound, and this process was repeated until the whole of the epithelial layer of the graft had exfoliated and had been replaced by new. In the mean time a considerable shrinkage had gone on in the size of the flap, and from measuring 3.25 by 1.5 centimetres one week after the operation it had come to a strip three centimetres long by half a centimetre wide. About two months after the operation the tissue uniting the lids was divided. At first there was very little ectropion remaining, but after two weeks the swelling of the conjunctiva increased and the eversion became fixed, though less than half as great as before. A second operation was therefore done to correct the remaining deformity by removing a wedge-shaped piece of the conjunctiva and underlying tissue. A cut was made along the inner surface of the lower lid, three millimetres from its free edge and parallel with it. The knife was carried parallel to the tarsus to the depth of more than half a centimetre. A second cut was now made, parallel with the first, but holding the knife at such an angle that the two cuts would come together at the depth of half a centimetre. In this way a wedge-shaped piece of tissue was removed having sides about one half a centimetre broad and of a length equal to the everted portion of the eyelid. Two deep sutures, each with two needles, were then passed through the skin a little below the eyelashes, and going backward through the subconjunctival tissue were brought out on the cheek 1.5 centimetres below the point of entrance, and the lower ends being tied the cut edges of the conjunctiva were brought into apposition and the eversion was reduced.

After four days these sutures were removed, there had been no suppuration along their track, the wound had healed, and the ectropion had disappeared.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, M. D., SECRETARY.

April 26, 1884. **Dr. J. C. White** presiding. Eighty-five members present.

REPORTS OF COMMITTEES.

The committee appointed at the stated meeting October 27, 1883, on the restoration of the National Board of Health, reported any action to be at present inexpedient.

The Committee on Social Meetings reported a balance on hand of $163.73.

The treasurer reported an expenditure during the past year of $432.99, and a balance in the treasury of $231.13.

Dr. A. Day presented a paper entitled Medical Delusions.[1]

The officers were elected for the ensuing year according to the nominations reported in the Journal, April 17th.

PRIMARY CANCER OF BLADDER.

Dr. Whitney showed a specimen of primary cancer of the bladder, situated in the right posterior wall, and involving the opening of the right ureter. This was dilated, as well as the pelvis of the kidney, which was in a condition of hydronephrosis. The left ureter was normal in size, and the kidney showed fatty degeneration of the convoluted tubes. The lumbar glands on the right side were diseased, and the liver was filled with nodules of new growth.

The microscopic examination showed the disease to be of the flat-celled variety of cancer.

The specimen came from an old man who had had hæmaturia for eight months, but no pain. Gradual loss of strength and death.

DOUBLE OVARIOTOMY.

Dr. A. T. Cabot showed the specimens from a case of ovariotomy, which were interesting from the fact that a parovarian cyst was associated with a cystic condition of both ovaries.

The patient, twenty-four years of age, had noticed a gradual increase of size during the past four years. The catamenia had not been noticeably irregular. When seen the whole abdomen was occupied by a fluctuating swelling, which to aspiration yielded a fluid similar to that shown.

Ovariotomy was performed, and both ovaries being found to be cystic were removed with the broad ligament cyst, which was of considerable size, and contained twenty-five pounds of fluid. The patient made a good recovery.

Dr. Cabot pointed out how easily the parovarian cyst would have shelled out of the broad ligament had not the disease of the ovary required its removal also. One ovary was about the size of half a lemon, the other as big as a large orange; both were thoroughly cystic (multilocular). The parovarian cyst was a great unilocular sac, thin walled, and the specimen of fluid from it was as clear as water, and contained almost no albumen, but abundant chlorides.

Dr. J. W. Elliot remarked that he was very much interested in Dr. Cabot's specimen, that the presence or pressure of an ovarian tumor seemed to favor the occurrence of cysts in the other ovary. Dr. Elliot farther remarked that he had recently removed an ovarian tumor which had so grown down into the broad ligament that he found it necessary to enucleate it from under the peritonæum; that in this case the other ovary was so much enlarged that it was supposed to be cystic, and was accordingly removed, but upon examination no cyst was found. The patient made a good recovery. Dr. Elliot also referred to another case, operated on one month ago, where he found a dermoid cyst, which contained a large quantity of hair, bone, and skin. He had intended to exhibit the specimen at this meeting, but had, unfortunately, forgotten to bring it. This dermoid cyst had been of rapid growth, only nine months. The only symptom had been constant uterine hæmorrhage. The tumor had been supposed to be a uterine fibroid. The patient made a quick recovery. The temperature was not above 99.8° F.

COLD BATHS IN THE TREATMENT OF PNEUMONIA.

A recent contribution to the subject of this method of treating pneumonia is summarized from *Vratch*, by the *London Medical Record* (July 15th), as follows: — The author, Dr. M. K. Kiseleff, states that in 1880 forty-four patients with pneumonia were admitted to the Grozuyi Military Hospital; twenty-three of them were treated by cold baths, at the temperature of 28° R. to 26° R., with gradual cooling to 16° R. or 12° R. The baths were made daily, between four and six o'clock P. M., and lasted from ten to fifteen minutes. Before and after each bath the patients received from three to six ounces of sherry or *vodka* (*eau de vie*). The results were as follows: (1.) The mortality amongst the patients treated by baths was lower than amongst those left without baths (respectively 17.7 per cent. and 57.1 per cent.) (2.) The curves of morning and evening temperatures, the pulse and respiration, did not present any great differences; but while in the patients left without baths a high temperature lasted all day long, in those treated by baths it fell 1.5° C. to 3° C. for four or five hours daily. Further, the pulse after each bath decreased from ten to twenty beats, and pain disappeared. The respiration remained unchanged. (3.) Crisis in bath-cases occurred apparently earlier (in three cases on the third day, in two on the fourth, in two on the fifth, in two on the seventh, in two on the eighth, in five on the sixth, in one on the ninth, in four on the tenth, in two on the thirteenth; while in the cases left without baths crisis frequently occurred on the ninth day). (4.) Cold baths had no influence on the frequency of complications, but the latter ran a more favorable course. (5.) Recovery proceeded more rapidly (nineteen patients treated by baths recovered between the tenth and twenty-seventh day since the appearance of first symptoms). In 1881 and 1882, Dr. Kiseleff treated other forty-nine patients by cold baths. Only three (6.12 per cent.) died. Crisis occurred not later than on the eleventh day, most frequently on the sixth and ninth. The patients left the hospital in three or four weeks, being quite strong and sound. The author's general conclusion is, that cold baths present a powerful therapeutic agent in the treatment of pneumonia. He points also to such important advantages of baths as disappearance or diminution of pain, absence of delirium, advent of quiet sleep, etc.

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[1] See page 145 of this number of the Journal.

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No. 4 Park Street, Boston, Mass.

THE RESCUE OF LIEUTENANT GREELY AND HIS SURVIVING COMRADES.

We have just seen an effective illustration of the adaptability of the human constitution to all climates and temperatures, as well as its power to endure extreme privation, in the rescue from starvation and death of Lieutenant Greely and the remnants of his party, — a rescue the more remarkable that it was accomplished amid such dangers and brought deliverance out of such miseries, — and in the thrilling story of the hardships which this party underwent from the time that they abandoned Fort Conger, August 9, 1883, till they were found off Cape Sabine in Smith's Sound by Lieutenant Schley, July 4, 1884. During more than nine months the party lived on the scant allowance of food brought with them, and a small quantity found in *caches* left by other expeditions. When this was exhausted, — and the last regular rations were issued about the first of May, — they had to live on boiled seal-skin strips from their clothing, lichens, and shrimps. It is not a wonder that on such fare any died, it is a wonder that any survived.

A point of interest in connection with this history, is that at the time when Greely and his men left Fort Conger they were all well and in good spirits, and there is every probability that, could they have reached Littleton Island where there was abundant food stored away for them, they would all have been living at this day. For two years, then, these twenty-four American adventurers, born and nurtured in a temperate climate, and with constitutions not above the average in robustness (their leader had been somewhat shattered by malaria) withstood with impunity and even with physical advantage, in a latitude of 82°, the rigors of a climate where, according to Hartwig, "the average temperature of the winter generally ranges from — 20° to — 30°, or even lower, and for a great part of the year is able to convert mercury into a solid body."

The conditions whereby man is able to bear the excessively low temperature of an Arctic winter are stated in a very few words; a thick fur clothing; a hut, small and low, where the warmth of a fire, or simply of a train-oil lamp, is husbanded in a narrow space, and a copious supply of animal food, of flesh and fat. With the descent of the thermometer the internal processes of combustion are increased, for the air, condensed by the cold, furnishes more oxygen to the lungs; the circulatory system and the muscles experience a marked augmentation in tonicity; the appetite and digestion are stimulated to an extraordinary degree.

"The mysterious compensations," says Kane, "by which we adapt ourselves to climate are more striking here than in the tropics. In the Polar zone the assault is immediate and sudden, and unlike the insidious fatality of hot climates, produces its results rapidly. It requires hardly a single winter to tell who are the heat making and acclimatized men. Peterson, for instance, who has resided for two years at Upernavik, seldom enters a room with a fire. Another of our party, George Riley, with a vigorous constitution, established habits of free exposure, and active cheerful temperament, has so inured himself to the cold that he sleeps on our sledge journeys without a blanket or any other covering than his walking suit, while the outside temperature is thirty degrees below zero."

In connection with the means necessary to fortify the human system against extreme cold nothing is of more importance than suitable alimentation, and had Greely and his men been reduced in mid-winter to the extremes to which they were brought later in the year, when it was warmer, soups made of lichens and seal-skin boots could hardly have saved one of them. Indeed, the only nutritious substance available to them in that bleak and barren waste seems to have been shrimps, the most diminutive of decapods, and the supply even of these was quite insufficient.

The problem of the sustenance of human life in a condition of fair nutrition and vigor within the Arctic Circle seems to have been now decided in the affirmative, and we shall probably soon see the hazardous experiments of Lieutenant Greely and party repeated on a grander scale, and with greater precautions for safety. It must, however, be borne in mind that only the naturally robust and hardy are fitted to withstand the polar cold. The physician cannot safely recommend his cardiac, phthisical, or dyspeptic patients to try the tonic, bracing effect of a winter at Fort Conger, albeit exceptional cases might be benefited. Captain Ross has judiciously treated this question of constitution. "What good," says he, "to give fur garments to him who is incapable of engendering bodily heat?" He regards as certain that men who are endowed "with a great appetite and splendid digestion" are more fitted than others to produce animal heat. The "sanguine temperament is also a favorable condition, especially when it is accompanied with an energetic character, which habitually keeps up confidence, cheerfulness, and hope in the midst of the most trying circumstances."[1]

The "confidence, cheerfulness, and hope" are probably no less requisite to success in these arduous experiences than are the other qualities, personal and objective. In fact, the physiologist and the therapeutist recognize them as everywhere the foundation principles of a healthy and enduring vitality.

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[1] Ross, Narrative of a Second Voyage, page 165. (Quoted by Longet, Traité de Physiologie, t. ii., p. 543.)

A NEW ANTIPYRETIC.

Dr. Paul Guttman has lately introduced to the Medical Society of Berlin a new alkaloid, a derivative of quinoline, which bears a striking resemblance to quinine, while being more antipyretic than the latter. This medicament, which has been called *antipyrine* by Professor Filehne, has been obtained by Professor Knorr in the laboratory by way of synthesis. Antipyrine presents itself under the form of a white crystalline powder, very soluble in water, rather tasteless, easily tolerated by the stomach, especially when taken with wine or aromatics.

According to Professor Filehne this substance, exhibited in doses of two grammes every hour till six grammes are taken, is said to give constant antithermal results even when the fever is very high. The antipyretic action lasts from seven to nine hours, sometimes very much longer, and the pulse becomes less frequent. May has tried this new remedy in the hospital of Cologne in the treatment of typhoid fever, and is enthusiastic in its praises. In his practice it has proved superior to quinine. Rank expresses himself similarly as the result of fifty observations in the hospital at Stuttgart. Guttman's trials are, however, the most numerous, and they seem to have been the most thorough. His cases, reports of which he has made to the Society, number 120. Twelve of these were cases of typhoid fever, eight of pneumonia, three of scarlet fever, four of intermittent fever, etc. All these affections were complicated by a high fever. Given in the doses before mentioned (ʒss. per hour for three doses) antipyrine was observed always to cause a marked fall in the temperature, which lasted five or six hours and even longer. In the first hour which follows the administration of the medicine the temperature falls half a degree, and the decline goes on increasing during the second hour, and attains its maximum during the third. As the temperature lowers perspiration appears. No secondary unpleasant effects have been noticed, unless occasional vomiting be excepted. The medicament is very soluble in warm water, a half gramme of the latter dissolving one gramme of the alkaloid. In this form it may be administered hypodermically, and so introduced it exercises a speedy, safe, and efficient action. The only febrile disease in which antipyrine seemed to be without effect was intermittent fever.

When given in antifebrile doses this medicine has always been found to be free from the inconveniences which attend sulphate of quinine in large doses, such as headache and intoxication. It would seem from Dr. Guttman's experience to be of about half the strength of quinine, that is, to get the full antipyretic effect which you would derive from two grammes of quinine you must give four grammes of the other.

The cost of antipyrine is about two thirds of that of quinine. Dr. Guttman has expectations that, now that it can be produced synthetically from relatively inexpensive materials, there will soon be a considerable reduction in its price.

In the discussion which followed the reading of Dr. Guttman's paper Dr. Tillmans related his experience with the new medicament in the Charity Hospital. In general his observations confirm those of Guttman. He finds that patients enfeebled by chronic affections (suppurations, tuberculosis, etc.) are very susceptible to the action of antipyrine even in small doses. Antipyrine is on the whole admirably supported. It may be given for months together without the least harm resulting. Tillmans has, in fact, given it uninterruptedly for months to tuberculous patients, and has kept the temperature within very nearly the normal bounds.

In pneumonia it is necessary to give large doses, for otherwise you cannot control the temperature. In very bad cases of this disease Tillmans has brought down the febrile heat from 40.1° C. to 37.8° C. in six hours, by giving during this time seven grammes of antipyrine, and this reduction of temperature has lasted twelve hours.

In one case of typhoid fever Tillmans gave antipyrine from the beginning to the end of the malady, and kept the temperature almost within the normal limits.

Guttman has invariably found when giving antipyrine that when the fever again rises after the effect of the medicine passes off the elevation of temperature is not attended with a chill, as is the case when kairine is given. The same fact has been confirmed by Falkenshein.

A trial of the medicine at the Boston City Hospital during the last three months confirms, as far as the experiments go, these observations and conclusions. Three successive hourly doses of thirty grains cause not unfrequently a fall in temperature of four to six degrees, the subsequent maximum not being attained for eight to twelve hours, and then being less than the initial temperature. No inconveniences have been experienced.

On the whole the profession seems to have in antipyrine a febrifuge of no little promise. It is to be regretted, however, that its originator should not have felt it unworthy of German science to cover the discovery with a patent.

MEDICAL NOTES.

— In a recent number of the *Lancet* Alexander Harkin states that a painful area normally exists upon percussion over the fourth and fifth dorsal vertebræ. This pain is described as "peculiar; some compare it to an electric shock diffused over the chest and arms, others liken it to the tingling sensation caused by a knock upon the ulnar nerve at the bend of the elbow, and all declare that it is of a most disagreeable nature." He has examined a large number of children and adults, male and female, and finds it constantly present.

— In 1835 Toulon lost 1656 inhabitants from cholera; in 1849, 751; in 1854, 1135; in 1865, 1331. The inhabitants remember that on former occasions the disease made its appearance in a mild, insidious form, and suddenly rose to an alarming degree of intensity.

— At a recent meeting of the Berlin Medical Society photographs were shown by Professor Virchow of the gigantic plane tree in the Island of Cos, under the shade of which Hippocrates is said by tradition to have held medical consultations. The tree stands in the market-place of the town of Cos, on the east side of the island, and the branches, which spread over nearly the whole of the market-place, are supported by marble pillars.

— An ingenious model was exhibited before the Ophthalmological Society of the United Kingdom at its recent meeting, by Mr. J. Streatfeild, for demonstrating ophthalmic operations as well as other points of instruction to a class. The model was made on a scale exactly ten times that of the actual eye, and the models of the eye instruments were on the same scale excepting that the handles of the instruments had been altered and shortened. The apparatus, which consisted of the front of an eye, permitted of rotation in every direction, and the eye could be fixed in any desired position. The sclerotic and the eyelids were constructed of white felt. The cornea was made of stout glass of the right curvature. The iris was imitated in thin sheet India-rubber, with a round hole for the pupil. The cataractous lens was made of xylonite. The internal and external rectus muscles of the eye were represented by pieces of linen bandage. With this apparatus could be represented the *modus operandi* of peripheral section of the cornea, of iridectomy, of extraction of cataract, and of squint operations. The anterior chamber could only be entered for iridectomy, cataract extraction, etc., in the usual place, at the sclerotico-corneal junction. Here at any part of the upper half circumference the knife, forceps, pricker, or curette could be entered between the felt sclerotic and the glass cornea, which gave way for their admission, and resumed its natural position when the instrument was withdrawn. The sheet India-rubber, of which this imitation iris was made, could be seized with the (model) iris forceps at any part, drawn out of the eye, more or less, and so much cut off as might be desired in the demonstration. Mr. Streatfeild illustrated his remarks by performing a cataract extraction on the model.

— In a town in Normandy lives an aged lady named Marie Durant, much visited, who is believed to be one hundred and twenty-three years and a few weeks old, but who, when asked, with true feminine instinct declares she does not know. For ninety-six years she has been a widow, and during her lifetime four kings have ruled, the stars of two emperors have risen and set, and three republics have been established. She lives exclusively on vegetable diet, but is always ready for a *petit verre* of cognac, and says she would have died but for frequent doses of it during a recent illness. Her skin is brown and wrinkled, and all the flesh seems to have disappeared from under it, though there are still small veins of color on her withered cheek.

— *A propos* of guess-work, the *London Medical Times* remarks (July 12th): Every great scientific theory has commenced in a guess, or, to speak of it more respectfully, a flash of genius or inspiration. That theories, medical or otherwise, are merely convenient guesses at truth, to be employed as working hypotheses, liable to modification or rejection as further facts are brought to light, essentially forms the distinction between a scientific and an unscientific guess. Every diagnosis is at first more or less of a guess. The original guess may be raised to a high condition of probability by the course of disease, by alterations of temperature, the development of physical signs, the appearance of a rash, etc., but frequently these may be misleading, and absolute certainty can be obtained only by post-mortem examination. A riddle may have numerous answers besides the right one. In disease a consideration of the same data may lead to a dozen different conclusions. It would be painfully interesting if the commentaries written by the candidates at such an examination as that for the London M. D. were published collectively. It is notorious that the diagnoses arrived at from the same facts vary considerably, and much ingenuity must be expended in endeavoring forcibly to twist these stubborn articles into a pillar of strength, in which, it may be, every particle is proclaiming its protest against misuse. In the examinations of our daily life, however, guess-work must always play an important part, its value depending largely on the degree of flexibility exhibited by the medical man. He who starts with a wrong diagnosis, and refuses to modify his originally expressed opinion, in view of fresh facts, will more certainly lose the confidence of his patients than he who frankly admits his error. Guess-work, invaluable as an aid when scientifically used, only becomes a direct evil when it leads to an uncompromising dogmatism.

— Pelizaeus examined 2,403 children between the ages of six and thirteen, with respect to the presence or absence of the patella reflex. Out of all these children there was only one boy in whom he was never able to obtain the patella reflex, in a few others in whom it was not present at the first examination it was always found on subsequent trials. The boy in whom it was absent was apparently in perfect health. These results are very different from those obtained by Eulenburg and Berger, who found an absence of patella reflex in 4.8 and 1.56 per cent. of the children examined. — *Archiv für Psychatrie*, etc., Bd. xiv., Hft. 2.

— Somnambulism is one of the subjects to be taken up by the committee for the collective investigation of disease in England.

— Dr. E. L. Keyes [1] gives the result of his experiments in a number of cases of gonorrhœa with some of the methods of treatment which have recently been recommended, especially those by hot water and by corrosive sublimate. His temporary conclusions are as follows: (1.) A mild corrosive sublimate solution irritates the urethral mucous membrane more than it seems to irritate an open wound. (2.) It appears that an abortive treatment of gonorrhœa is yet to be discovered. (3.) The hot water treatment of gonorrhœa is unreliable.

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[1] Journal of Cutaneous and Venereal Diseases, March, 1884.

— Mr. Lawson Tait reports in the *Lancet* (July 12th) two cases of remarkably high temperature taken by several observers and verified by himself, four independent thermometers agreeing in the record. In one case of a woman with chronic ovaritis a full temperature record is presented covering a period of two weeks; enormous variations are shown, from 99° upwards. Twice the temperature was 106°, once 107° twice 108°, three times 109°, six times 110°, and four times 111°. Another woman from whom both ovaries had been removed for cystoma showed a temperature at one time, verified like that in the other case by different observers and instruments, of 111°. There were no other untoward symptoms, and she made a good recovery.

— Under the new regulations for Government Life Insurance, says the *Lancet*, a novel experiment is being tried, the result of which will be watched with interest. Insurances for sums not exceeding twenty-five pounds are now granted at any post-office savings bank without any medical examination. If, however, an insurant should die before the second annual premium becomes payable, the amount of the first premium, and no more, will be paid to his representative; should the insurant die after the payment of the second, but before the third premium becomes due, the representatives will be paid only half the amount of the policy. After the payment of the third premium the policy is entitled to full benefit. It is nevertheless provided that in case of death within two years of an insurant who has not been medically examined, if it can be proved to the satisfaction of the Postmaster-General that the death was caused by accident, the full amount of the policy will be paid. Persons proposing to insure for sums not exceeding twenty-five pounds, and preferring that their policy should have the full benefit of insurance at once, can undergo a medical examination by payment of a fee of half a crown to the medical examiner. The rules do not explain the nature of the arrangement by which the fee for medical examination to be paid by the insurant is to be supplemented. The new system by which insurances may be granted through post-office savings banks affords great facilities for industrial insurance combined with absolute security, which, it may be hoped, will commend the system to the working classes. In view of recent abuses which have come to light in the insurance of children, it is worthy of observation that no insurances will be granted upon the lives of children under eight years of age, and the amount is limited to five pounds for children aged between eight and fourteen years.

— The experiments which M. Pasteur is reported thus far to have made with hydrophobia are said to be an unbroken success. Fifty-seven dogs have been the subjects of investigation. Of these nineteen were rabid, and by these thirty-eight healthy animals were bitten under uniform conditions. Of the thirty-eight, one-half the number had been previously inoculated or "vaccinated with attenuated virus; the other half had not. The latter, without a single exception, died with unequivocal signs of rabies, whereas the nineteen others remain as well as ever. They will be watched for a year by veterinary surgeons to see whether the inoculation holds good permanently or only temporarily.

Correspondence.

"NEPOTISM AT THE MASSACHUSETTS GENERAL HOSPITAL."

Mr. Editor, — I believe the readers of the Journal appreciate its sense of humor and are grateful for its attempts to soften the asperities of life. Perhaps they have never been treated to anything more amusing than the "Statement in Regard to the Charge of Nepotism at the Massachusetts General Hospital." It reminds one of the ludicrous attempts of an inebriated person to assure his friends that he is not intoxicated; or better still, of an individual charged by common rumor with intoxication, who takes pains to prove to the world that he is not dead drunk. The Massachusetts General Hospital is not yet old enough to appoint all its house pupils from the comparatively few families of its trustees and medical staff, and must fill up its quota from outsiders. Eight appointments in ten years of gentlemen who bear the well-known names of members of the staff is by no means a bad showing, but a candid statement in regard to the matter should not be confined to those degrees of relationship which are betrayed by identity of names.

It is often said that the appointments are influenced by favoritism, a word that includes nepotism and much more, and the "statement" expressly says that the appointments are not prizes to the best scholars and that the examinations are not intended to be tests of knowledge. Other qualifications are sought, and what can be more natural than that the nominating body should see those qualifications best marked in the sons of their friends and their friends' friends. The consequence naturally is that students rely upon other means than scholarship to gain the coveted positions. Occasionally a man forces his way in, so to speak, by superior scholarship, provided he takes care to exhibit also those other qualifications mentioned in the statement and it happens to be an "off year" for favorites. The names alone in any list of internes does not cover the ground. To fully understand the matter it would be necessary to recall the history of each year; to learn who was not appointed and the various reasons which influenced the individual members of the nominating and appointing bodies in making the several appointments.

But it is hardest of all to understand why any excuse or statement is necessary in regard to the matter. No hospital management would consent to have its house officers appointed by lot, and there are but two other ways — as the result of an examination, which *is* a test of knowledge, or by the arbitrary choice of the appointees. The first method is the most feasible in hospitals maintained at public expense; a private institution may adopt either method, and, though it is pleasing to the friends of a hospital to feel that its favors are bestowed in such a manner as to encourage true scholarship, there is much to be said in behalf of the favoritism method. Why should not the wishes of a man who helps financially to sustain the institution be regarded? Why should not a physician or surgeon be influenced by the wishes of his dearest friend or most profitable patient? The question is not intended even to suggest improper influence, but simply to say that the gentlemen referred to are subject to like influences as other men, and they cannot help trusting the children of their friends, who have grown up around them, rather than the strange young men who may be equally good, but whom they do not know.

Certainly this much must be said, internes appointed by vote are much more likely to be amenable to control than those who have compelled their appointment by virtue of a superior examination. A certain feeling of pride is natural to a man who has come off victorious in a contest, either mental or physical, with his fellows, and the winner of a hospital examination is probably a little more ready to criticise and instruct his visiting physician or surgeon than the man who owes his place to favor; and nobody supposes that the hospital suffers from the present method. Favoritism also gives a chance to those individuals who have not the ability or the industry to pass an examination, but do possess the faculty for learning by experience, and make, in the end, some of our finest practitioners.

Each method has its advantages, and each its disadvantages; neither can escape criticism, but neither needs to justify itself by showing that it is not the other. X. Y. Z.

THE PLASTER-POSTERIOR SPLINT.

Keene, N. H., *August* 6, 1884.

Mr. Editor: *Sir*, — My attention has been called to the foot-note appended to a very interesting article by Dr. George W. Gay in the *Boston Medical and Surgical Journal* of July 24th, in which is said: "A practical demonstration of the plaster-posterior splint was made before the Society by Dr. R. A. Kingman, of Boston, who perfected and brought it into use in this vicinity while he was house surgeon at the City Hospital in 1881. The efficiency and popularity of the splint are largely due to Dr. Kingman's skill and ingenuity."

Will you kindly allow me to object to the idea of any great amount of ingenuity being shown by my friend Dr. Kingman in regard to this splint, and I feel sure he will agree with me in the objection.

Nearly five months before Dr. Kingman entered the City Hospital, Dr. George Goodhue, of New York, told me of this splint as having been successfully used in the New York hospitals, and from that time on Drs. Cutter, Bullard, Squires, and I used it, as needed, continuously and successfully, and the splint so minutely described by Dr. Gay is to all intents and purposes identical with the first one applied, February 22, 1881, by Dr. Cutter and myself, under the supervision of Dr. Goodhue; and the hospital records describe the use of this antero-posterior splint by the house surgeons many times before July 4, 1881, on which day Dr. Kingman entered the hospital as surgical interne. The point I wish to make is that, in view of these facts, it seems hardly fair to ascribe to Dr. Kingman's skill and ingenuity the "efficiency and popularity of this splint."

Very truly yours,
George H. Bridgman, M. D.

Miscellany.

THE DIAGNOSIS OF MITRAL CONSTRICTION.

Simple mitral constriction, remarks a writer in the *Medical Times and Gazette* January 5, 1884, is of far more frequent occurrence than is generally allowed, and its diagnosis probably presents greater difficulties than any other serious lesion of the valves on the left side of the heart. We exclude from consideration cases which are complicated by regurgitation, because the latter, when advanced enough to produce grave symptoms, is easily detected; and the presence of constriction as well in such cases is not of great practical importance. But when, as not rarely occurs, the question is whether stenosis of the mitral orifice be present, and the cause of serious symptoms, or whether the heart be healthy, and the distress and danger due to other conditions, accurate diagnosis becomes a matter of the utmost moment. In a typical case the observer feels a thrill at the apex preceding the impulse of the heart; he hears at the base a clear second sound over the aortic valves, an exaggerated one to the left of the sternum, and at the apex a rolling presystolic murmur, gradually increasing in intensity and leading up to a short and sharp first sound, which is not succeeded by any appreciable second sound. The diagnosis of mitral stenosis under such circumstances admits of little doubt. But in a second series of cases both murmur and thrill may be absent, and the heart's action regular, and the difficulty of detecting the disease then becomes great. The most striking auscultatory phenomena are accentuation of the second sound at the base to the left of the sternum, and, what is of much greater importance, a peculiar hesitation in the production of the first sound, a kind of "hanging fire," which is easier for the experienced auscultator to appreciate than to describe. Whatever be its origin, whether it be a faint sound caused by the blood passing through the constricted orifice into the ventricle, and so practically a murmur, or be due to a slowly beginning, though suddenly ending, ventricular contraction, it is a phenomenon which at once strikes the ear and suggests the nature of the disease. In these and all other cases of suspected constriction of the mitral orifice, the detection, if possible, of increase in size of the left auricle and right side of the heart yields valuable corroborative evidence. There is a third class of cases, in which there may be no murmur, no thrill, no hesitating first sound, but extreme irregularity of cardiac action, the beats being very frequent and very irregular both in rhythm and in force; so much so that a great many of them produce no pulsation at the wrist. In some cases as many as half the beats of the heart are not felt in the radial artery, so that the pulse there may be moderate in frequency, although the cardiac contractions succeed each other with extreme rapidity. Similar phenomena may likewise be observed in cases of simple dilatation of the heart with degeneration of its walls, such as occurs, for example, in chronic bronchitis and emphysema; but then the patient is usually past middle life. If grave cardiac symptoms be found in a comparatively young person, and if auscultation only reveal extreme irregularity in the heart's action, the presence of mitral stenosis ought to be at once suspected. The administration of digitalis in such cases not only often removes the patient's distress, and produces regularity and normal frequency of the heart's beats, but also facilitates diagnosis. For when the heart's action gets slow and regular a presystolic murmur frequently makes its appearance. Finally, there are cases of considerable mitral constriction which produce no sufficiently well-marked morbid phenomena to enable the observer to detect the presence of heart disease. But the pathologist not infrequently meets with these narrowed orifices in the post-mortem room in patients who have died from other diseases. The reflection is then forced upon him, how extreme some pathological conditions require to be before they come within range of our present powers of diagnosis.

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LATE MARRIAGES.

Dr. F. Steinmann, of St. Petersburg, has recently published, says the *Lancet*, the results of his researches into the question of how far childbirth and lying-in are unfavorably affected by the primipara being old when she first becomes a mother. The estimate of the time when a primipara is called old varies between twenty-five (Fasbender) and thirty-five years (Mangiagalli), but Dr. Steinmann accepts that which most authorities have adopted, namely, thirty years. From twelve years' statistics of the St. Petersburg Maternity Hospital, during which time there were 28,279 deliveries, it appears that there were in that period 645 old primiparæ. Of this number a fraction over 69 per cent. were thirty to thirty-four; 26.2 per cent., thirty-five to thirty-nine; and 4.2 per cent., forty years and over; one of these was fifty-two years old. In 1875, when the general mortality was three and a half per cent., that of old primiparæ was nearly fourteen per cent.; and again, in 1881, when the general mortality was only one half per cent., that of the old primiparæ was eight per cent. A decidedly greater fœtal mortality when primiparity is late is also shown by the statistics collected by Dr. Steinmann, and, although the subject demands more attention from the profession than it has heretofore received, the facts adduced by him furnish strong reasons for objecting to late marriages.

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SURGICAL TRIUMPHS AND OPERATIVE AUDACITIES.

Mr. A. Jackson, of Sheffield, England, at the completion of a quarter century of incumbency of the lectureship on surgery at the Sheffield School of Medicine, made an address on A Quarter of a Century's Surgery: Its Lessons, its Failures, its Disappointments, its Prophecies,[1] which is of value as presenting the view of one who is evidently a conservative as to what is of permanent value in the so-called advances of surgery in the past generation. We subjoin the following extracts: —

After premising that " the great commotion or progress — whichever view be taken of it ' — of this period is largely due to two factors — anæsthetics and antiseptics — and granting the enormous value of the former in operation as well as in diagnosis, he goes on to say: " But while chloroform and antiseptics have had their advantages, have they done no harm? I think they have. What a terrible tale would abdominal sections tell, were they all recorded *accurately*, after the able method of Sir Spencer Wells! How often have they been done unsuccessfully! I am not alluding to ovariotomy, for that is one of the few successes of the last twenty-five years — a success founded upon a rock which neither the winds of fashion nor the fickleness of the English people will ever shake. I am alluding more particularly to the exploratory operations for the relief of internal strangulation; for the relief of pain; for caries of the spine; and also to those cases where portions of the stomach and intestines have been removed, gastrostomies performed, etc., etc. As Mr. Erichsen puts it, 'Will the surgery of our time record "surgical triumphs or operative audacities?"' May I substitute the word 'atrocities?'

" Far be it from me to say that these operations are wholly unjustifiable. I have sinned — in my opinion — many times. But is it not time to pause and consider whether they are justifiable; whether they are successful sufficiently often to continue them; and to try and perfect our diagnosis before we make this a permanent operation. Syme, fifty years ago, used the word gastrostomy, and condemned the operation; and I think we are bound to have stronger reasons than we have at present for running counter to the judgment of one of the greatest surgeons of the century.

" The St. Bartholomew Hospital Reports (1884) record twenty-one abdominal sections, with nineteen deaths, exclusive of ovariotomies. . . .

" With regard to the treatment of diseases of bones and joints, more particularly the hip, the knee, and the tarsal bones, are we where we were twenty years ago? With regard to the hip-joint and the tarsal bones I think we are. The recognized modes of treatment of the hip-joint have failed. I do not mean in every case, but in the majority. I think excision of the head of the femur has failed because enough bone has not been removed, and it has not been resorted to early enough; but so far as I know at present it is the only mode of treatment with any chance of success except in the early stages. Excision of tarsal bones or gouging them out may also be classed amongst our failures; and I would urge a more frequent resort to Syme's operation.

" Every department in surgery has been harassed and unsettled; no one knows better how much has been done in this way than the unfortunate man who has to lay down laws for the students in lecture; for in the very outset, with regard to the treatment and dressing of an incised wound, the treatment of a fracture, there are no rules, no laws; each man does that which is right in his own eyes, and there are almost as many different methods of treatment as there are clinical teachers.

" Each hospital has its own particular way of treating broken bones. We have the same miserable sequelæ, ankylosed joints, œdematous legs, pain, thickening, want of power, as formerly; and no one stops to think if anything can be done to prevent their occurrence.

" Oh, that several workhouse medical officers would write a book on the Sequelæ of Hospital Surgery. Such a book, with a hospital surgeon's account of his mistakes, would do more to advance surgery than the publication of so many successful cases. The treatment of empyema is now one of the burning questions of the day; and we find men advocating the removal of a portion of not one rib only, but of four or five; and we are asked to consider the propriety of draining pulmonary vomicæ, and the removal of portions of lung. 'Are these surgical triumphs or operative audacities?' . . .

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[1] Medical Press, July 9, 1884.

"In a deal that is now called new and brought forward as instances of progress, we are now only returning to the modes of treatment suggested and practiced in days gone by. The ligature of the sac for the radical cure of hernia was many years ago practiced by the elder Teale. Cystotomy for irritable bladder was introduced by Paget, of Leicester. The kidney was successfully removed twenty-five years ago; osteotomy twenty-four years ago.

"To sum up, I am inclined to think that, in future, we shall find surgery stepping in and dealing successfully with ruptured bladders, perforating ulcer of the stomach, and kidney diseases; but I do think we ought to make a stand against performing large operations on internal cancers until we know more about their laws of recurrence. I think we ought to watch with very great jealousy the results of our osteotomies, our abdominal sections, and drainage of pulmonary vomicæ. We ought to try to find out what is the best treatment for spinal disease and diseases of bones and joints in their early stages; to invent some more satisfactory way of treating fractures; and to publish more of our unsuccessful cases."

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 2, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	726	380	36.68	14.28	24.68	.84	2.52
Philadelphia	927,995	454	225	26.84	13.64	19.14	1.76	1.98
Brooklyn	644,526	308	195	51.15	7.92	42.57	—	1.65
Chicago	632,100	320	212	52.39	6.51	38.13	3.41	5.89
Boston	423,800	245	130	48.15	10.35	35.10	3.15	1.35
Baltimore	408,520	157	84	33.28	14.08	20.48	3.20	3.84
St. Louis	400,000	177	90	30.80	5.60	21.12	3.20	3.20
Cincinnati	272,400	93	39	27.82	7.49	16.05	5.35	—
New Orleans	234,000	133	44	46.64	—	12.58	—	.74
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	92	40	25.92	14.04	19.44	3.24	1.08
Pittsburg	180,000	86	53	45.18	8.12	32.54	2.32	4.64
Milwaukee	142,400	92	78	48.60	2.16	44.28	1.08	1.08
Providence	119,405	48	26	39.52	4.16	33.28	2.08	—
New Haven	62,882	33	18	54.54	—	42.42	3.03	—
Nashville	54,400	36	17	38.78	11.31	27.77	2.77	—
Charleston	52,286	37	14	18.90	29.70	13.50	2.70	—
Lowell	71,447	39	21	38.40	15.36	35.84	—	—
Worcester	69,442	20	12	40.00	15.00	30.00	5.00	5.00
Fall River	62,674	38	26	50.00	—	44.71	—	—
Cambridge	60,995	31	13	19.32	19.32	16.11	—	—
Lawrence	45,516	22	15	45.45	9.08	45.45	—	—
Lynn	44,895	21	13	33.33	19.04	33.33	—	—
Springfield	38,090	18	11	72.22	5.55	55.55	5.55	5.55
Somerville	31,350	17	9	58.88	5.88	58.88	—	—
Holyoke	30,515	10	7	50.00	—	40.00	—	—
New Bedford	30,144	13	7	53.83	7.69	46.14	7.69	—
Salem	29,503	—	—	—	—	—	—	—
Chelsea	24,347	9	4	11.11	11.11	—	—	—
Taunton	22,693	8	0	—	—	—	—	—
Gloucester	21,400	10	5	30.00	20.00	30.00	—	—
Haverhill	20,905	7	4	42.84	14.28	42.84	—	—
Newton	19,421	9	1	33.33	22.22	22.22	—	11.11
Brockton	18,323	4	1	—	50.00	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	5	2	40.00	40.00	40.00	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Eighty-eight Massachusetts towns	—	46	4	—	21.74	—	—	—

Deaths reported 3364 (no report from Buffalo): under five years of age, 1800; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases), 1040, diarrhœal diseases 705, consumption 360, lung diseases 138, diphtheria and croup 77, whooping-cough 57, typhoid fever 57, malarial fevers 44, measles 38, scarlet fever 31, cerebro-spinal meningitis 15, erysipelas six, puerperal fever six, small-pox three, typhus fever one. From *whooping-cough*, New York 19, Boston 12, Brooklyn 10, Philadelphia five, Baltimore, District of Columbia, and Nashville two each, St. Louis, Cincinnati, Pittsburg, Milwaukee, and Providence one each. From *malarial fevers*, New Orleans 15, St. Louis 12, Brooklyn six, Baltimore five, New York four, Charleston and Chelsea one each. From *measles*, New York 18, Chicago seven, Philadelphia four, Brooklyn and Pittsburg three each, Boston, Cincinnati, and New Orleans one each. From *scarlet fever*, New York seven, Philadelphia six, Chicago and Boston four each, Cincinnati and New Haven two each, Brooklyn, Baltimore, Pittsburg, Providence, Lowell, and Cambridge one each. From *cerebro-spinal meningitis*, New York three, Philadelphia and Fall River two each, Chicago, Boston, Baltimore, St. Louis, Cincinnati, Nashville, Springfield, and Holyoke one each. From *erysipelas*, New York two, Chicago, Cincinnati, Milwaukee, and New Haven one each. From *puerperal fever*, Chicago three, Brooklyn, Boston, and St. Louis one each. From *small-pox*, New Orleans two, Philadelphia one. From *typhus fever*, New York one.

Cases reported: scarlet fever 42, diphtheria 22, typhoid fever nine, and measles four in Boston; scarlet fever 31, and diphtheria seven in Milwaukee.

In 106 cities and towns of Massachusetts, with an estimated population of 1,528,732 (estimated population of the State 1,955,104), the total death rate for the week was 19.11 against 21.54 and 17.68 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending July 26th, the death-rate was 24.0. Deaths reported 4031: acute diseases of the respiratory organs (London) 177, diarrhœal diseases 838, whooping-cough 129, measles 117, scarlet fever 83, fever 36, diphtheria 29, small-pox (London 23, Liverpool and Sheffield one each) 25. The death-rates ranged from 14.0 in Bristol to 34.6 in Leicester; Birkenhead 16.6; Birmingham 20.7; Bradford 17.2; Leeds 27.3; Liverpool 27.1; London 26.1; Manchester 24.2; Nottingham 29.2; Sheffield 26.7. In Edinburgh 17.6; Glasgow 26; Dublin 21.9.

For the week ending July 19th, in the Swiss towns, there were 43 deaths from diarrhœal diseases, consumption 33, typhoid fever 20, lung diseases 14, diphtheria and croup three, scarlet fever one, erysipelas one. The death-rates were, at Geneva 25.5; Zurich 11.8; Basle 21.4; Berne 22.2.

The meteorological record for the week ending August 2d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
July–August, 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 27	29.971	60	67	56	90	81	95	89	SE	E	NE	4	16	19	F	O	R	—	—
Mon., 28	29.936	60	66	54	93	72	91	85	NW	SE	SW	10	9	4	O	F	C	—	—
Tues., 29	29.856	58	63	56	100	100	100	100	SE	E	N	5	18	9	R	R	R	—	—
Wed., 30	29.813	62	73	55	98	82	95	92	N	SE	W	10	7	10	O	F	C	—	—
Thurs., 31	29.781	70	82	63	87	67	100	85	SW	S	SW	7	17	7	C	O	O	—	—
Fri., 1	29.948	71	82	65	79	44	73	65	NW	W	W	11	8	6	F	C	F	—	—
Sat., 2	30.140	71	82	62	68	37	83	63	NW	W	W	7	8	8	F	C	F	—	—
Mean, the Week.	29.921	64.6	73.0	59.0				82.7										27.50	1.89

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM AUGUST 2, 1884, TO AUGUST 8, 1884.

Woodward, Jos. J., major and surgeon. Sick leave of absence extended six months. Paragraph 9, S. O. 178, A. G. O., July 31, 1884.

Gibson, J. R., major and surgeon. Granted leave of absence for one month and fifteen days. S. O. 36, headquarters Division of the Atlantic, August 4, 1884.

Heizmann, C. L., captain and assistant surgeon. Relieved from duty at Columbus Barracks, Ohio, and ordered for duty in Department of the East. Paragraph 2, S. O. 150, A. G. O., August 2, 1884.

McCreery, Geo., first lieutenant and assistant surgeon. Leave of absence extended two months. Paragraph 4, S. O. 180, A. G. O., August 2, 1884.

Taylor, A. W., first lieutenant and assistant surgeon. Ordered for temporary duty at Fort Riley, Kansas. Paragraph 1, S. O. 153, headquarters Department of the Missouri, July 29, 1884.

Hopkins, W. E., first lieutenant and assistant surgeon. Granted one month's leave of absence, with permission to apply for one month's extension. Paragraph 1, S. O. 67, headquarters Department of Arizona, August 1, 1884.

Benham, R. B., first lieutenant and assistant surgeon. Assigned to duty at Fort Brown, Texas. Paragraph 1, S. O. 90, headquarters Department of Texas, July 19, 1884.

Gandy, C. M., first lieutenant and assistant surgeon. Granted leave of absence for one month, — to commence between August 15th and 30th, — provided he furnish medical attendance at Fort Brady, Mich., during his absence. Paragraph 5, S. O. 154, headquarters Department of East, July 30, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE THREE WEEKS ENDING AUGUST 9, 1884.

Harmon, G. E. H., passed assistant surgeon. Ordered to temporary duty at Norfolk Navy Yard.

Sayre, J. S., assistant surgeon. Ordered to U. S. S. Independence.

Books and Pamphlets Received. — Twenty-ninth Annual Report upon the Births, Marriages, and Deaths in the City of Providence for the Year 1883. By Edwin M. Snow, M. D., City Registrar. Providence. 1884.

Post-Partum Uterine Injections of Carbolic Acid. An Inquiry into their Propriety. Read before the Indiana State Medical Society. By H. v. Sweringen, A. M., M. D. Fort Wayne, Ind., June 11, 1884.

Fifth Annual Announcement and Catalogue of the College of Physicians and Surgeons, Boston. Session of 1884–85.

Forty-Third Annual Announcement of the St. Louis Medical College. Winter Session, 1884–85, etc. 1884.

Proceedings of the Sanitary Conference of State Boards of Health. Held at New Orleans, La., June 2–4, 1884.

Woman's Medical College of the New York Infirmary. Sixteenth Annual Catalogue and Announcement, June, 1884.

Trachoma and the Ætiology of Jequirity Ophthalmia. By J. A. Andrews, M. D. New York. (Reprint.)

Report of the Board of Managers of the Pennsylvania Hospital to the Contributors, at their Annual Meeting, held 5th Month 5, 1884. Philadelphia.

Manual of Physiology. A Text-Book for Students of Medicine. By Gerald F. Yeo, M. D., F. R. C. S., Professor of Physiology in King's College, London, etc. Philadelphia: Henry C. Lea's Son & Co. 1884.

An Introduction to Pathological and Morbid Anatomy. By T. Henry Green, M. D. Lond. Fifth American from the Sixth Revised and Enlarged English Edition.

Diseases of the Throat and Nose, including the Pharynx, Larynx, Trachea, Œsophagus, Nose, and Naso-Pharynx. By Morell Mackenzie, M. D. London. Vol. II. Illustrated. Philadelphia: P. Blakiston, Son & Co. 1884.

Official Report of the Relief Furnished to the Ohio River Flood Sufferers. Evansville, Ind., to Cairo, Ill., etc. By R. P. M. Ames, A. M., M. D. 1884.

Seventh Annual Report of the Managers of the Adams Nervine Asylum. 1884.

Phthisis Pulmonalis, etc. By L. H. Wood. Denver, Colo.

Première Application à Paris en 1883 de l'Assainissement Suivant le Système Waring. Par Ernest Pontzen, Ingénieur Civil. Paris. 1884.

Materia Medica and Therapeutics. An Introduction to the Rational Treatment of Disease. By J. Mitchell Bruce, M. A. Aberd., M. D. Lond. Philadelphia: Henry C. Lea's Son & Co. 1884.

Original Articles.

THE VALUE OF PROBABILITIES IN MEDICAL RESEARCH.

BY F. J. B. CORDEIRO, M. D.,
Assistant Surgeon U. S. Navy.

By probability we understand the projection of the past into the future, — a process by which we avail ourselves of bygone experience. Or probability and experience are two ends of a connected series vanishing in one direction into the future, the other into the past. The end spanning the future we can liken to a bridge springing out into the air from a buttress, and this buttress is the past. The farther back the buttress extends the longer out can we build our bridge. The word "probably" occurs constantly throughout Medicine, and what word could occur more properly in one of the less exact sciences? It was latest in my ears when Dr. Warren, in determining whether or no a needle was in the foot of his patient, said, "Two halves of a needle were seen before the accident, afterwards only one. The probability would have been greater if a whole needle had been seen before the accident and a half afterwards." Such a case is easily dealt with by common sense, as we say. Not so simple is the following: Suppose the obturator artery arises from the epigastric once out of every two subjects in the female, and once out of every five in the male. Suppose that when so arising it goes to the inner side of the crural ring, in the proportion of one out of eleven subjects. Suppose it arises by two trunks, one of which is from the epigastric, in one out of seventy-two subjects. Suppose the above anomalies occur unilaterally four times to every time they occur bilaterally. What, then, is the danger of wounding the obturator artery in operating for crural hernia in a given case? The theory of probabilities gives us readily

For female,
Danger $= (\frac{1}{2} \cdot \frac{1}{11} + \frac{1}{72} \cdot \frac{1}{11}) (\frac{1}{5} + \frac{4}{5}) = .0255.$
For male,
Danger $= (\frac{1}{5} \cdot \frac{1}{11} + \frac{1}{72} \cdot \frac{1}{11}) (\frac{1}{5} + \frac{4}{5}) = .0106.$

That is, if the statistics are correct, the accident will happen 255 times out of every 10,000 females operated on, and to 106 males out of every 10,000.

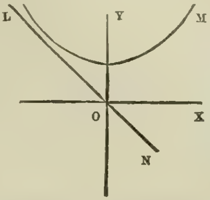
If we measure a quantity a given number of times we shall have as many errors as we make measurements. These errors will vary in magnitude. If we make an infinite number of measurements we shall hit as often above as below the true value, and by as much, that is, for any number of errors of a given magnitude with a plus sign, we shall have as many of a like magnitude with a minus sign. In other words, if we were to measure an angle a very large number of times with the plainest kind of quadrant, we should get a more accurate result than from a few measurements by the most elaborate verniers and micrometers, provided the instrumental errors in each were equal. And we should get an absolutely accurate result from our imperfect instrument, provided we made an infinite number of observations. Thus, like Jason's horde sprung from the dragon's teeth, our errors annihilate each other.

Let x be an error, carrying with it its sign. We can formulate our law above $\Sigma x = o$. This is the law of the Arithmetic Mean. Let us integrate the expression $x_1 + x_2 + x_3 \ldots + x_n = o$. We have $\int \Sigma x \, dx = \frac{1}{2} \Sigma x^2 + C$.

It follows that Σx^2 is a minimum for $\Sigma x = o$. This is easily seen also by the following. If we shift our origin to a point x_o, the residuals of the measurements will be $x - x_o = x'$.

$\Sigma x'^2 = \Sigma x^2 - 2 \Sigma x x_o + n x_o^2$. But $\Sigma x = o \therefore \Sigma x'^2 = \Sigma x^2 + n x_o^2$. Hence $\Sigma x'^2$ is a minimum only when $\Sigma x'^2 = o$. This is the principle of Least Squares.

The function $\Sigma x'^2$ changes value with change of origin, according to the law



$$\Sigma x'^2 = y = C + n x^2,$$

that is, it shifts in the parabola *L M*, as per figure. The function $\Sigma x'$ shifts in the line *L N*.

It is important to bear in mind, as is easily seen by the simple proof above, that the law of the Arithmetic Mean and the principle of Least Squares are absolutely true only for an infinite number of observations. For a small number of observations their value is not great, but their accuracy and *applicability* increase rapidly as the observations increase.

Let us now consider if the proportions in which errors of different magnitudes occur is subject to law for an infinite number of observations. I give here Gauss's beautiful demonstration of this point.

Let $y = f(x)$ be the probability of the occurrence of the error x. The probabilities of various errors x_1, x_2, x_3, etc., then are $f(x_1), f(x_2), f(x_3)$, etc. The probability of the simultaneous occurrence of these errors is the product of their separate probabilities.

$$\text{Let } P = f(x_1), f(x_2), f(x_3), \text{ etc.} \qquad (1.)$$
$$\text{Then } \log P = \log f(x_1) + \log f(x_2) + \text{etc.} \qquad (2.)$$

Now the absolute values of x_1, x_2, x_3, etc., being unknown, we wish to determine the most probable system of values. Of all possible systems, that one is most probable which makes P a maximum. Differentiate (2),

$$\frac{dP}{P} = \frac{d f(x_1)}{f(x_1)} + \frac{d f(x_2)}{f(x_2)} + \text{etc.} \qquad (3.)$$

Let $d f(x) = \phi(x), f(x), dx$ where ϕ is some form of function. Substitute in (3) and equate to o.

$$\frac{dP}{P} = \phi(x_1) \, dx + \phi(x_2) \, dx + \text{etc.} = o. \qquad (4.)$$
$$\therefore \phi(x_1) + \phi(x_2) + \phi(x_3) + \text{etc.} = o.$$

But $x_1 + x_2 + x_3 + \text{etc.} = o$ by the principle of the Arithmetic Mean. Hence ϕ means simply multiplication by some constant k. Hence

$$\frac{d f(x_1)}{f(x_1) \, dx} = k x_1$$

$$\therefore \frac{d y_1}{y_1} = k x_1 \, dx$$

Or, generally, $\frac{dy}{y} = k x \, dx.$

$$\text{Integrating, } \log y = \frac{k x^2}{2} + k^1$$

$$\therefore y = e^{\frac{k x^2}{2}} - e^{k^1} = c\, e^{-h^2 x^2},$$

where $c = e^{k^1}$ and $\frac{k}{2} = -h^2$. We derive, then, the law of the probability of error, $y = c\, e^{-h^2 x^2}$ — a remarkable result. Let us understand that this law is absolutely true only for an infinite number of observations, though nearly true for a large number. With a small number of observations chance wanders as it pleases: there is no law or semblance of law; but gradually, as the observations increase, chaos begins to marshal itself into Gauss's law, given above. There exists, therefore, either no law at all or an approximation to Gauss's law.

The following historical digression will not be without interest. The impression has prevailed among many writers, past and present, that various laws of probabilities might exist under different circumstances. Merriman[1] says, with Laplace, that he is unaware that any one has yet proved the *a priori* probability of the Arithmetic Mean. I quote: "It is distinctly conceivable, and hence *a priori* possible, that in different classes of observations different laws of error might exist; therefore we ought not to expect that from merely theoretical considerations a single definite law of error should result."

Gauss, as long ago as 1809, seems to me to have had a comprehensive and just understanding of the whole subject. To him belongs the whole credit in this branch of probabilities. Laplace showed that for most accurate results the sum of the errors raised to the 2*n*th power should be used, the accuracy increasing with *n*. But the condition is intrinsically the same where the squares are taken. For the condition $x_1 + x_2 + x_3 +$ etc. $= o$ is equivalent to the condition $x_1^3 + x_2^3 + x_3^3 +$ etc. $= o$.

Integrating this last expression, we have

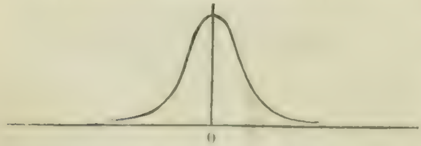
$$x_1^4 + x_2^4 + x_3^4 + \text{etc.} = k.$$

This must be a minimum when $x_1 + x_2 + x_3 +$ etc. $= o$. And so on for any power $2n$. Using the test that the fourth powers of our errors shall aggregate a minimum we shall have a smaller value for the error of our mean. For the function $\Sigma x'^4 = \Sigma (x - x_0)^4$, (where x_0 is the error of our mean) $= \Sigma x^4 + 6 \Sigma x^2 x_0^2 + n x_0^4$. Therefore the function $\Sigma x'^4 = y$, shifts according to the law $n x_0^4 + 6 C' x_0^2 + C'' = y$, as we shift our origin x_0.

The function $\Sigma x'^2$ shifts, as we have seen, according to the law $n x_0^2 + C = y$. Hence for a given value of the function y we shall get a smaller value of x_0 in the former law of variation than in the latter. And this applies with increasing force to higher powers. Laplace remarks, however, that he has found the differences between the values deduced by squares and fourths unworthy of consideration.

Let us return to the law $y = c\, e^{-h^2 x^2}$

This gives us a curve of the following shape: —



The probability that an error will fall within a certain limit x_0 is $2c \int_0^{x_0} e^{-h^2 x^2} dx$.

$e^{-h^2 x^2}$ can only be integrated by the aid of an infinite series. Between the limits o and ∞ it has been accurately integrated by Poisson.

$$\int_{-\infty}^{+\infty} c\, e^{-h^2 x^2} dx = \frac{c}{h}\sqrt{\pi}$$

But this integral, representing the sum of all the probabilities, must equal unity. $\therefore c = \frac{h}{\sqrt{\pi}}$ h can be considered as a parameter of precision, for the probability of a given error is diminished as h increases. When h is 8, $y = o$, that is, the possibility of error is precluded. When $h = o$, $y = o$. This is a logical equation and means not that there is a probability of nothing, but that there is no probability, as in that case law is at an end.

The value of x corresponding to $h x = .4769$ — where the probability is ½ — is called the probable error. It shows that an error is as liable to fall without as within its limit.

h, in terms of the errors, $= \sqrt{\frac{n+1}{2 \Sigma x^2}}$.

Let r denote the probable error of a single observation. We saw that $h r = .4769$.

$\therefore r = .4769 \sqrt{\frac{2 \Sigma x^2}{n+1}}$. Let r_0 denote the probable error of the Arithmetic Mean. We have $h_0 r_0 = .4769$, but $h_0 = \sqrt{n}\, h \therefore r_0 = .4769 \sqrt{\frac{2 \Sigma x^2}{n\,(n+1)}} = .6745 \sqrt{\frac{\Sigma x^2}{n\,(n+1)}}$.

Likewise $r = .6745 \sqrt{\frac{\Sigma x^2}{n+1}}$.

Dienger[1] has calculated these formulæ differently.

According to him $r = .6745 \sqrt{\frac{\Sigma x^2}{n-1}}$.

$$r_0 = .6745 \sqrt{\frac{\Sigma x^2}{n\,(n-1)}}.$$

Practically, as there is no great difference between the formulæ, I shall use Dienger's, as they have become somewhat established. I do not think them so accurate as the others, however.

Let us now apply some of the foregoing work to Professor Bowditch's excellent tables on the growth of children. According to his measurements the average height of Boston schoolboys five years old is

For Americans . 41.74
For Irish . . . 41.59

These are founded on the following observations: —

Inches.	American.	Irish
47	2	
46	1	5
45	6	8
44	18	31
43	[illegible]	[illegible]
42	[illegible]	[illegible]
41	[illegible]	77
40	23	64
39	12	41
38	[illegible]	17
37	[illegible]	5
36	3	1
35	1	-
34		-
33		
32		-
31		-
30		1
Total	201	[illegible]

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[1] Method of Least Squares.

[1] Ausgleichung der Beobachtungsfehler.

Let us find the probable error of each average. We have the formulæ, $r_0 = .6745 \sqrt{\frac{x\,\Sigma^2}{n\,(n-1)}}$ and Peters' approximation formula, $r_0 = .8453\,\frac{\Sigma\,x}{n\sqrt{n-1}}$.

By the first formula we have for Americans

Errors	Squares.	Sums.
5.26	27 6676	55.3352
4.26	18.1476	18.1476
3.26	10.6276	63.7656
2.26	5.1076	91.9368
1.26	1.5876	46.0404
.26	.0676	2.5012
.74	.5476	25.1896
1.74	3.0276	99 9108
2.74	7.5076	90.0912
3.74	13 9876	125 8884
4.74	22.4676	89 8704
5.74	32.9476	98 8428
6.74	45.4276	45.4276
Total	– –	852 9476

$$n\,(n-1) = 40200.$$
$$40200)852.9476(.02121.$$
$$\sqrt{.02121} = .146.$$
$$.146 \times .6745 = .098477 = \text{Prob. error.}$$

That is, it is as likely that the true value of the average will fall without the limits 41.8385, 41.6425, as within them. It is an even wager. Calculated by Peters' formula the probable error is .0955.

For Irish boys five years old: —

Errors.	Squares.	Sums.
4.41	19.4481	97.2405
3.41	11.6281	69.7686
2.41	5.8081	180.0511
1.41	1.9881	105.3693
.41	.1681	10.9265
.59	.3481	26 8037
1.59	2.5281	161.7984
2 59	6 7081	275 0321
3.59	12.8881	219.0977
4.59	21.0681	105.3405
5.59	31.2481	31.2481
11.59	134.3281	134.3281
Total	– –	1417.0046

Prob. error = .0694.

In other words it is an even wager that the true value of the average lies without or within the limits 41.6594, 41.5206.

In comparing in general two values M and N with probable errors p and q respectively, for M to be unequivocally greater than N, the following relation must hold, $M - N > p + q$. Let us compare thus the averages we have discussed above. $41.74 - 41.59 = 15$, $.0985 + .0694 = .1679$. Hence Professor Bowditch's statistics cannot be considered as showing that American boys are taller than Irish at the age of five.

Our criterion does not declare the opposite to be the fact, but simply shows that from the data we can draw no conclusion whatsoever. I propose to call the quotient $\frac{M-N}{p+q}$ the *reliability*. The reliability, then, must be unity or greater to merit our confidence. In the case in hand the reliability is $\frac{83}{100}$ — rather small for the number of observations.

Let us compare the heights of Boston schoolboys of American and Irish parentage between the ages of seventeen and nineteen. I shall use the approximation formula $r_0 = .8713\,\frac{\Sigma\,x}{n\sqrt{n-1}}$ which gives very close results. This differs slightly from Peters' formula.

Ages between Seventeen and Nineteen.

Americans.	Irish.
Errors.	Errors.
7.55	4.80
6.55	6.60
5.55	5.60
13.65	3.20
24.85	.20
20 50	6.00
29.45	2.20
7.15	16.00
8.10	4.20
30 45	6.20
31.85	8.20
24.15	.20
40.05	.80
10.90	3.60
12.90	2.80
14.90	
12.45	169.88)75.20(.44
13.65	
21.30	
7.65	
10.85	
6.05	
4.95	
17.40	
10.35	
14.70	
4.45	
5 45	
6.45	
424.25	

$.44 \times .8713 = .383 =$ Prob. error for Irish.

Prob. error for Americans = .15.

$\therefore M - N = .25$, $p + q = .51$. Reliability = .40. Hence from Professor Bowditch's tables we are not warranted in drawing the conclusion that American boys between the ages of seventeen and nineteen in Boston are taller as a rule than Irish boys of the same ages. Between the ages of six and sixteen the reliability is greater than unity, reaching a maximum for the age of fourteen, and progressively decreasing in either direction. This shows, then, quite conclusively, that poverty and deprivation have an effect in retarding the growth between the ages of six and sixteen, reaching a maximum at fourteen years. The decreasing reliability after fourteen would tend to show that it is a retardation only, which has a tendency to correct itself as years go on. Whether the gap ever closes itself, and if so, at what age, are questions which cannot be answered at present. We have just seen that, as far as Professor Bowditch's tables are concerned, we are not at liberty to say that the gap exists at the ages of seventeen and nineteen.

Boudin is of the opinion that the stature is independent of comfort and misery, but closely connected with race. I think this is highly probable, though it is well to bear in mind that this is in the nature of a personal opinion. Boudin arrived at his conclusions from an examination of the measurements of recruits to the army from different parts of France. His conclusions were not derived from an application of the laws of probability and hence cannot possess the indisputable character of the conclusions I have drawn above.

Villermé concludes as the results of his observations that "the stature is greater and the growth sooner completed, other things being equal, in proportion as the country is richer and the comfort of its inhabitants more general." This is a hasty conclusion. I have no data at hand by which rigidly to test these hypotheses. But my object in this paper is not the carrying out of anthropological investigations, however interesting they may be, but merely the exemplification of general principles. I believe, however, that if Villermé had applied some of the preceding rules, he would have found that the reliability of his conclusions fell below unity. The method in hand, therefore, furnishes us with a means of *settling* many questions which are at present unnecessarily considered *sub judice.*

Returning to Professor Bowditch's tables, let us compare the weights of American and Irish children at the age of eight years.

AMERICAN. Errors.	IRISH. Errors.
29.57	21.88
25.57	89.40
21.57	152.68
70.28	514.02
81.42	835.38
334.95	709.66
334.20	210.04
153.86	259.44
267.30	184.14
430.81	64.92
208.60	14.82
57.72	3056.18
2015.83	

Reliability = .81.

Weights between Seventeen and Nineteen.

AMERICANS.		IRISH.
123.88	42.06	32.60
41.94	65.94	28.60
67.88	41.94	33.20
29.94	33.94	12.60
25.94	29.94	17.20
131.64	25.94	18.40
35.88	43.88	1.20
83.64	17.94	22.20
159.04	69.70	11.40
77.22	59.64	61.60
15.52	59.40	19.40
20.60	9.70	81.20
78.78	20.60	43.40
140.84	48.48	383.00
168.72	50.30	
162.54	70.30	
66.18	18.06	
26.06	68.12	
60.12	2506.54	
136.24		
38.06		

Reliability = .89.

The reliability at and before eight years falls below unity; hence we have no grounds for believing that American children in Boston up to eight years of age, nor after seventeen to nineteen years, are heavier than Irish children of the same ages.

Between these ages the fact is declared. The inference from this would be that deprivation retards the acquirement of the normal weight, though its effect in this respect is not so soon developed as in regard to the height. It seems to be equally soon effaced, however.[1]

Comparing American and Irish schoolgirls in Boston, we find that the height of the latter becomes less than that of the former somewhere before the fifth year. As Professor Bowditch's tables do not record before this age, we cannot say at what year. His tables would seem to show that the gap is closed between the seventeenth and nineteenth years. As regards the weights, they differ reliably at six years and coincide again at the ages seventeen to nineteen. The reliability for five years, comparing the weights, is .45. Hence we see that in girls as well as boys deprivation affects the height before the weight, and in girls both are affected sooner than in boys. We have also reason to believe that these discrepancies are all simultaneously obliterated at the ages seventeen to nineteen.[2]

The method I have exemplified above is a valuable one, and capable of extended application. Take, for instance, the question whether an increased amount of urea is eliminated during increased bodily exertion. Let a sufficiently large number of observations be made under the two conditions of rest and work, the weight being preserved, and other circumstances identical in each case. Then compare the sum of the probable errors with the differences of the averages. I have not any figures at hand, and this paper is already too long without their addition.

But I will say that if the supporters of Liebig's theory will simply show that $M - N > p + q$ in a large number of observations they will do more to establish their conclusions than by any amount of collateral argument. How many theories are there, when so tested, that will fall to the ground! It is these unsound hypotheses, supported by figures, that are especially dangerous. To the average reader the figures furnish them a stability they do not possess.

The following are a few problems in probabilities, given without demonstration, that will possess, perhaps, some utility. Suppose that a complete event μ is made up of two parts m and n; the limits of error of the fraction $\frac{m}{\mu}$ will be $\pm 2\sqrt{\frac{2mn}{\mu^3}}$

For instance, Dr. John Homans out of 100 cases of ovariotomy has had 87 recoveries and 13 deaths. What, by *a priori* reasoning, will be the limits of his success in future operations, under similar circumstances?

$$\text{Here } 2\sqrt{\frac{2mn}{\mu^3}} = \frac{9\frac{1}{2}}{100}$$

Hence, from Dr. Homans' past record, we could not expect a fewer number of recoveries than 77½ per cent., nor a greater number of successes than 96½ per cent. By taking a larger number of operations we shall be able to get narrower limits than these.

Suppose that out of μ cases of scarlet fever, m are followed by acute nephritis, — what is the mathematical risk that it will occur in a given case. The risk is anywhere within the limits $\frac{m}{\mu}\ 2\sqrt{\frac{2mn}{\mu^3}}$.

This expression must be filled out from statistics.

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[1] In comparing the heights and weights above [illegible], where the reliability falls below unity no conclusion can strictly be drawn. However, where the variations are [illegible] in excess in one direction, a presumption [illegible]. But the fact is not *declared* unless the reliability exceeds unity.

[2] It is evident that the [illegible] of observations on each side of the average may be represented by the curve of probabilities (Quetelet, [illegible]. His tables [illegible] states that the distribution follows the law of the Binomial Curve. V. Bowditch's tables.

Suppose an experimenter has been investigating the prophylactic value of belladonna in scarlet fever. Suppose that out of b people who have put themselves under the supposed influence and have subsequently thoroughly exposed themselves, m do not have the disease. Suppose that w other individuals expose themselves under similar circumstances without taking belladonna and of these m' fail to have the disease. Suppose that in each case, n and n' individuals respectively contract the disease. The case is made out only on the condition $\frac{m}{b} - \frac{m'}{w} > 2\sqrt{\frac{2\,mn}{b^3}} + 2\sqrt{\frac{2\,m'n'}{w^3}}$, and this condition is as inexorable as the law of the Medes and Persians. It is in such a way as this that Medicine is to approximate to an exact science. The more heavily she leans upon her sturdy brother Mathematics, the quicker and surer will her progress be.

If an event occurs n times in succession, the probability that it will occur m times more is, irrespective of conditions peculiar to the question, $\frac{n+1}{n+m+1}$.

If an occurrence has been observed to repeat itself n times consecutively, the probability that there is a cause behind it is $\frac{2^{n+1}-1}{2^{n+1}}$. Thus: suppposing that every person not vaccinated is certain, if sufficiently exposed, to contract small-pox, and suppose that ten vaccinated persons after greatest exposure fail to contract natural small-pox. What is the probability that the vaccination is the cause of the immunity? Our formula tells us Prob. $= \frac{2047}{2048}$ which is almost a certainty.

I have thus shown that probabilities may be of value in medical investigations, particularly in statistical work.

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SANITARY FOREST-CULTURE.[1]

BY J. F. ALLEYNE ADAMS, M. D., OF PITTSFIELD.

THE subject of Forestry, involving as it does important considerations of public health, is not unworthy of the attention of this Society. Although a love of trees has always existed as one of the better instincts of mankind, it is only within comparatively few years that the evils resulting from the wholesale destruction of the forests have become so well understood as to result in active public measures for their prevention. Out of the necessity for overcoming these evils have arisen the science and art of Forestry, whose two-fold aim is to prevent the destruction of forests from being carried to a dangerous extreme, and to reproduce in part those which have already been destroyed. The subject, which was formerly viewed chiefly from an economical point of view, is now, as recent observations bring out more clearly its sanitary aspects, naturally regarded by the medical profession with increasing interest.

The beneficial influence of forests upon public health is chiefly exerted in three ways: —

(1.) By regulating the flow of streams.
(2.) By modifying the climate.
(3.) By protecting against malaria.

Under each of these heads a great number of interesting facts have been collected, of which the briefest possible summary will be presented.

(1.) It is well known that a piece of woodland acts as a reservoir, a large portion of the rainfall being held by the roots and spongy soil, from which the sun's rays are excluded, thus keeping the springs alive, and storing up water to feed the streams during the dry season. On open ground the snows of winter chiefly expend themselves in spring freshets, while the snow which falls in the woods melts slowly, and is chiefly absorbed by the unfrozen soil. When, therefore, a country is denuded of its woods, the rain which falls upon it is wasted, running off in destructive floods, washing the lighter soil away from the hillsides, overflowing the valleys, and doing a vast amount of damage; while in summer the springs dry up, the streams are shrunken, and those great areas which had been overflowed become dry. A large territory in the southeast of France, once fertile and prosperous, has from this cause become desolated and almost depopulated, and all the rivers of Europe are subject to greater fluctuations than formerly. The same has been observed of the rivers of India, Tartary, and both continents of America. In the United States the increase of both floods and droughts is strikingly apparent. Wherever forests have been allowed to grow up again, on land once cleared, the springs have been found to reappear and the streams which they feed to regain their regular flow. Of this many instances might be cited, only one of which, as possessing a somewhat peculiar interest, will be mentioned as an example. It is stated by Surgeon Curran[2] of the Indian army, that the brook Kedron, in Palestine, which has in modern times been nearly dried up, "has recently for the first time in centuries flowed in a copious torrent, evidently in consequence of the numerous enclosures of mulberry and olive groves made within the last few years by the Greek convent." The prejudicial effects upon health of great fluctuations in the level of streams are sufficiently apparent. There must result great variations in the level of the subsoil water, which are recognized as a fruitful source of disease, and also, dependent upon this, great variations in the depth of water in wells, an important factor in the propagation of typhoid fever. Moreover, the alternate overflow and drying of low lands afford the very best conditions for the development of malarial diseases in those regions where the malarial poison exists, and offer the most inviting field for its spread beyond its accustomed limits. Among the causes of the recent epidemic of malarial fevers in Connecticut and portions of Massachusetts, the cutting off of timber from the mountains must be recognized as an important one, for hence the rivers suffer an extensive overflow every spring, while in the summer they are so dried up as to expose a large portion of their bed to the sun's rays. The malarial poison has reached its greatest intensity and has spread most widely in certain seasons of extreme low water.

(2.) *The influence of forests upon climate.* A piece of woodland exercises upon temperature an influence resembling that of the ocean, cooling the air in summer and warming it in winter. It also presents a mechanical obstacle to the violence of winds, besides depriving these winds of the character of excessive heat, cold, moisture, or dryness. Thunder storms are less violent in wooded than in open districts, the trees acting as electrical conductors. Forests are also believed to increase the rainfall. The experiments of Dr. Anders[1] show that the evaporation from a forest is greater than that from an equal area of water, twice that from an equal area of damp soil, and several times greater than that from dry soil. It would naturally be supposed that this excessive evaporation would, by increasing the degree of saturation of the atmosphere, increase the rainfall, and such has, in some instances, been found to be the case. In Lower Egypt, for instance, where twenty million trees were planted by Mehemet Ali and Ibrahim Pasha, the rainfall has more than doubled within the life of the present generation. The same has been observed in Scotland, and also on the Island of St. Helena. But such is not the result of all observations. For instance, at Marietta, Ohio, where a record of the rainfall has been kept almost continuously since 1817, the rainfall has not been found materially changed, although the country in that vicinity, which was formerly heavily wooded, has now but thirty-three per cent. of woodland.[2] Such apparent discrepancies show the importance of multiplying such observations, and of taking into consideration all other meteorological influences. One point to be remembered is, that rain being usually formed at a great height, sometimes one or two miles above the earth, the quantity of vapor from a forest may be carried by the wind a considerable distance before being condensed into rain.

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[1] Read before the Massachusetts Medical Society, June 11, 1884, and recommended for publication by the Society.

[2] A Plea for Tree Preservation in India, by Surgeon-Major Wm. Curran, A. M. D. Indian Annals of Medicine, etc., Calcutta, 1877, vol. xix., p. 59.

(3.) *Protection against malaria.* Of the efficacy of masses of trees for this purpose there can be no doubt. Malaria possesses an affinity for leaves, and those of the eucalyptus are believed by many to possess a peculiar power of neutralizing it. It is highly probable, however, that this influence is wholly mechanical, for the experiments of Tyndall[3] show that all minute particles suspended in the air have a tendency to attach themselves to any surface. The air of closed boxes became, in three days, wholly free from suspended particles, all of which had attached themselves to the sides of the box. Various infusions of meat and vegetables introduced into such boxes remained for weeks and months unchanged, while the same infusions exposed to the general atmosphere speedily putrefied, and became alive with bacteria. These experiments are mentioned as showing the probable way in which leaves remove from the air the elements of disease. In all malarial regions a belt of trees interposed between a swampy place and a dwelling is known to be a defense against malaria. In Virginia, a few years since, the cutting away of such a screen rendered a residence unhealthy which had always before been exempt from malaria. The freedom of the Dismal Swamp from malaria has been ascribed to the fact that it is covered with a dense growth of cypress and juniper trees. A century ago Pope Benedict caused the woods to be cut down between the Pontine Marshes and Rome, against the remonstrances of Lancisi. As a consequence the malaria reached the city, portions of which became so fever-stricken that many people were driven away from homes previously healthy.[4] Within a few years the French in Algeria have greatly reduced the prevalence of malarial fevers by planting large numbers of eucalyptus trees about certain marshy spots. The same has been done, with a like result, in Southern France, in Corsica, in Spain, and also by Trappist monks in the Roman Campagna.[5]

To these sanatory uses of the forest must be added the restorative effect of a sojourn among the woods, as shown by the many invalids benefited by a trip to the Adirondack wilderness, the woods of Maine and Canada, and the pines of the Southern States, as well as the advantages derived from woods and groves near cities and towns where children may spend an occasional holiday in the open air.

Although it is the design of forestry, by introducing a regulated and systematic method of cutting, to render the supply of timber perpetual, without materially diminishing the present supply, yet the chief objection to forest preservation comes from those who fear that the lumber interests will thereby be injured. That this objection is not well grounded is shown in the fact that under the present destructive method of cutting, some of our most valuable woods, notably the indispensable white pine, are becoming scarce, and nothing short of a general and earnest attention to the subject of forest preservation can prevent their speedy extermination.

To insure the protection of the existing forests, and the reproduction, to some extent, of those which have been destroyed, it is essential to have —

(1.) A general diffusion of knowledge as to the injuries inflicted upon the country by the unregulated cutting down of the trees.

(2.) The enactment of such laws as will cause the care and replanting of forests to be systematically and intelligently undertaken, and also prevent forest fires.

(3.) The establishment of forestry as a special branch of education, either in separate schools or in connection with agricultural or other colleges, for the training of skilled foresters to take charge of the timber lands.

In Europe there is no lack of interest in the subject, the necessity in the older countries being greater than in ours. Laws for the replanting and protection of forests have, since 1860, been enacted in France, Prussia, Switzerland, Italy, and other countries. The work is chiefly carried on by the governments of these countries, liberal appropriations being made for the purpose, and a large force of foresters employed. For the education of these, numerous schools of forestry have been established, the greater number being in Germany and Austria.

In the United States the interest in the subject is shown by the organization of a Forestry Congress two years ago, at the meetings of which many valuable papers have been read. Several papers have also been presented to the American Public Health Association, and others have been published in popular magazines. The Agricultural Department at Washington has a Division of Forestry, the report of which, by Dr. Franklin B. Hough, in 1877,[6] is the most useful hand-book on this subject, and which is still doing valuable work under Mr. N. H. Eggleston, for which Congress appropriates the paltry sum of $10,000 annually. In eleven States there are laws for the encouragement of tree-planting, either by offering a bounty for lands planted with forest trees, or by exempting such lands from taxation for a term of years. Seven other States have laws to promote tree-planting upon highways. In 1873 Congress passed an Act to Encourage the Growth of Timber upon Western Prairies.[1] In the last census a great deal of attention was given to the forests, and the report by Dr. Sargent, now in press, will contain a vast amount of information on the subject.

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[1] Forests, their Influence upon Climate and Rainfall, by J. M. Anders, M.D., Ph.D., American Naturalist, January, 1882, vol. xvi., No. 1. On the Transpiration of Plants, by the same author, American Naturalist, March, 1878.

[2] See the Sanitary Value of Forests, by George C. Andrew, M.D., of La Porte, Ind. Trans. Am. Pub. Health Association, 1877.

[3] Floating Matter in the Air, by John Tyndall, F.R.S., 1882.

[4] Forests and Trees as Sanitary Factors, by John S. Caulkins, of Thomasville, Mich., Report Michigan State Board of Health, 1881. See also Forests and their Climatic Influence, by M. Becquerel, Smithsonian Report, 1869.

[5] Caulkins, op. cit.

[6] Report upon Forestry, prepared under the direction of the Commissioner of Agriculture, 1877. This report is a mine of information.

In Massachusetts a law exists requiring such agricultural societies as receive state bounty to offer premiums for the raising and preserving of oaks and other forest trees suitable for ship timber. In 1878 an act was passed exempting from taxation for ten years lands planted with certain kinds of forest trees. In 1882 a law was enacted entitled An Act Authorizing Towns and Cities to Provide for the Preservation and Reproduction of Forests.[2] Under this act cities and towns may purchase lands to be preserved as forests. The title of such lands vests in the Commonwealth, and the State Board of Agriculture is made a Board of Forestry, with power to appoint keepers, and to make improvements, though the expenditure in any town may not exceed the amount received for rent and sale of products.

The Massachusetts Society for the Promotion of Agriculture has at various times, beginning in 1804, offered prizes for the cultivation of forest trees. One of these of $1000 was paid in 1870 to the Hon. Ben. Perley Poore, of Newburyport.[3]

In 1872 Harvard University received a bequest from the late James Arnold, of New Bedford, for the purpose of founding a professorship of tree-culture, and creating an arboretum in connection with the School of Agriculture and Horticulture at the Bussey Place, West Roxbury. Thus began the "Arnold Arboretum," which, under the care of Prof. C. S. Sargent, is destined to become an important centre for forestry education.

It is thus evident that Massachusetts has been a leader among the States in regard to forestry, and yet the practical outcome of what has hitherto been done is not very great. The law passed two years ago was specially intended to effect the preservation of the Middlesex Fells and their conversion into a public park, with the double purpose of improving the watershed of the streams and ponds in that vicinity and of maintaining a sylvan health resort. This is an important step forward, and yet the law is not likely to result in any general purchase of forest and waste lands by towns and cities. Such purchases would be most likely to be made for the purpose of improving a water supply, but the fact that the water supply of one town is very often derived from another town, while this law only permits towns to purchase lands within their own limits, renders the law of but little use for this purpose. The same objection will apply to the improvement of the reservoirs of manufacturing companies, since the streams which feed them seldom arise in the same town, and sometimes not even in the same county or State. It has been suggested that the State might charter forestry corporations, composed of manufacturers and others whose interests are involved, with power to purchase and hold large tracts of forest land; but the antipathy of our people to great land monopolies would doubtless render the passage of such a law impossible.

The benefits to be derived from forest culture are not sufficiently local in their character for such work to be assumed with the best success by either towns or corporations. The forests in one part of the State benefit the whole population, especially in the ways which have been outlined in this paper, and, therefore, the wisest plan would be for the State to assume control of the forests, purchasing such lands of little value for farming purposes as may seem advisable, and planting them with forest trees. From these lands the State would in the future receive a revenue from the sale of timber, to be cut under such a system as to insure the perpetuation of the forest.[4] To obtain the very best results such measures should be undertaken by all the States, and when a beginning is made by one or more States others will be likely to follow their example.

Upon the hills of Western Massachusetts are thousands of acres of land, which, when first cleared, was sufficiently productive; but the soil, no longer held together by the roots of the trees, has had its lighter and richer portions washed out year by year until its best elements have found their way into the valleys, leaving the hill farms sterile and nearly worthless. The change is evidenced by the ruined houses and half-obliterated cellars which are sadly abundant on the hills, indicating a population and prosperity in former times which would now be impossible. In the vicinity of Boston, within my recollection, many fine tracts of woodland have been cut down for fire-wood, leaving barren, rocky hills, looking desolate enough without their once beautiful covering. If these sterile hills, all over the State, could be planted with the best varieties of forest trees, and properly cared for, the value of adjacent lands would be enhanced, our streams would flow with greater regularity, freshets and low water would both be less common, the climate would be tempered, the extremes of heat and cold being less marked, and winds less violent, the rainfall would be more copious and regular, malaria would lose its foot-hold, while every grove would be a sanitarium for the weary denizens of city and town. Let us as physicians do what in us lies to promote this important reform.[6]

Dr. Hough also published, in 1882, a valuable text-book entitled The Elements of Forestry.

[1] United States Statutes at Large, vol. xvii., Forty-Second Congress, 1873.

[2] Acts and Resolves of Massachusetts, 1882, p. 200, chap. 255.

[3] Tree-planting on a large scale has been successfully practiced by the late Richard S. Fay at Lynn, and Mr. Joseph S. Fay at Woods Holl.

[4] Private enterprise alone would accomplish much if the art of making forest cultivation profitable were generally understood. In the three western counties of Massachusetts the planting of sugar maple trees would in time yield rich harvests of maple sugar.

[6] Valuable works of reference, besides those mentioned, are the following: Trees and Shrubs of Massachusetts, by George B. Emerson, 1846. Man and Nature, by George P. Marsh, 1864. The Earth as Modified by Human Action, by the same author, 1874.

Also the following books by John Crombie Brown, LL. D.: Forests and Moisture, or Effects of Forests on Humidity of Climate. Edinburgh, 1877. Reboisement in France. London, 1880. Pine Plantations on Sand Wastes in France. London, 1876.

A special bulletin of the Boston Public Library in June, 1879, under the heading Trees and Forests, contained 180 titles. A bulletin printed in connection with the meeting of the Forestry Congress at Washington, May 7, 1884, contains a list of 167 papers read at the previous meetings of the Congress during the past two years, of which a considerable number pertain to the effect of forests upon climate and health. A weekly journal of forestry, entitled Oesterreichische Forst Zeitung, is published in Vienna

LABOR IN A CASE WITH CONTRACTED CONJUGATE: VERSION AND CRANIOTOMY.[1]

BY W. E. BOARDMAN, M. D.

February 24, 1884, at 1.30 p. m., Catherine H. was brought from Brighton to the Boston Lying-In Hospital by Dr. H. E. Marion with the following history: Married and had one miscarriage about one year ago. Catamenia last present May 20, 1883, when it was observed that the flow lasted only a day or two, and was scanty. Labor began at six p. m. February 23d. Seen for the first time by Dr. Marion at 12.30 a. m. February 24th, when the os was found to be fully dilated, head presenting O. R. A., but very high, so that he did not feel positive about his diagnosis. At 1.30 a. m. the bag of membranes reached to the vulva, and was ruptured during a digital examination. At ten a. m. no progress had been made; the head was still situated high up, barely within reach of the index finger. Concluding that operative interference was demanded, Dr. Marion hesitated to undertake it at the home of the patient in consequence of the very limited accommodations and arrangements afforded, and advised her to enter the hospital, where she arrived at 1.30 p. m.

Upon examination directly after her entrance the condition of things was found to be unchanged, and I thought I could make out some shortening of the conjugate diameter with the presentation O. R. A. in confirmation of Dr. Marion's diagnosis. It was decided to interfere on account of no progress made and the increase in the rapidity of both the mother's and fœtal pulse, and thinking it would be a favorable case for the employment of Tarnier's axis traction forceps I requested my colleague, Dr. Richardson, to join us, and bring his instrument. In the interval the patient had several strong pains, which Dr. Marion remarked were stronger than he had observed during the progress of the labor. Ether was administered at three p. m., Drs. Richardson, C. M. Green, and Marion being present. It was then found that an error in diagnosis had been made unless possibly a rotation had occurred under the pains in the interval since the preceding examination, for now it was found to be O. R. P. with extension, but the head had not engaged. The idea of employing forceps was abandoned, and version was done with considerable difficulty owing to the firm uterine contractions. Upon the delivery of the body my hand had become useless from the continued pressure to which it had been subjected, and I was obliged to yield the completion of the operation to Dr. Richardson. With much difficulty the arms were released by him, when I attempted to apply forceps after traction had been employed by the body without success. Finding myself unable to adjust the first blade, and thinking it due to the loss of power in my hand, I again gave up to Dr. Richardson, who completed the delivery. He, too, was unable to apply the forceps, and after still further ineffectual attempts to deliver by means of traction on the body I advised perforation of the head as the cord was pulseless when first it came within reach. Accordingly Dr. Richardson perforated with Braun's scissors behind the left ear, not using the trephine through fear of implicating the bladder. Braun's cranioclast was then introduced, but the head could not be extracted. The cephalotribe was tried, but could not be adjusted. The head was then again perforated behind the right ear, the cranioclast introduced, and by combined traction upon this and the body, the child was finally delivered at 4.15 p. m., the placenta following directly. The cervix was found to be badly lacerated in several directions, and the perinæum torn irregularly through the sphincter, requiring several sutures. The child was a boy, and weighed, minus the contents of the skull, nine and one half pounds.

The patient has had a normal convalescence, except that an enormous fæcal discharge on the fifth day tore away the sutures in the perinæum, though the sphincter had united tolerably well. She will return home on the 9th inst., the fifteenth after entrance, at her own request. During her stay in the hospital it has been ascertained that four years ago she was delivered naturally of a good-sized child, though the labor was somewhat tedious.

Measurements with the pelvimeter gave the following results: Between anterior superior spines, eight and one fourth inches; between crests of ilium, nine and three fourths inches; between sacrum and pubes, seven and one fourth inches. Deducting from the latter three and one half inches, an accepted average, for integument, fat, etc., and this patient was excessively fat, we obtain a conjugate diameter, fairly estimated, of three and three fourths inches, corresponding with the measurement obtained by the introduction of the index and middle fingers within the vagina to the promontory. At all events there was some shortening of this diameter. Add to this fact that of the malpresentation, and also the fact obtained after the delivery that the head of the child was notably unyielding from advanced ossification, and the solution of the difficult labor becomes easy. Judging from the condition of the child's cranial bones, its weight, and the history of the catamenia, it is not improbable that its fœtal life was unusually prolonged.

With regard to measurements made upon the outside, Lusk gives as the normal results, ten and one fourth, eleven and one fourth, eight inches respectively, in the above order, according to which our very fat patient presented a notable narrowing in all directions. As showing that we need not be in haste to interfere in every case where the diameters are shortened, as indicated by the pelvimeter, which is applied externally, I will append the measurements in three cases, all primiparæ, now in the hospital, with each one of whom the labors were natural, and, curiously enough, the first one, with the longest diameters and the smallest child, had the longest labor: —

Case I. Diameters, eight and three fourths, ten and and one half, seven and one half. Labor, O. L. A., fourteen hours. Child, seven and one fourth pounds.

Case II. Diameters, seven and one half, eight and one half, six and three fourths. O. R. P., with rotation. Labor, seven hours. Child, seven and one half pounds.

Case III. Diameters, eight, nine and one half, five and three fourths. O. L. P., with rotation. Labor, four hours, twenty-three minutes. Child, eight and one half pounds. And Case III., with a presentation O. L. P., with the shortest conjugate diameter and the heaviest child, had the shortest labor.

— Vinegar, clear, is recommended as a valuable remedy for diarrhœa. Dose for an adult, ℥i.

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[1] Read before the Obstetrical Society of Boston, March 8, 1884.

NOTES OF A CASE OF DROWNING.[1]

BY GEORGE STEDMAN, M. D.

On Thursday, May 22, 1884, the body of an unknown man was found off Wellington's wharf in the water of the Mystic river. The body was that of a man five feet ten inches in height and about one hundred and seventy pounds in weight. He was about forty-four years of age, had heavy red mustache and side whiskers ("Galway sides"). He wore a dark mixed suit, white shirt, and heavy boots; this being all the information known to the medical examiner.

External examination showed no mark of violence except a bruise upon the forehead. There was no frothy foam perceptible at the external air passage, neither was there any strongly marked congestion of the face or upper part of the body, and the body was in an excellent state of preservation. Forty-eight hours after the recovery of the body there was noticed a bluish-purple discoloration of the eyelids; and upon the lower portion of the abdomen, in the iliac region of each side, there was at the expiration of another day a greenish discoloration, somewhat faint, of the size and shape of half a pea-pod.

Though from the place of finding the body, death was presumably from immersion, the fact of a decomposition developing at the abdomen primarily, and the discoloration about the eyes, which in the absence of any other appearance of decomposition about the face and head, taken in connection with the bruises on the forehead, suggested that there might be a fracture at the base of the skull, and an autopsy was decided upon.

At the time of examination, which was four days and a half after the recovery of the body, the appearances which have been mentioned had not materially changed, except that the discoloration about the eyes appeared more like the discoloration of decomposition than like the ecchymosis of a fracture.

On section there was found to be very little if any congestion of the vessels of the brain.

The right heart was in no way distended with blood, and a portion of the blood in the right auricle was clotted.

The lungs were not increased in volume, and only moderately congested, neither did the section show the presence of water in these organs to anything beyond an amount which might have been readily overlooked.

The stomach contained about a teacupful of water. The other internal organs, aside from a very slight amount of congestion, presented nothing unusual.

While all these appearances are consistent with each other, and consistent with death from drowning, which in the absence of any other cause of death discovered post-mortem, and in view of the history of the case, is undoubtedly the correct diagnosis, the case is of interest from the absence of almost all the typical signs of death from drowning, and by the presence of some of the appearances which are supposed to contraindicate such cause of death.

The probability is that the man fell into the water, and in falling struck his forehead, producing insensibility, that he immediately sank, and being insensible he made no attempt at inspiration, thereby getting no water into the lungs. The fact that there was no struggling would account for the absence of the intense congestion generally seen in the upper parts of the body. Hence the developing of the process of decomposition in the usual manner.

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[1] Read at the annual meeting of the Massachusetts Medico-Legal Society, June 9, 1884.

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CHLORAL HYDRATE AS AN ANTISEPTIC.

BY E. WARNER, M. D., OF WORCESTER, MASS.

For the last ten years I have used a solution of chloral hydrate as almost my only surgical dressing. This has met the conditions so perfectly, I have not been tempted to substitute for it any of the other dressings that have met with favor among those making use of antiseptic treatment.

It makes a clear and clean solution, itself without offensive odor, and with power to remove the odor of carbolic acid or the fœtor of purulent discharge.

It is not only not irritating, but it seems to act as a local sedative or narcotic, often relieving the pain of a recent injury or operation so completely as to make the use of an opiate unnecessary.

It leaves no stain; can be sprinkled freely on the floor as on the clothing, and its use is no way disagreeable. It is inexpensive and simple in its application.

A solution of the strength of from three to five grains to the ounce will be found sufficient for all ordinary purposes.

In the treatment of large suppurating wounds or granulating surfaces, it will often keep the air of the room or ward so pure that no one would suspect the presence of such a case. There is no danger from its absorption, but much comfort follows its constant employment. The spray is not used during the operation, and no heavy, thick, and somewhat bungling dressing afterward. A light and moist dressing is all that is required. After properly cleansing the wound with this solution, adjust by suture or strap the flaps or edges of the wound as accurately as possible. Make use of a light compress moistened with the solution, and apply the roller with only sufficient firmness to keep the parts from bagging or the flaps from becoming œdematous and flabby. If necessary leave some dependent point open for drainage, and use no drainage tube unless its use seems imperatively demanded. The presence of the drainage tube usually prevents union by first intention.

This warm, moist, light, and clean dressing will prove soothing and agreeable to the patient, and can easily be changed as often as is required for cleanliness, as the dressing is not allowed to become dry and sticky. Somewhat frequent changes add to the comfort of the patient and insure perfect cleanliness. This tends also to relieve the surgeon of anxiety, and he watches less nervously the pulse and temperature to apprise him of the approach of threatened danger, as is the case when the wound is concealed under the numerous folds of the Lister dressing.

There need be no fear of bacteria entering the exposed wound. They are effectually destroyed by the dressing; the soil becomes unsuited to their development and growth. It acts as a perfect germicide, and this is why the spray is discarded, which is an unpleasant and troublesome part of Listerism.

For use during the operation a solution made with warm water is preferred. In this the hands of the operator are cleansed, the sponges, instruments, ligatures, and sutures are also all passed through it. Following this practice healing by first intention is often secured after many of the major amputations of limbs and breast, where suitable flaps can be obtained. Compound comminuted fractures, with great injury to the soft parts and very free oozing of blood at first, will often heal without suppuration.

What of the solution penetrates the wound seems to destroy the offending germs, and prepares the wound for healthy reparative processes.

Seldom, if ever, has a case operated on for injury or disease, and treated by chloral, thoroughly applied, been followed by pyæmia or septicæmia. This is claiming much, but the records of hospital and private practice sustain the assertion.

Examples can be given from all departments of surgical practice where it has been exclusively used. It has been most thoroughly tested in cases of ovariotomy, and with the most gratifying success. With my present experience of its use in this operation I should be unwilling to use carbolic acid or any other antiseptic with which I am now acquainted. In this important operation it seems to be *the* agent *par excellence* which should be used where a surface so extensive and so delicate and parts so vital are exposed, and sometimes requiring a somewhat lengthy exposure. It never poisons; it never irritates; it never does any harm. So far as present experience shows its effect is only soothing, cleansing, and wholesome.

In midwifery its use is entirely satisfactory. As an injection it disinfects uterus and vagina, and is in itself always safe.

In the operation for restoring the perinæum or the cervix, or as an injection after any operation in uterine surgery, it meets all the conditions of a safe and reliable antiseptic remedy.

Its use is equally satisfactory in the treatment of felons, abscesses, fistulæ, etc., after operation. It is one of the most soothing of applications in burns, erysipelas, eczema, and chronic ulcers.

An obstinate case of chronic eczema, about the ankle-joint of a hysterical patient, was cured in a week by simply keeping a cloth on it constantly wet with this solution. The dressing was not allowed to become dry for a moment, night or day, for a week, when the cure was complete. This case had lasted many months, and had perplexed more than one physician.

Chloral can be used with vaseline or glycerine in the same proportions of three or four grains to the ounce, if for any reason it is more desirable to use it in this manner.

It is not necessary, perhaps, to use more space for the purpose of citing illustrative cases or of demonstrating its method of use more in detail.

The evidence in favor of the other members of the antiseptic family, as given from time to time in the journals, has been faithfully followed, and duly considered.

The object of this paper is simply to call the attention of physicians and surgeons to this antiseptic remedy, the use of which has been attended with satisfactory results in the practice of the writer and those who have been so situated as to observe its use. This family is already large, but is still on the increase.

The perfect dressing has not yet been found. The field of experiment and trial is being thoroughly cultivated, and almost any one may contribute something of value to the general result.

Chloral hydrate in solution is clear, colorless, and well nigh inodorous, harmless and inexpensive, and yet thoroughly efficient; can be easily kept and transported, as two ounces of water will take an ounce of the crystals, and thus it can always be had when and wherever needed. No accidents or serious mistakes can follow the use of this weak solution of three or four grains to the ounce, but comfort will be contributed to the unfortunate sufferer.

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REPORT ON MEDICAL CHEMISTRY.

BY WILLIAM B. HILLS, M. D.

COPPER.

The action of solutions of salts of copper on animal membranes has long been known and investigated, but much remains to be learned, especially about chronic copper poisoning. V. Ellenberger and Hofmeister[1] record their observations on the effects of small doses of the salts regularly administered. The subjects of the experiment were sheep, and the dose of from half a gramme to three grammes. Amongst the negative results were no alteration of muscular structure, no acceleration of the motion of the heart, no uniform alteration in the microscopic appearance of the blood corpuscles, no alteration of the respiration nor of the secretion of urine. Amongst the positive results, the presence of albumen, bile, and blood in the urine, flaccidity of muscles, weakness, and loss of appetite. The excretion of copper from the system is chiefly by means of the bile, partly by the urine, but in lesser degree.

The principal part of the body which retains copper is the liver, which holds it with very great tenacity, it having been found forty-one days after a dose had been given; the pancreatic glands retain it with almost equal strength; the kidneys do not contain so much as the other two organs. The deposit of copper is proportionally much greater if it has been administered in numerous small doses, the cells having time to absorb it, which is not the case with large doses, owing to their rapid action. The deposits in the nervous system are small, and still smaller in the muscular system: not enough to interfere with their action, but sufficient to be found in the flesh after administration of medicines containing copper.

The opinion is entertained by many that copper should not be classed among the poisonous metals. In large quantities it is, of course, noxious: but this is true of many substances which cannot fairly be considered as poisonous. The latest experiments tend to indicate that, at any rate, copper is not a cumulative poison like lead. MM. Houlès and De Pietra Santa,[2] in a recent communication addressed to the Académie des Sciences of Paris, give an account of Durfort, a village of Tarn, where the workmen pass twelve hours daily in the midst of an atmosphere of copper oxide. Their skins, hair, and beards are covered with copper. The same metal can be detected in their secretions and excretions, and after death in their bones. These people suffer from no special trade disease, and on the other hand they enjoy no special immunity from infectious diseases, and in particular from cholera and typhoid fever. The reporters conclude that the so-called "colique de cuivre," asserted in the eighteenth century to be a definite disease, does not exist.

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[1] Journal of the Chemical Society, London, April, 1884, page 474, from Berl. Centr., 1883, page 606.

[2] The Lancet, February 9, 1884, page 267; Chemical News, January 25, 1884, page 47.

ATROPINE.

A. W. Gerrard, F. C. S.,[1] describes a test for atropine which he believes will be of value in forensic analysis, as hitherto no reliable chemical test for this alkaloid has been known. For practically working the test he recommends the following procedure: To a small portion of atropine in a test-tube, add about two cubic centimetres of a five per cent. solution of mercuric chloride in fifty per cent. alcohol, and warm gently; a yellow precipitate at once appears and becomes brick-red in color upon boiling. He finds there are certain conditions necessary for the success of this test, as is the case with most alkaloidal reactions. It does not answer in dilute solutions, neither does it turn out well if the atropine be added to the mercury solution. The mydriatic alkaloids, hyoscyamine, daturine, duboisine, and homatropine give the same reaction. The same test was applied to other alkaloids. They gave for the most part a white precipitate; in no case a red precipitate.

ELIMINATION OF MERCURY IN THE FÆCES.

Schuster[2] states that in forty examinations of fæces, mercury was found regularly in relatively large quantities during treatment by inunctions. Mercury was found in the fæces for five and one half months after the end of the mercurial course. The metal was found in the fæces in all the cases in which it was found in the urine; on the other hand, it was frequently not present in the urine when it was found in the fæces. The inference is that the elimination of mercury by the fæces is regular and continuous, and that after extensive courses of inunction, say of from thirty to forty-five days, it is completed in six months.

POISONING FROM BAD MEAT.

According to Huber (who treated the subject in 1878 in the Archive der Heilkunde),[3] the above title applies to a group of diseases which, though possessing various features in common, have been often mistaken by reason of their peculiar causes. Huber alludes to the uniform and characteristic features of these cases, which he divides into two groups. The shorter form of the disease quickly manifests itself (sometimes in a few hours) after the poison has begun to operate, convalescence or death ensuing in a few days. Excessive vomiting, violent colicky pains, indifference to surrounding objects, rapid failure of strength, extreme feeling of cold, cramps in the muscles of the calves, and low temperature of the skin in all parts of the body, are referred to in connection with this form of the malady. In fact a certain resemblance between it and cholera is pointed out. Extreme weakness and occasional shivering only introduce the special appearances connected with the disease, which manifest themselves in the digestive canal and the nervous system. Vomiting and diarrhœa, followed by constipation, indicate the derangement of the former; while the affection of the latter is shown by great excitability, and occasionally by sleeplessness and delirium. The slower form of the disease is, however, considered the more fatal. The interval between the infection and the appearance of the disease is usually six days or more. The preliminary symptoms may then last some days, and the actual outbreak of the disease is attended rather by constipation than by vomiting and diarrhœa, while the most serious disturbances in the nervous system are noticeable. Feverish appearances are also present, as well as a decided increase of temperature. These symptoms are followed by cramps in the muscles (particularly the calves), hoarseness and aphonia, oppression in the chest, and violent palpitation of the heart. Convalescence is slow in both cases, and the smallest mistake in diet is apt to cause a renewal of the above symptoms, or even a complete relapse.

PTOMAINES.

Thomas Stevensen, M. D.,[4] gives a brief account of the recent investigations in regard to the alkaloidal bodies discovered by the late Professor Selmi in 1872, and to which he applied the name of ptomaines. In 1880 the Italian government appointed a commission to investigate these bodies. A few papers have already appeared from the hands of individual members of the commission, including one from Selmi, who in 1880 described the physical properties of the hydrochloride of a basic body resembling conine. Its physiological effects, however, were similar to those of curare, a result confirmed by Th. Husemann. In 1881 Armand Gautier showed the basic character of the ptomaines by their power to neutralize acids, and by the formation of crystallizable chloroplatinates, like those furnished by the alkali-metals, ammonia, and alkaloids generally. In the same year, this observer, in conjunction with Etard showed that putrefaction begins with the evolution of nitrogen, that various schizomycetous organisms then develop, which attack the albuminoid bodies with evolution of hydrides of sulphur and phosphorus; whilst leucines, leucinines, skatol, indol, carbylamines, and ptomaines are formed. By fractional extraction of putrid liquids with ether, they obtained two bases having the composition expressed by the formulæ $C_9H_{13}N$, and $C_8H_{13}N$ respectively.

Nencki claims to have separated the ptomaines from the products of the decomposition of gelatine by pancreatic tissue; and from one analysis of the chloroplatinate of a base he deduced the formula $C_8H_{11}N$.

L. Brieger obtained ptomaine reactions from peptones prepared by acting on egg-albumen with gastric juice; but the base could not be separated. The extracts nevertheless were poisonous. From a fermented magma of horseflesh in water he obtained the hydrochloride of a base $C_5H_{14}N_2$, crystallizing in needles; but he was unable to isolate the base itself from its salt. Doses of seven or eight grains of the hydrochloride were only feebly toxic to rabbits. The mother-liquid from which the salt crystallized was however more poisonous, and is stated to have contained the salt of a poisonous base $C_5H_{11}N$, isomeric with piperidine.

E. and A. Salkowsky obtained from putrid flesh and fibrine a base which they analyzed and to which they assign the formula $C_5H_{11}NO_2$; but it was not poisonous, and is probably not a ptomaine, but an amide of valeric acid.

The labors of Guareschi and Mosso are most important, tending to discredit much of the previous work done in this field, and to condemn Dragendorff's method for separating the alkaloids in medico-legal analyses. They find that commercial alcohols are seldom so pure as not to contain bodies reacting like alkaloids; that commercial ether and chloroform need purification; and that ordinary amyl alcohol, and benzine contain pyridine. All experiments made with unpurified reagents are hence necessarily valueless. This circumstance may, perhaps, serve to explain the differences between observers, some of whom have been able, and others unable, to obtain similar results when working with like materials. From so much as eighty pounds of putrid human brains, only insignificant quantities of ptomaines were obtained, too small for analysis; and these, in doses of one fifth to five grains, given to frogs subcutaneously, produced effects like curare, though it required the larger of the above doses to kill the animal. Experiments made with guinea-pigs convinced the authors that the ptomaine of human brains could not be confounded with any known poison in toxicological investigations by its effects upon animals.

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[1] American Journal of Pharmacy, April 1884, page 206.

[2] The Practitioner, June, 1884, page 449.

[3] The Lancet, February 9, 1884, page 265.

[4] The British Medical Journal, June 14, 1884, page 1136.

From the putrefaction of enormous quantities of fibrine there resulted a base, with alkaloidal reactions, and forming double platinum and gold salts. The composition of this base is represented by the formula $C_{10}H_{15}N$ or $C_{10}H_{13}N$. The discrepancies in the analytical results are not satisfactory. On frogs and birds the extracts containing this ptomaine acted like that obtained from putrid brains. Moreover, fresh brains yielded to Guareschi and Mosso, by the Otto-Stas method, small residues giving the general reactions of alkaloids. Beef, too, yielded minute residues with similar reactions. Fresh materials yielded almost no ptomaines. Dragendorff's method of extracting the alkaloids, in which dilute sulphuric acid is used as the solvent, resulted in more alkaloidal extract than the Otto-Stas method; and there is no doubt that the method of Dragendorff manufactures, so to speak, alkaloids. Coppola also has confirmed these results. He found that fresh dog's blood extracted by Dragendorff's method yielded abundant alkaloidal reactions; not so when extracted by chloroform. The large quantities of putrid material required to be operated on, often one or two hundred weight, to obtain ponderable quantities of a ptomaine, and the small toxicity of the substances thus obtained, except when employed in large doses, show that the probability of a ptomaine being mistaken for a vegetable alkaloid by a careful worker according to the Otto-Stas method is remote.

F. Marino-Zuco[1] states that the so-called ptomaines of Selmi are nothing but neurin.

SALICYLIC ACID AS A FOOD PRESERVATIVE.

The frequent employment of salicylic acid as a constituent of food preservatives makes important any investigations tending to show the effect on the system of the long continued use of this substance. The Comité Consultatif d'Hygiène Publique[2] has on two separate occasions reported against its employment as an agent for the preservation of articles of food. As this conclusion has been much opposed by those interested in such employment, a subcommittee of the body in question has reconsidered the matter, and their reporter, Professor Brouardel, has published their conclusions on this subject in a recent number of the *Annales d'Hygiène*.

He observes that, although the beneficial operation of salicylic acid in certain diseases is fully admitted, the theory of its action is very imperfectly understood. It is known, however, that when introduced into the economy it is eliminated by the kidneys and liver; and its warmest partisans admit that its use is contra-indicated in the subjects of those diseases which prevent its due elimination, and thus give rise to an accumulation that in several instances has proved fatal. Moreover, elimination is sometimes impeded from unknown causes in persons in whom the functions of these organs work healthily, while in aged persons it is always very slow. Under any circumstances, only a portion of the salicylic acid is eliminated, the remainder undergoing combinations in the tissues, which, although they may prove therapeutically useful, and even for a time produce no evil consequences, could not be indefinitely prolonged without mischief ensuing.

Even small doses of the salicylate may prove dangerous to persons who eliminate it imperfectly; and Professor Brouardel's investigations during several years past lead him to believe that the number of such persons is largely on the increase. Since 1861 he has analyzed the urine of all patients entering his hospital service, and his registers show that the frequency of albuminuria has more than doubled during the last twenty years. Now, these patients are not all condemned to an early death, for many recover and others live for many years; and when examples are adduced of young and robust persons tolerating the daily use of from four to six grammes of the salicylates for months or years, we must not forget the aged persons and albuminurics, and individuals the subjects of various kinds of hepatic and renal disease, whose lives might be seriously compromised by such a regimen. The committee, therefore, believing that for such persons the daily use of salicylic acid would be highly dangerous, while even for those in good health there is no proof that it would be innocuous, recommend that its present prohibition should be maintained.

THE DANGERS OF CANNED FOODS.

During the past few years the use of canned foods has become very extensive. From time to time cases of supposed poisoning from the use of such foods have been reported, and in most of the reported cases the presence of some injurious compound of tin has been alleged, although in some cases lead has been identified as the probable injurious contamination. Dr. Henry Leffmann[3] has found, especially in the case of canned peaches, that tin is the metal dissolved. He observes that the solution requires considerable time. In all the cases in which contamination was found by him the fruits were more than a year old. Chemical tests were made on these samples, because they had caused some irritation of the stomach in persons who had partaken of them. Dr. Leffmann mentions a report of A. Winter Blyth, Medical Officer of Health to Marylebone, London, by which it appears that of twenty-one samples of preserved fruits, apricots, tomatoes, and pine-apples, every one contained a dangerous amount of tin, the least quantity found amounting to one and a half grains per pound, the largest to eleven grains per pound.

Dr. Johnson,[4] in a paper read before the New York Medico-Legal Society in April last, cites several cases of corrosive poisoning supposed to have been due to zinc chloride and tin chloride derived from the use of the "muriate of zinc" amalgam in soldering cans. This flux, consisting of a solution of zinc chloride, is said to be quite commonly used in the place of rosin flux, which is more troublesome, but harmless. Every care is said to be taken in its application, but as it is a poison, some risk of poisoning must attend its use.

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[1] Berichte der deutschen chemischen gesellschaft, 1884, page 1044.

[2] Medical Times and Gazette, February 16, 1884, page 21.

[3] Philadelphia Medical Times, December 15, 1883, page 198.

[4] Medical News, May 31, 1884, page 642.

Drs. Ungar and Bodländer,[1] of Germany, have recently examined a number of cans of vegetables and fruits, and in every instance found tin in the solid portion of the contents in the form of an insoluble stannous compound. The percentage of the impurity, calculated as metallic tin, was, however, very small, in no case exceeding 0.04 per cent.

Professor Attfield,[2] in a paper read at a meeting of the Pharmaceutical Society, March 5, 1884, expresses the opinion that the action of the fluids or juices of the food on the tin of the can, and consequent solution of the tin, and consequent admixture of a possibly assimilable compound of tin with the food, never occurs to an extent which, in relation to health, has any significance whatever. The occurrence of tin, not as a compound, but as the metal itself, is, if possible, still less important.

During the last fifteen years Professor Attfield has frequently examined canned foods, not only with respect to the food itself as food, and to the process of canning, but with regard to the relation of the food to the can itself. He gives the results of some analyses by which it appears that about one half of the articles examined contained no appreciable amount of tin; the remainder contained varying amounts up to 0.007 grains in a quarter of a pound. The largest amount of tin he ever detected in actual solution in food was in canned soup, containing a good deal of lemon juice. It amounted to only three hundredths of a grain in a half pint of the soup as sent to the table. He thinks that these proportions are undeserving of serious mention; that probably no article of canned food, not even the most acid fruit, if in a condition in which it can be eaten, has ever contained, in an ordinary table portion, as much of a soluble salt of tin as would amount to a harmless or useful medicinal dose; that, if a possibly harmful quantity of a soluble compound of tin be placed in a portion of canned food, the latter will have so marked a metallic taste that no sane person will eat it. This opinion seems to be in accord with the known effects of the very soluble chloride of tin upon animals and man.

Professor Attfield has occasionally met with small pieces of metallic tin in canned foods, perhaps amounting in some of the cases to a few tenths of a grain per pound. These are chipped off from the tin sheets in the operations of cutting, bending, or hammering the parts of the can, or possibly melted off in the operations necessary for the soldering together of the joints of the can, or perhaps cut off by the knife in opening the can. He considers these perfectly harmless. Respecting the globules of solder (lead and tin) that are occasionally met with in canned food, he believes that most persons detect them in the mouth and remove them, as they would shots in game; but if swallowed they do no harm.

He thinks it just possible that in the early days of canning the use of "spirits of salt" in soldering may have resulted in the presence of tin, lead, or other chloride in canned food; but such a fault would soon be detected and corrected. It is just possible, also, that formerly the tin itself may have contained lead, but he has not found any lead in the sheet tin used for canning of late years.

The following are other conclusions to which the author has arrived: (1.) Unsoundness in meat does not appear to promote the corrosion or solution of tin. I have kept salmon in cans till it was putrid, testing it occasionally for tin. No trace of tin was detected. Nevertheless, food should not be allowed to remain for a few days, or even hours, in saucepans, metal baking pans, or opened tins or cans, otherwise it *may* taste metallic. (2.) Unsound food, canned or uncanned, may of course injure health, and where canned food really has done harm, the harm has in all probability been due to the food and not to the can. (3.) What has been termed idiosyncrasy must also be borne in mind. Serious results have followed the eating of oatmeal, shell-fish, salmon, and mutton. Possibly there were cases of idiosyncrasy in the eater, possibly the food was unsound, possibly other causes led to the result, but certainly, to my mind, the tin had nothing whatever to do with the matter. (4.) In my opinion, given after well weighing all evidence hitherto forthcoming, the public have not the faintest cause for alarm respecting the occurrence of tin, lead, or any other metal in canned foods.

PEPTONURIA.

From an investigation of the frequency with which peptone appears in the urine, Von Jaksch[3] has drawn some interesting conclusions. It was found in seventy-six out of 354 cases; seventy-two being instances of inflammation or of pus accumulation, three of scorbutus, and one of phosphorus poisoning. He agrees with Hofmeister in thinking that the peptone is not merely dissolved in the pus (in those cases where pus formation is the predominant feature), but that it is contained in the pus corpuscles. With reference to the cases which were not purulent, he is of opinion that, from the increase of white corpuscles, as well as of the products of their destruction in the blood, it may be concluded that peptone may be set free in the blood by the destruction of these corpuscles, and may be excreted by the kidneys. He gives some examples showing that the onset and course of peptonuria may be of use as a sign of the commencement and cessation of the absorption of inflammatory products.

Hospital Practice and Clinical Memoranda.

A CONCRETION IN THE EXTERNAL AUDITORY MEATUS.

BY DAVID COGGIN, M. D., SALEM, MASS.

An American lady, aged forty-five years, consulted me on the 11th of July last because of deafness in her left ear. The canal was occluded by wax, and after its removal the hearing was normal.

The patient then expressed the wish that the hearing in her right ear might be as easily restored. She stated that there had been a fœtid discharge from it since her childhood, when she had scarlet fever. Of late years, in spite of her endeavors to keep the ear clean, the odor had been so noisome as to cause her to avoid mingling in society. Watch heard only on contact. On attempting to introduce a speculum, it struck a hard, gritty substance, just within the cartilaginous portion of the meatus. With forceps, this was found to be firmly fixed. By picking it, filaments resembling cotton fibres were drawn out.

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[1] Medical News, May 31, 1884, page 642.

[2] American Journal of Pharmacy, May, 1884, page 269.

[3] Edinburgh Medical Journal, May, 1884, page 1059.

The patient said she was positive that cotton-batting had not been introduced in the canal for over twenty years.

Not succeeding in withdrawing the foreign body with the angular forceps, a pair of strong, straight ones was used, and it was only after several trials, and by the employment of considerable force, that the offending plug was removed *en masse*. The lining integument of the meatus was much ulcerated, or bathed in blood and pus. In the lower and posterior quadrant of the drum there was a perforation. After cleansing the middle ear, the watch was heard at five centimeters.

The cretaceous cast of the meatus that was extracted was about twelve millimeters in length, of a dirty gray color, and closely resembled an ordinary pebble. Cotton fibres were readily recognized in the particles of the concretions that were broken off.

Because of the very unpleasant nature of the specimen in the consulting-room, it was at once destroyed, so no careful examination of it was made. Doubtless the deposition on the pledget of cotton, of lime, and other salts from the pus that for two decades was being poured out, resulted in the stalagmitic formation that was encountered.

Reports of Societies.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. M. GREEN, M. D., SECRETARY.

March 8, 1884. The President, Dr. C. Ellery Stedman, in the chair.

LABOR IN A CASE WITH CONTRACTED CONJUGATE.

Dr. W. E. Boardman reported a case of labor in which the pelvis was contracted in the conjugate diameter, and in which version and perforation of the after-coming head were performed.[1]

Dr. Richardson said that this was the most difficult and at the same time the most interesting case he had ever seen in the Lying-In Hospital. Considering the long and difficult operation to which the patient had been subjected, it was surprising to see what a convalescence she had. Dr. Richardson also spoke of the advantage of using forceps with the pelvic curve reversed in cases in which the occiput was posterior and the head extended, and he alluded to a case in which he had so used the forceps with success. He thought that after version, when the occiput remains posterior, the forceps could be used to advantage with reversed pelvic curve. In answer to a question by Dr. Lyman as to how high the head was in the case to which he had alluded, when he applied the forceps reversed, Dr. Richardson said that the head was above the superior strait.

Dr. C. E. Stedman asked what experience members had had with repaired perinæums in subsequent labors. He had had one case in which the new perinæum had not torn in the next succeeding labor. He also inquired how many members had seen fatal hæmorrhage consequent upon laceration of the cervix in labor. He had seen two cases of severe hæmorrhage from lacerated cervix, and also two fatal cases, in one of which the cervix was known to be torn, and in one in which it was thought to be.

Dr. Hodgdon had seen one case in which a severe pain had lacerated the rigid os and brought the head to the perinæum: hæmorrhage was so severe that the patient fainted before it was controlled.

A SANITARY TOWEL.

Dr. Curtis showed an English sanitary towel for the use of menstruating women: the towel was made of borated cotton, and provided with suitable tapes for adjustment. These napkins were soft, deodorizing and comfortable, and could be thrown away when soiled.

Dr. Brown spoke of an American towel which had been well spoken of: it was made of absorbent cotton and had a thicker band than the English pattern.

Dr. Doe had found these towels of value in the lying-in room.

Dr. Boardman said that in the Lying-In Hospital a pad was used after labor made of gauze and carbolized charpie: the charpie, he thought, held the secretions better than absorbent cotton.

DIFFICULT DENTITION.

Dr. Lyman alluded to a case of difficult dentition. On two separate occasions, with the advent of the last molars, the child had convulsions followed immediately by severe spasmodic asthma with labored breathing, sonorous and sibilant râles; the symptoms subsided in a few days without treatment, as the local irritation in the jaw passed away. He supposed the pulmonary complication to be purely reflex and similar to the well-known cases of the so-called ear cough.

PLACENTA PRÆVIA.

Dr. O. W. Doe reported a case of placenta prævia as illustrating the ease and rapidity with which labor may be induced and completed when this complication arises.

Mrs. J., aged thirty-one, was confined with her first child on the 23d of December, 1879, after a normal labor of twelve hours. Two years and eight months later her second child was born after a very easy and normal labor of three hours: post-partum hæmorrhage ensued directly, which caused a somewhat protracted convalescence. Her catamenia last appeared on May 30, 1883, the second child being then eight months old. Pregnancy caused but little discomfort, though she complained continually of lack of her usual strength.

On February 13th she was suddenly seized with hæmorrhage from the vagina sufficient to thoroughly soak a napkin. There was no pain whatever attending it. She lived out of town, and when I saw her at 3.30 P. M. there had been no recurrence of the sudden flow; but there had been a constant dribbling which had increased during the last half hour. On examination the os was found to be very soft and dilatable, easily admitting two fingers. The head was presenting, but disengaged and freely movable. The placenta was situated to the left, close to, but not overlapping, the os. Remembering the rapidity with which the cervix dilated at her previous confinement, and knowing that she had a very roomy pelvis, I decided to deliver her at once. To guard against a recurrence of post-partum hæmorrhage, I gave her at four o'clock one fluid drachm of extract of ergot. Ten minutes later I ruptured the membranes and, finding that the head was forcing the placenta before it, I proceeded at once to dilate with my hand, in order to complete the labor by turning. This was accomplished very easily, and the child, a strong, healthy girl, weighing six pounds, was delivered in twenty-five minutes from the time I began the dilatation. The placenta was expelled five minutes later by pressure, and no undue hæmorrhage followed.

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[1] See page 176 of this number of the JOURNAL.

The patient made a rapid and uninterrupted convalescence.

Dr. Forster asked why Dr. Doe gave ergot: the reply was that in a previous labor the patient had had post-partum hæmorrhage, and the ergot was given to forestall the same accident in this case: from his previous knowledge of the pelvis Dr. Doe knew he could deliver the child before the ergot acted.

Medical and Surgical Journal.

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RECOVERIES FROM INSANITY.

In the last annual report of the Boston City Lunatic Asylum, Dr. T. W. Fisher, the superintendent, has some interesting remarks on the recovery-rate in lunatic hospitals. He is puzzled to understand the great difference in the recovery-rate between the hospitals of all grades in England and Wales and our own State hospitals. "Why," he asks, "do forty per cent. of the admissions *appear* to recover in the former case, and only twenty per cent. in the latter?" His own percentage of recoveries has been nearly forty, and he cites a number of insane hospitals outside the State in which thirty-five to forty-one per cent. of the patients recovered.

He answers his own question by saying, in substance, that it is largely the personal judgment of the superintendent which leads to the wide discrepancy. In this he is undoubtedly correct, and even to a greater degree than we ordinarily suspect. In the first place, insane hospital superintendents are mortal like other men, and both from temperament and education liable to wide differences of opinion. The morbidly conscientious, over-sensitive, or too scientific man will reject as undetermined that which the over-sanguine and ignorant man accepts willingly as a fact.

The former kind of man will often be in doubt how to classify a case. He will see imaginary symptoms, fear an immediate relapse, or hesitate to try the effect of home surroundings. He is apt to keep a patient too long and lose the golden moment to discharge him, when recovery would be permanently established by so doing. Finally, when too late, the patient leaves, "much improved," but never to be perfectly well. The over-sanguine man, on the other hand, jumps at his conclusions, and by a series of mental gymnastics accomplishes brilliant, not to say startling, results. To him amelioration means recovery, and his patients go home weeks or months before the proper time. His recovery-rate will be large and flattering to his institution. He keeps no table of relapses or homicides committed by discharged patients, and his conscience will be easy.

For the most gifted of men insanity is a disease extremely difficult to understand. There is no fixed standard of mental health, and as truly none of mental disease. Each case is in some feature unlike all others. There may be and usually is some clearly demonstrated physical ailment, existing as a complication. Beyond these questions of mental and physical manifestations, is that of the liberty of the subject. The latter question is one which is sure to become more and more difficult to settle as we better understand the nature of insanity. Some of those patients formerly sent to a "close asylum," so-called, will do better in a small open institution on the voluntary plan, without total deprivation of liberty, and a larger number of cases of incipient insanity, or insanity with a preponderance of moral symptoms, will be sent earlier to a lunatic hospital. As the means of treatment become more varied and scientific, greater skill and knowledge will be required on the part of the alienist to properly use them, for while many diseases do well on the let-alone plan, insanity requires very early and decided treatment to effect its cure. In the decision of all these matters, what Dr. Fisher calls the "personal equation" will have a direct and important bearing on the recovery-rate.

Dr. Fisher speaks of the researches of Drs. Earle and Parks in relation to the recurrence of insanity, and thinks these researches have had a tendency to lower the apparent recovery-rate of the State hospitals. "Recovery and Recurrence," he says, "are two different questions and it is impossible to predetermine the permanency of the yearly recoveries in an annual report." Every patient discharged without trace of insanity and well enough to resume family relations should properly be called recovered. The fact that he has been insane before, or possibly may be again, does not change his condition on discharge. If free at that time from mental disease, he is to all intents and purposes well. We do not think that Dr. Earle's very valuable investigations can change this rule. But undoubtedly they have made superintendents more careful in putting down patients as recovered, and have especially shed light on the *permanency* of *recovery* and in that way added to our knowledge of insanity.

Fifty years ago Dr. Samuel B. Woodward, superintendent of our then only State hospital at Worcester, after stating that the average percentage of recoveries for that year had been fifty-five and three fourths.[1] proceeds to compare this showing with foreign insane hospitals. He finds in thirteen in Great Britain an average of thirty-five per cent. In five French hospitals forty-three per cent., and in four German hospitals thirty-one per cent. "Oh! what a falling off is there," we might well say, in looking at our present results. Our recoveries have been reduced nearly two thirds, while England's have materially increased.

If we take another comparison, we find, according to Dr. Fisher's report, that the percentage of recoveries in our four State hospitals for cases of all kinds have been six and one half per cent. Dr. Woodward states that Esquirol for the eight years previous to 1834 had a percentage of recoveries on all cases of twenty-five and one fourth, while at the Worcester Hospital for four years the proportion of recoveries on all cases was thirty-eight and four fifths per cent.

These figures must of course be accepted for what they are worth. From any point of view they show a falling off in the recovery-rate. If we should, however, take other lunatic hospitals, the contrast would be less striking. This, for instance, is the case in Scotland, where, according to the Commissioners on Lunacy, there is a diminished death-rate, an increased recovery-rate, and a smaller increase in incurable patients, than in asylums in other countries. In England the Lunacy Commissioners have said that the increase in fresh cases of insanity is not out of proportion to the increase in population.

Such statements as these make us throw off a little of the deep melancholy into which we have been plunged by reading some of our State Insane Hospital reports. And we even have the courage to assert that our observation and reading have led us to the conclusion that at least thirty per cent. of all cases of insanity admitted into lunatic hospitals are discharged recovered. Of late years the recovery-rate has risen, rather than fallen off.

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MEDICAL VERNACULAR.[2]

A SHORT time since the JOURNAL referred to some expressions more or less commonly used by the laity (particularly those of foreign extraction), in describing the state of their bodily health. Some other phrases have since suggested themselves which may also be of interest to mention in this connection.

First, there is a word which is in very general popular use among patients of all classes, but which is applied to very different things. To bloat is in general to swell, and when a person says he "has been bloated" one is apt to understand that there has been œdema. It is the favorite vernacular word for ascitic distention. But it is also applied to flatulence, as when one says that he is "apt to bloat every day after dinner." By derivation this is apparently the more correct use of the word. *Bloat*, to wit, *blowed*, should refer to a distention with gas rather than with fluid. This word is cited to show that what is intended by the patient as a definite term may and often does require further investigation by the physician.

A curious misapprehension exists among the lower ranks of society regarding the word *fracture*. We remember that once having had occasion to make a diagnosis of broken arm in an Irish child, the mother thanked God with great unction that it any way was n't "a fracture," which mishap, it seems, she had once suffered from herself. We have several times observed this peculiar dread of a fracture over and above that of a broken bone (though what was the distinction in the speaker's mind has never been made clear), and recall the awe-stricken way in which, after an opinion had been expressed that no bones were broken, the question was asked, "Do ye think is it a fracture?"

The "spine of the back," an expression which seems at first sight rather tautological, is, perhaps, after all, only an accurate and discriminating utterance. If *spine* (French *épine*) is a thorn, and the vertebral column is so called only by metonomy from the spinal processes which are in the living subject its most obvious part, who shall say that the patient who complains of a bad pain in the "spine of his back," is not speaking with at least scientific accuracy in excluding other spines, as that of the ischium or pubes.

"Doctor, how are my pulse?" is a question often heard in our hospitals. Even those who in general pay no regard to maintaining a correspondence between the number of their nouns and of their verbs, yet draw the line at their imagined plural *pulse*, perhaps out of respect for it as a scientific word. "His hands is cold, but his pulse are good," say such persons. Acquaintance with the sound rather than with the looks of the word is, of course, the obvious explanation of this error. We remember on one occasion to have been fortunate enough to hear the singular *pult*. Yet in general the plural does not presuppose a singular any more than to a carrier of ashes does that term suggest an ash.

"Spits" is good Saxon, and has the advantage in brevity over its Latin brother. "To heave up bad spits" is the fate of many a luckless emigrant to our bleak New England shore. With the native politeness, which is one of the most delightful characteristics of the Irish race, he always adds after any such unpleasant allusion, "saving your presence" or "wid respects to ye." The mention of vomiting is made with similar deprecation unless, indeed, the expulsive effort is ineffectual, in which case it is merely a "dry reachin'."

"A sore troath" is an ailment of frequent occurrence. The transposition of the *t* and the *th* in this word is almost universal among the Irish. The word recalls to us a curious instance of the persistence of an obsolete word which lately came under our observation. A domestic (a Nova-Scotian, we believe,) spoke of having the *squinancy*. No one of the family could understand what she meant until the head of the household recollected the word as being old English, and used by Bacon. Squinance, squinancy, squinsy, are the successive steps which led to *quinsy*. All, as also the Italian *squinanzia*, the Spanish *esquinancia*, the French *esquinancie*, have a common parent in κυνάγχη (κύων ἄγχω) the "dog-throttling," that choking which is as when one is throttled by a dog. The Latin form, *Cynanche*, has persisted in medicine to the present day, as in "Cynanche maligna," but the cognate English word, squinancy, has dropped so far out of sight as to be at present almost unintelligible, except, strange to say, among the farming population of Nova Scotia.

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[1] The percentage is based on *discharges*. It would be nearly four per cent. less computed on *admissions*.

[2] Continued from page 141.

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ANTHROPOPHAGY.

Recent disclosures in connection with the survivors of the Greely Arctic expedition have called attention strongly to the above subject. Evidence obtained from the exhumation of the remains of Lieutenant Kislingbury makes it certain that during the latter period of their struggle with starvation some, at least, of the men made use of human flesh as food. We cannot but regard the persistent efforts of certain newspapers to discover and promulgate these facts as uncalled for, and the surviving friends who have claimed autopsies have, we think, acted unwisely for their own peace of mind in converting what would have otherwise remained an open question, at least in regard to individuals, into a ghastly certainty. There seems to be no evidence and, perhaps, from the nature of the case, never can be any to show that the death of any member of the party was due to violence, except in the case of Private Henry, who was shot by order of the commander after repeated infractions of discipline under circumstances calculated to prejudice the safety of all his companions, and after receiving an exhibition of leniency much greater than would ordinarily be expected of a military commander. The fact that his body was eaten will, of course, raise questions as to the singleness of the motive which caused his execution, but the explanation given seems ample.

Admitting, then, the fact of human remains having been eaten by men in dire extremity, we can hardly understand the public horror at the fact, or the strenuous denials persisted in alike by survivors and government officials. The appropriate feeling seems to us rather to be one of profound pity for those subjected to such distress, and the indignation, if any, should be reserved for those, whoever they may be, who are responsible for the neglect and abandonment of the explorers to the bitter cold and the foodless solitudes of the Arctic shores.

The subject of anthropophagy is one of interest to the ethnologist and the physician. The question has been discussed whether it was practiced by primitive man, and so whether it was to be regarded as a natural instinct. The prevalent opinion seems to be that while there is some evidence that individuals may have eaten human flesh, yet at that period, as now, the majority were not addicted to it. The bones which have been found of this period were mostly intact, and it is argued that were the individuals eaten, the bones would be found broken either as a means of getting off the flesh or of extracting the marrow.

Evidence is not wanting that cannibalism was practiced in countries now the foremost in civilization. St. Jerome, writing about 380, says of a valiant tribe of Caledonia: "Cum ipse in Galliâ viderim Attacottos (vel *Scotos*) gentem Brittanicam humanis vesci carnibus . . . pastorum *nates* et feminarum *papillas* solere abscindere : et has solas ciborum delicias arbitrari." [1]

In the chronicles of the *Welsh Triads* [2] charges of cannibalism are freely made against the Saxon conquerors. Ethelfrith (King of Northumbria, A. D. 593) encouraged it, and Gwrgi, a Welshman residing at the court, became so addicted to it that he would eat no other meat. A man and a woman were slain for him daily, and on Saturdays two of each, in order that the Sabbath might not be broken! But much later than this cannibalism continued to be practiced. Lindsay of Pitscottie, writing in 1460 of what had transpired within the recollection of people then living, tells of a family of cannibals, of whom one, a daughter, had become so enamoured of human food that she said to her executioners: "Give me credence and trow me if you had experience of eating men and women's flesh, ye wold think it so delicious ye wold never forbear it again." [3]

The inhabitants of the island of Shetland are said to have eaten those who were shipwrecked upon the island. Cannibalism was also practiced in the vicinity of Glasgow and of Perth in the fourteenth century.[4]

The eating of human flesh for other purposes than averting starvation is not unknown in later days among civilized peoples. During the French Revolution one of the mob plucked out the heart of the Princess Lamballe, and took it to a restaurant, where it was cooked and eaten by him. Sir Ewen Cameron of Locheil, the great Highland chief, killed an English trooper by taking a bite out of his throat, and used to say that it was the sweetest morsel he ever tasted; [5] a remark almost identical with that ascribed to Richard Cœur de Lion, when, on recovering from sickness and longing for a piece of pork, he could not obtain it, but was given as a substitute a piece of a Saracen's head.

Voluntary cannibalism at the present day has substantially disappeared, except in remote localities. The brown races of Polynesia, until within a few years, practiced it as a religious rite; the New Zealanders only when inflamed with hatred against their enemies; while the Fiji natives almost alone practiced it from actual relish. Pork and human flesh were the only kinds of meat to be had, and the latter was considered the greater delicacy. A writer [6] describes a banquet at which ten bodies were served.

The somewhat curious fact has been pointed out [7] that the people most systematically addicted to cannibalism are not the most degraded of the human race. The latter types, as a rule, feed on worms and herbs, while the New Zealanders and Hawaiians (both systematic anthropophagi) were much more perfect physically than the Australians, whose small food they despised. A banquet hall in New Zealand in which cannibalism was regularly practiced was a highly ornamented building, "one of the finest specimens yet extant."

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[1] Gibbon, Decline and Fall, vol. ii., chap. xxv.

[2] Chambers' Book of Days, vol. i., p. 688.

[3] Loc. cit.

[4] Buckle, History of Civilization, vol. iii., chap. i.

[5] Chambers' Cyclopædia, vol. ii., p. 564.

[6] Harper's Magazine, September, 1853.

[7] Chambers' Cyclopædia, loc. cit.

Famine, siege, and shipwreck have been the causes of involuntary cannibalism, and at the present time the last mentioned is the only contingency likely to lead to this terrible necessity. The chief question of medical interest is what is the effect upon the bodily organization of such food. The mental influence, of course, should be taken into account, although it is probable that before yielding to this necessity the mind of the sufferer has already reached a point where all other feelings, as of religion, sentiment, emotion, respect, are swallowed up in one overwhelming frenzy for food. After the hunger is in a measure appeased the psychical faculties may regain enough of their normal tone to sink the victim into a state of profound depression. Of course, from the nature of the case, observations must forever be wanting as to the mental state of a starving man.

Physiologically, human flesh is, of course, a nitrogenous food, and as such, under the same conditions as the flesh of other animals, is capable of supporting life. Human milk is one of the most perfect aliments known. Human blood is transfused into the veins of persons exsanguinated, and restores their strength, otherwise irrevocably lost. The taste of human flesh is probably not greatly different from that of the other mammalia. If we could conceive one being fed with it unwittingly, as was Thyestes in the ancient myth, he would probably be none the worse for it — would possibly relish it.

These remarks are qualified by the fact that it is rarely that starving men obtain the flesh of the human animal under circumstances which admit of its having any comparison with that of other animals as a nutriment. Worn out with toil, wasted by hunger, and probably dying of starvation or of disease, the flesh is likely, like any other diseased flesh, to disagree, and to cause digestive disturbance. The exceptional circumstance of a violent death occurring to a man in fair health would furnish a food, probably nutritious, and certainly, as we believe, quite legitimate when the sole means of prolonging life. Even a natural death from certain forms of disease, as, for instance, cerebral hæmorrhage, would probably not materially injure the body for purposes of food. The bleeding of a slaughtered animal, while in accordance with the ancient Mosaic ritual and with modern custom, for the purpose of whitening the meat, improving its flavor, and enhancing its period of preservation,[1] is not absolutely essential, and its neglect in the case of disease supposed, especially in an arctic climate, would probably cause no serious ill effects. Other causes of death, such as septic diseases, those involving fever, tuberculosis, and the like, would doubtless subject the consumer to grave risks.

It is to be wished that those who by such terrible experience of hardship have been brought to the dreadful necessity of subsisting upon the flesh of their dead fellow-men could feel assured of popular sympathy and pity, and that, inasmuch as publicity has been given to the unfortunate facts, we might have such results of their sad experience as may be of physiological value.

It must be borne in mind that the Greely party when found, and probably for months before, were none of them in a normal condition of body or mind; that famine brings the strong man low down in the animal scale; that under its influence the powers of the mind are progressively suspended, those being first suspended which are the most recent products of civilization, — among them the sense of moral obligation and of decency; that "the normal highest level of evolution, the topmost layer" (to use Hughlings Jackson's phraseology), is rendered "functionless" under the "dissolution" which prolonged want of food occasions; that individuals from hunger and anæmia and emaciation eventually reach a level where the automatic and instinctive impulses are everything, and the voluntary are nothing; that, in fact, there is a lower stage of evolution where, to use a homely phrase, "dog can eat dog," are truths with which physiologists are familiar.

Far, then, from wondering that anthropophagy occurred among the dismal experiences at Cape Sabine, we should look upon it as one of the most natural things that could happen under the circumstances, and the necessity of the situation and the deplorable physical and mental condition of the men should be a sufficient justification of the act.

"In passing by certain pathological conditions where hunger presents itself in an inexorable manner" (we quote from the work of Longet), "we witness similar phenomena in the case of men of previously sound organizations, but deprived of food. We are compelled to believe that in these cases a pathological state supervenes, a particular delirium, the delirium of famine. The starving wretch is under the domination of resistless egoistic impulses. In vain the moral law commands, in vain social laws and customs menace and restrain; hunger speaks louder than law, than reason, than sentiment. It is a matter of history that in years of famine crimes against the proprieties of civilized life increase in a marked manner; in savage countries, where hunting is the principal means of support, cannibalism is often practiced in times of great scarcity.

"Instances of anthropophagy during times of famine are not exceedingly infrequent, and the history of shipwrecks and sieges, in the horrible truths therein attested, has left nothing for the imagination of poets to invent, when it has told us of mothers taking the lives of their own babes that they might have whereon to satisfy the cravings of their own hunger. Where the maternal sentiment dies, what noble sentiment can remain?"

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[1] Pavy, Food and Dietetics, page 149.

Since the above was in type Greely's published statement has appeared. It is proper that his denial of any personal participation in the cannibalism, — much as it may have been justifiable under the circumstances, — should have as wide currency as the original charges: —

"I can but repeat that if there was any cannibalism, and there now seems to be no doubt about it, the man-eating was done in secrecy, and entirely without my knowledge, and contrary to my discipline. I can give no stronger denial. . . . The crew of the Thetis can testify that the body of the last man dead, Schneider, was not mutilated in any way; and the fact that we kept Ellison alive in the hopeless state we were in ought to convince anybody that we are not cannibals, at least not an organized body of cannibals. When I increased poor Ellison's rations, to the detriment of the rest of us, not a man complained, although knowing that it decreased our space of life in a terrible degree. . . .

"For days and weeks I lay on my back unable to move. If, in my enfeebled condition, one or more of my men fed upon human flesh, it was beyond my control, and certainly beyond my knowledge."

For the living it seems to us there would be greater safety in the solitude of the arctic ice, with such a company as the returned explorers, whatever truth there may be in the present "charges" of cannibalism, than in the dullness of summer months in a populous country where newspapers existed and felt the necessity of furnishing daily a new sensation.

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MEDICAL NOTES.

— A steamer of the Savannah line which arrived in this city last week brought a large number of watermelons, some three thousand of which were condemned by the Inspector of Provisions and ordered to be dumped into the city scow. A large number of the melons disappeared from the wagons during their transit. The drivers say that these were stolen by boys whom they (the drivers) were unable to keep from plundering the carts. This story looks somewhat improbable in view of the fact that fruit is constantly transported through our streets in wagons without risk of molestation. Moreover, it is claimed that the drivers themselves picked out a number of the best-looking melons and disposed of them to cheap dealers. Numerous cases of illness were reported among boys and others who got possession of the decaying fruit and who ate heartily of it in spite of its bad condition. Opportunity for such evils is favored by the fact that the transportation of condemned fruit is compelled from the owners, the city making no provision for removing it. Under such circumstances there is an obvious temptation to owners and teamsters to redeem something from the loss. In certain cases of disputed ownership fruit has been left to rot on the wharf to the discomfort and even danger of the abutters, while the authorities were trying to decide whose was the responsibility for the removal. In all such cases it would seem wiser for the removal of condemned fruit to be made by the municipal authorities themselves, the expense if necessary being afterward collected from the owners.

— Sir Erasmus Wilson, LL. D., F. R. S., the well-known and prolific writer on dermatology, and late President of the Royal College of Surgeons of England, died August 8th. He was born in 1809, became a member of the Royal College of Surgeons in 1831, Fellow in 1843, member of the Council in 1870, and President in 1881. He founded the Chair of Dermatology and the Museum of Dermatology in the College of Surgeons in 1869, and was elected the first professor. He made munificent gifts to hospitals, also founded a chair of pathology in the University of Aberdeen. He took a great interest in Egyptology, and it was through his munificence that Cleopatra's Needle was transported from the borders of the Nile and erected on the Thames embankment in London.

— The *Lancet*, in a recent number (July 12, 1884), says: "We understand that Dr. Lyons, M. P., has given notice of an important amendment to be inserted in the Medical Act Amendment Bill, to the effect that two physicians of over twenty years' standing should be made life peers and act as lord justices of appeal in medico-legal trials. Such appointments have been urged by Sir Spencer Wells, Dr. Theodore Williams, and others, and will, if made, considerably strengthen the hands of justice."

—Professor R. Harvey, of Calcutta, advocates the use of the forceps in breech presentations in certain cases (*Indian Medical Gazette*, June, 1884). A number of obstetrical authorities have now declared in favor of this innovation.

— A correspondent of the *Medical Record* (May 17th) who had the opportunity for a number of weeks to make observations on the physical state of the leading female performers in a large circus, writes concerning the influence of their work on the general health, and on the menstrual and child-bearing functions. He found that the riding, jumping, and leaping did not influence pregnancy unfavorably. Temporary suppression of the menstrual fluid sometimes occurs during these exercises, and its duration tends to be prolonged; but an excessive loss was not found in any case. The non-existence of uterine disease could not certainly be ascertained; but it appeared probable, from the absence of pelvic discomfort and leucorrhœa, and from the excellent general health. Their faces did not exhibit any evidence of especial fatigue, and they all ate and slept well. Dr. Post furnishes particulars concerning five of these women: three being foremost riders, and two gymnasts. Their histories differed mainly in the fact that the gymnasts had early abortions without extraordinary cause, while the riders never miscarried, except as the result of a fall, their routine work not producing this effect. The routine life of the gymnast obviously much favors the dislodgment and expulsion of the ovum at an early stage. But it must be observed that her costume furnishes much less facility for concealing pregnancy, and, therefore, a greater temptation for provoking abortion than is the case with the rider, who can exhibit throughout the eighth month without detection. The fact that pregnant women can undergo the violent exertion they have to sustain while in the ring, and yet bring forth healthy children at term, and suckle them, is most remarkable. The explanation in part lies in their having pursued this habit of life from childhood, the muscular attachments of the uterus being probably rendered unusually firm by the training that has been pursued. Menstruation, however, is more injuriously affected, dysmenorrhœa of some kind being the rule among these women. The menstrual discharge often becomes suppressed during performance, to appear afterwards in excess. The influence of the work on involution of the uterus seems good, for some of these women returned to their occupation in from four to six weeks after confinement, without injury. In some of these women the chest development was very fine, measuring under the clothing thirty-four, thirty-six, and thirty-eight inches in individuals weighing less than one hundred and thirty pounds. With a superb bust curve, in none of them were the breasts large, the effect being obtained by the "ribbing out" of the thorax, which renders even a small breast prominent.

Correspondence.

THE PLASTER-POSTERIOR SPLINT.

Mr. Editor, — I feel called upon to make a brief reply to the letter of my friend, Dr. Bridgman, in your issue of the 14th ult.

And first let me state that I entirely coincide with Dr. Bridgman in his account of the introduction of the splint, yet as Dr. Gay first became acquainted with the splint through my application of it in the hospital wards, and as we have together taken much interest, not only in studying its indications and application, but also in trying to make it known to the profession at large, is it any wonder that, in a footnote to his valuable paper, he should unwittingly accord to me more credit than belongs to me or than I am willing to accept?

Additional explanation of the passage objected to is found in the fact that up to June, 1882, nothing was known of the new appliance outside of the hospital staff and graduates. At that time, however, on the occasion of the meeting of the Massachusetts Medical Society, Dr. Cushing and myself prepared specimens designed to demonstrate its application, this being, to the best of my knowledge, the first opportunity ever afforded the profession of becoming acquainted with it. I may add that, so far as I am aware, the first published description of the splint is from my pen, and may be found in Mr. Sampson Gamgee's "Treatment of Wounds and Fractures."

I wish, also, to assert my conviction that there does exist a very material difference in point of utility and desirability between the *posterior* splint, as described by Dr. Gay, and the *antero-posterior* splint, as introduced by Dr. Goodhue, and perpetuated by Dr. Bridgman.

Very truly yours,

Rufus A. Kingman, M. D.

Boston, *August* 16, 1884.

Miscellany.

VACCINATION AND SYPHILITIC INFECTION.

Our readers will remember that some two years ago certain experiments were carried out by Dr. Cory, the chief vaccinator attached to the National Vaccine Establishment in England, to test the current belief that vaccine lymph taken from a syphilitic person, if unmixed with the blood of the vaccinifer, does not contain the syphilitic virus, and is hence incapable of imparting syphilis by its inoculation. These experiments could only be carried out on his own person, and with true scientific devotion he set himself to work. The appendix to the report of the medical officer of the Local Government Board for 1882 contains a full account of these experiments. These are summarized in the July number of the *Practitioner.* The paper in which the matter is dealt with was prepared by Drs. Bristowe, Humphry, and Ballard, and Mr. Jonathan Hutchinson. It will be unnecessary for our present purpose to give an account of each experiment; indeed, all but the last one can be passed by with the explanation that children who were obviously syphilitic were selected as the vaccinifers; that in two cases they presented active symptoms of syphilis, and that, notwithstanding this, the ordinary precaution to avoid admixture of blood led to no transmission of the disease in connection with the vaccinations which were effected. The last experiment was performed on July 6, 1881. The vaccinifer was a female infant eighty-four days old. Ten days after birth she began to have "snuffles." When about four weeks of age an eruption appeared upon the arms, and this remained at the time when her lymph was used. There was also a sore upon the right buttock and one in the left nostril. The vesicles which had resulted from the child's vaccination were normal in appearance and not inflamed. The immediate neighborhood of the vesicles was free from eruption. Lymph was carefully taken, and the vaccination was performed in three places, but the operation was unsuccessful and no pock arose. But on the twenty-first day there was at two of the vaccinated places redness and a small papule. These papules grew rapidly. One soon exhibited an ulcer, and at this stage Dr. Humphry and Mr. Jonathan Hutchinson were consulted; both agreed that the spots were syphilitic, and with Mr. Hutchinson's reluctant concurrence they were both excised on the 11th August, the incisions uniting on the following day. But on the 14th one of the places was a little inflamed; on the 17th a gland in the axilla was tender; next day one of the wounds was distinctly inflamed and indurated, and there was a good deal of axillary pain. Towards the end of the month the throat was sore, the glands of the neck were painful, a roseolar rash appeared on the forehead, temples, back of the neck, and below the ears, and anti-syphilitic treatment was fully commenced. Referring to the experiments as carried out by the officer in question, the reporters then sum up as follows: —

"(1.) He has stated to us that the object he had in view in instituting these experiments upon his own person was to test a current belief that vaccine lymph taken from a syphilitic person, if unmixed with the blood of the vaccinifer, does not contain the syphilitic virus, and is incapable of imparting syphilis by its inoculation. Having acquired syphilis at his last experiment, he had (apart from any question of vaccination) a second object in having the primary lesions excised, namely, to examine microscopically the excised parts, and to ascertain whether the excision would prevent constitutional disease or modify its course. It was further in order to give this second experiment fair scope that he abstained from submitting himself to anti-syphilitic treatment, until the signs of constitutional syphilis had become so clear that doubt of the failure of excision as a preventive measure could no longer be entertained.

"(2.) It is conclusively proved by his experiments that it is possible for syphilis to be communicated in vaccination from a vaccine vesicle on a syphilitic person, notwithstanding that the operation be performed with the utmost care to avoid the admixture with blood.

"(3.) It is to be remarked that the infants from whom he took lymph for his personal vaccination were, in all cases but one, not suffering from hereditary syphilis in a *latent* form, but were infants in whom *active* symptoms were unmistakably present, as shown by cutaneous eruption, snuffles, mucous tubercles, and ulcerations.

"(4.) Moreover, out of the four children thus used, only one was proved to have been capable of imparting syphilis by the lymph taken from its vaccine vesicle.

"(5.) This case is in conformity with general experience in the following respects, among others, namely, that when syphilis is communicated by inoculation the first appearance of the disease is at the seat of inoculation, the taint of the blood being in all cases preceded by a conspicuous, peculiar, and persistent manifestation of disease at the seat of inoculation.

"(6.) The infants from whom he took lymph for his experiments on his own person were in such a condition of obvious syphilitic disease as would certainly have precluded their use as vaccinifers by even an inconsiderate and reckless vaccinator. Indeed, they were selected by him for his self-vaccination because they were unquestionable syphilitic cases. It is a rule of practice in the profession not to use in vaccination lymph taken from a child in whom there is any suspicion whatever of syphilitic taint, or, indeed, in whom there is any skin disease, although of a character known to be harmless; and the observance of this professional rule is strictly enjoined by the Local Government Board in its instructions to public vaccinators through the country."

Perhaps the point of greatest interest in connection with these experiments has reference to their relation to the practice of vaccination as carried out in England. As to this Dr. Buchanan points out that quite apart from the question of the transmission of syphilis by vaccination it has been the practice of English vaccinators to avoid using any syphilitic children as vaccinifers, and the long-continued absence of any authenticated case of syphilization as the result of vaccination in this country led many to doubt whether such a result was ever possible. In order to attain success in the course of experiments to which we have adverted it was necessary deliberately and intentionally to break through an invariable rule of practice which all medical practitioners observe, and to repeat the experiment again and again in the face of repeated failures. So far as public vaccinators are concerned they are bound by the instruction, "Take lymph only from subjects who are in good health, . . . and always carefully examine the subject as to any existing skin disease, and especially as to any signs of hereditary syphilis;" and Dr. Buchanan comes to the conclusion that the observance of this rule offers all the safeguard needed, and that syphilis can only be imparted by a vaccinator in such a manner as no medical practitioner is likely by any accident or carelessness to imitate.

THE TREATMENT OF EPILEPTIFORM NEURALGIA BY NERVE-STRETCHING.

The synonym for this troublesome affection is "incurable facial tic," and in view of former therapeutic measures it seems to be a correct descriptive term. With the exception of the massive doses of opium (ten to thirty grains daily), which alone Trousseau considered of any value among drugs, nothing has been found to give permanent relief. Neurotomy and neurectomy are of only transient effect, but according to some authorities, among them Mr. Walsham,[1] nerve-stretching has given relief, whose permanence is to be inferred from the non-reappearance of pain during the intervals (in some cases long) since the operation. The particulars in some half dozen cases are thus given by Mr. Walsham. He says: —

In the first patient with this disease who came under my care I stretched the infra-orbital nerve. The neuralgia was of ten years' duration, and for two years of this time the patient had been actually bedridden, as the pain was beyond endurance when she attempted to get up. All medical remedies had been tried and failed. The operation was performed in February, 1879. She was completely relieved, and when last heard of, three years afterwards, by my friend, Mr. Anderson, who sent her to me, she expressed herself as having been cured. The second patient, a man thirty-two years old, who had been an out-patient of Dr. Lauder Brunton's, had had the neuralgia for nine years. He had formerly been in good circumstances, but in consequence of his pain had been rendered unfit for any mental exertion, and had gradually lost his business. The neuralgia was confined to the regions supplied by the auriculo-temporal and inferior dental nerves. He had consulted many of the most eminent physicians in London and Paris, and various homœopaths, medical rubbers, and electricians, and had had the inferior dental and mental nerves divided by Messrs. Tomes and Durham. In April, 1883, I stretched the auriculo-temporal nerve, and a week later the inferior dental from within the mouth. The relief from pain was complete; he has had none since, and is now again making headway in his business. The third patient, sixty years old, had suffered for eight years. The pain was confined principally to the inferior dental nerve. I stretched this in May, 1883. Since then he has had no pain except some slight twinges in the infra-orbital nerve (none in the inferior dental) for a few days in March, 1884, ten months subsequent to the operation, after having got wet through and taken a violent cold whilst following his occupation as a gardener. The fourth patient, a man fifty-six years old, had been in St. Bartholomew's Hospital for some time under the care of Dr. Church, and more lately as an out-patient under Dr. Lauder Brunton, to whom I was indebted for the case. He had suffered for five years. In November, 1883, I stretched the inferior dental and infra-orbital nerves, and he has remained well since. The fifth, a man seventy-three years old, had suffered for ten years with pain, chiefly in the inferior dental. He had had the mental branch cut and stretched, with little or no benefit, at the National Hospital for Epilepsy. In March, 1884, I stretched the inferior dental from within the mouth. The patient, notwithstanding his age, had no bad symptom, and at present has had no return of his neuralgia.

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[1] Practitioner, July.

In the sixth case a man, fifty-nine years old, had suffered for upwards of fourteen years. He had been under the care of several physicians, and had had the supra-orbital and infra-orbital stretched on various occasions. Looking to the success of the above cases I attempted to stretch these nerves again, but found, on cutting down upon them, that the tissues were so matted together, as the result of the previous operations, that it was impossible to isolate them. An aneurism needle was passed under the cicatricial tissue in the situation of the nerves, and an endeavor made to stretch it, but it did not yield to any appreciable extent. The pain was as severe after the operation as ever. On more closely questioning him it was found that although he said the pain began in the cheek and darted upwards over the head, it really began in the gums, in the region of the molar teeth, which had been previously extracted, that is, in the posterior dental nerves, and shot upwards towards the back of the orbit. In January, 1883, I removed Meckel's ganglion and the whole of the superior maxillary nerve, after having forcibly stretched its proximal end, from the foramen rotundum to the spot where it emerges on the cheek. The patient had no bad symptom; he slept well the night after the operation, better than he had done for months; he was up and about the ward in a few days, and has had no pain since.

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TOXICOLOGY IN LITERATURE.

Mr. A. Wynter Blyth, writing in the *Medical Times and Gazette* (August 2d), on Old and Modern Poison Lore, speaks of the inaccuracies of dramatists in their literary handling of poisons, and offers a suggestion of a poison suitable for the purposes of the playwright: —

"Few dramatists," he remarks, "have been happy in the description of death by poison; the death of Cleopatra, described by Shakespeare as resulting from the bite of a venomous snake, is like no clinical description of fatal illness from bites of any class of snakes.

"In Philip Massinger's play, The Duke of Milan, Francesco dusts over a plant with a poisonous powder; this plant Eugenia holds; Ludovico Sforza kisses her hand twice, and from this slight contact very rapidly dies — why, it is doubtful whether pure aconitine itself, the most powerful of all known substances, and only separated within the last few years, could be inhaled under these conditions in sufficient quantity to do harm.

"Beverley, in Edward Moore's Gamester, takes poison in the fifth act, after which he makes several pretty long speeches, and ultimately dies suddenly, but, so far as we can learn, with considerable calmness. Nathaniel Lee, in his tragedy, Alexander the Great, provides a poison for the destruction of the emperor, which is described as of 'exalted force.'

"'. . . mixed with his wine a single drop gives death,
And sends him howling to the shades below.'

Nevertheless, after taking the poison, Alexander walks about, declaims much, kills Clytus, and goes through the latter part of the fourth act, and most of the fifth, comfortably enough; then raves in delirium, regains his senses, and dies after a very fine speech. There was no poison known to the writers of the plays alluded to which would produce symptoms in any way similar. At the present day there is, however, a liquid made by artificial means, the effects of which are stranger than those imagined by play-writers — after it is swallowed the person walks about for an interval of time varying from a quarter of an hour to two hours. His skin, and even the whites of the eyes, become of a strange, purplish livid color, but he may feel fairly well; then the fatal symptoms set in with appalling suddenness, and he dies in a few minutes. For any one who delights in constructing stories of sensation, these occasional effects of nitro-benzine, just described — the weird blue color, the interval allowing of acts and rhapsodies, and the abrupt termination, afford considerable, although perhaps not commendable, scope."

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THE ELIMINATION OF MERCURY DURING AND AFTER ITS CUTANEOUS EMPLOYMENT.

In a reprint from the *Journal of Cutaneous and Venereal Diseases*, vol. i., No. 12, Dr. Schuster, of Aix-la-Chapelle, gives the results of more than one hundred examinations respecting the elimination of mercury in syphilitic patients who were either still under treatment by mercurial inunction, or who had been thus treated for a time varying from one to twelve years. At first, only the urine was tested, by the Ludwig-Fürbringer method, modified by Schridde. Mercury was thus found often in small, but rarely in large quantity, during, and some weeks after, the mercurial treatment. Frequently, however, mercury was not found in the urine. Dr. Schuster, therefore, proceeded to examine the fæces, and found that mercury was always present in them. The result of forty examinations of the fæces was, that mercury was found regularly in relatively large quantity during mercurial inunction. The earliest examination was made ten days after the beginning of treatment. Mercury was found in the fæces for five and a half months after the end of the course, the examination being made at intervals of from ten to fourteen days. Mercury was found in the fæces in all cases in which it was found in the urine; but it was frequently absent from the urine when it was found in the fæces. From this Dr. Schuster draws the following conclusions: — (1.) The elimination of mercury by the fæces is regular and continuous. (2.) The elimination of mercury introduced by a course of inunction of from thirty to forty-five days is completed in six months. (3.) Persistence of mercury in the organism does not occur.

DEATH-PUNISHMENT BY HANGING.

Under the head of "Nugæ Hibernicæ," in the *British Medical Journal*, January 5, 1884, are some details of the mechanism of hanging as a death-punishment. Till recently the employment of a short drop, with consequent simple strangulation, led frequently to very painful scenes; but since the employment of the "long drop," fracture of the transverse process of the second cervical vertebra is caused, and instantaneous death takes place by injury to the medulla oblongata.

The drop in Ireland ranged at first from ten feet to seventeen feet, and death was instantaneous. Two cases occurred in which the weight of the criminal was the same, namely, 160 pounds, and the "long drop" the same, namely, fourteen feet; but in one case the transverse processes of the second vertebra were broken across, and in the other case the head was cut off by the rope. A scientific investigation of the ropes followed, and the cutting off of the head was found to be due to deficient elasticity of the rope. These cases led to a full discussion of the whole question, and particular attention was paid to the position of the noose, for which three positions were advocated, namely: (1.) The occipital position. (2.) The subaural position. (3.) The submental position.

(1.) The "occipital knot" had practice in its favor, handed down from the old times of the "short drop;" but experience showed that the "long drop" and "occipital knot" divided all the soft tissues of the neck, except the skin, before the blow reached the second cervical vertebra and medulla oblongata, and there was not sufficient margin of resistance to prevent the head from coming off.

(2.) The "subaural knot" was merely a hangman's ignorant idea, and had no support from anatomy.

(3.) The "submental knot" and "long drop" delivers the first shock on the spine (like killing rabbits by a blow on the back of the neck), and causes immediate death without dividing the soft parts of the neck, which remain to protect the head from coming off.

After the adoption of the "submental knot" the "long drop" was reduced from twelve feet or fourteen feet to eight feet, and the results have proved that an eight-foot drop, with "submental knot," will produce a greater destruction of the transverse processes of the cervical vertebræ than a fourteen-foot drop with the "occipital knot." The transverse processes have been fractured as far down as the fourth vertebra, and death is, of course, instantaneous, and that without risk of taking off the head.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 9, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Whooping-Cough.	Diphtheria and Croup.
New York	1,340,114	708	396	242	86	153	13	28
Philadelphia	927,995	388	182	86	41	57	2	7
Brooklyn	644,526	326	181	111	33	83	11	6
Chicago	632,100	—	—	—	—	—	—	—
Boston	423,800	207	99	76	28	54	13	3
Baltimore	408,520	134	62	36	14	22	6	1
St. Louis	400,000	168	72	56	15	33	1	5
Cincinnati	272,400	91	29	23	15	14	—	3
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	97	45	24	12	17	2	1
Pittsburg	180,000	84	50	43	6	25	3	9
Milwaukee	142,400	89	68	42	2	32	1	1
Providence	119,405	66	37	30	3	25	—	3
New Haven	62,882	28	14	10	3	7	—	—
Nashville	54,400	15	8	5	2	4	1	—
Charleston	52,286	33	12	6	4	4	—	—
Lowell	71,447	33	16	13	3	10	—	1
Worcester	69,442	32	17	8	3	7	—	1
Fall River	62,674	37	28	16	1	16	—	—
Cambridge	60,995	23	14	13	4	8	—	4
Lawrence	45,516	19	9	7	4	4	1	—
Lynn	44,895	15	9	5	2	5	—	—
Springfield	38,090	16	6	12	1	10	—	—
Somerville	31,350	11	6	4	1	3	—	1
Holyoke	30,515	11	6	4	2	4	—	—
New Bedford	30,144	14	11	7	—	7	—	—
Salem	29,503	19	12	6	4	4	1	1
Chelsea	24,347	13	4	1	2	—	—	—
Taunton	22,693	9	4	7	—	3	—	2
Gloucester	21,400	7	2	2	—	2	—	—
Haverhill	20,905	10	5	5	1	4	—	—
Newton	19,421	10	5	2	2	2	—	—
Brockton	18,323	4	2	1	1	1	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	1	—	2	—	—	—
Fitchburg	13,433	4	0	—	3	—	—	—
Massachusetts towns	—	—	—	—	—	—	—	—

Deaths reported 2726 (no reports from New Orleans, Chicago, and Buffalo): under five years of age, 1412; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 903, consumption 280, lung diseases 148, diarrhœal diseases 620, diphtheria and croup 77, whooping-cough 55, typhoid fever 55, malarial fevers 31, measles 28, scarlet fever 17, cerebro-spinal meningitis 10, erysipelas six, puerperal fever three, typhus fever one. From *typhoid fever*, Philadelphia 14, New York nine, Boston, Cincinnati, and Baltimore five each, Brooklyn and Pittsburg three each, St. Louis, District of Columbia, and New Haven two each, Milwaukee, Charleston, Cambridge, Lawrence, and Taunton one each. From *malarial fevers*, New York and St. Louis 10 each, Brooklyn six, Baltimore and Providence two each, Charleston one. From *measles*, New York 19, Pittsburg three, St. Louis and Milwaukee two each, Brooklyn and Taunton one each. From *scarlet fever*, New York seven, St. Louis and Milwaukee two each, Philadelphia, Boston, District of Columbia, Lowell, Lawrence, and Haverhill one each. From *cerebro-spinal meningitis*, New York three, Milwaukee and Springfield two each, Philadelphia, New Haven, and Lowell one each. From *erysipelas*, Philadelphia three, Brooklyn, St. Louis, and District of Columbia one each. From *puerperal fever*, Philadelphia, Milwaukee, and Chelsea one each. From *typhus fever*, Cincinnati one.

One case of small-pox reported in St. Louis.

In 110 cities and towns of Massachusetts, with an estimated population of 1,376,704 (estimated population of the State 1,955,104), the total death-rate for the week was 20.44 against 19.11 and 21.54 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending July 26th, the death-rate was 24.9. Deaths reported 4176: acute diseases of the respiratory organs (London) 159, diarrhœa 881, whooping-cough 118, measles 86, scarlet fever 77, diphtheria 30, fever 33, small-pox (London 17, Liverpool, Sunderland, Hull, and Sheffield one each) 21. The death-rates ranged from 11.1 in Brighton to 33.8 in Leicester; Birmingham 20.6; Blackburn 23.1; Bradford 16.2; Leeds 27.9; Liverpool 31.9; London 25.9; Manchester 27.8; Nottingham 26.9; Sheffield 27.3; Sunderland 24.1. In Edinburgh 18.4; Dublin 28.7; Glasgow 19.3.

For the week ending July 26th, in the Swiss towns, there were 36 deaths from diarrhœal diseases, consumption 28, typhoid fever eight, diphtheria and croup five, puerperal fever two, measles one. The death-rates were, at Geneva 17.3; Zurich 11.8; Basle 19.4; Berne 13.3.

The meteorological record for the week ending August 9th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
August, 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 3	30.060	71	86	62	73	63	91	76	SW	SW	SW	5	11	7	C	F	C	—	—
Mon., 4	29.960	74	84	63	98	73	97	89	SE	S	SW	6	9	11	O	C	R	—	—
Tues., 5	29.974	72	77	69	97	83	100	93	S	SW	SW	8	10	9	O	O	R	—	—
Wed., 6	29.974	71	86	68	95	88	99	94	W	SW	SW	8	6	7	O	R	O	—	—
Thurs., 7	30.008	66	77	63	80	98	100	93	W	SW	N	5	2	15	F	R	R	—	—
Fri., 8	30.088	69	74	62	92	52	84	76	NW	SE	NW	7	8	8	O	C	C	—	—
Sat., 9	30.225	64	71	61	70	67	85	74	N	NE	N	6	12	3	C	F	F	—	—
Mean, the Week.	30.041	69.6	65.0	64.0				85.0										26.15	3.42

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM AUGUST 9, 1884, TO AUGUST 15, 1884.

Bartholf, J. H., captain and assistant surgeon. Relieved from duty at Vancouver Barracks, Wash. Ter., and ordered to take station at Portland, Oregon. Paragraph 1, S. O. 114, headquarters Department of Colorado, August 1, 1884.

Heizmann, C. L., captain and assistant surgeon. Ordered to proceed to Fort Ontario, N. Y., and report for duty. Paragraph 3, S. O. 163, headquarters Department of East, August 13, 1884.

Kane, John J., captain and assistant surgeon. Granted leave of absence for one month. Paragraph 1, S. O. 160, headquarters Department of East, August 10, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING AUGUST 16, 1884.

Bogert, E., medical inspector, to be fleet surgeon, Asiatic Squadron.

Babin, H. J., surgeon, detached from U. S. S. Minnesota, ordered to Marine Rendezvous, N. Y.

[illegible], R., passed assistant surgeon, detached from Marine Rendezvous, N. Y., ordered to Naval Academy as member of Examining Board.

Cooke, G. H., surgeon, ordered to Naval Academy as member of Examining Board.

Rixey, P. M., passed assistant surgeon, detached from specia duty at Washington, ordered to U. S. S. Lancaster.

Woolverton, T., surgeon, ordered to U. S. S. Minnesota.

Died. — At Lexington, Mass., August 13, 1884, Abel Bryant Adams, M. D., M. M. S. S., aged seventy-three years.

Books and Pamphlets Received. — Fifth Annual Report of the State Board of Health of Illinois. 1883.

Streif Lichter uber die Stellung des Arztes in der Gegenwart und sein Verhältniss zur Praxis, etc. Von Dr. Med. Heinr. Schmidt. Berlin.

Twentieth Report of the Trustees of the City Hospital, Boston, with Reports of the Superintendent and Professional Staff, Rules for Admissions and Discharges, Prospectus of Training School for Nurses, etc. 1883–84. Boston.

Second Annual Announcement of the Northwestern Ohio Medical College, Toledo, Ohio. Session of 1884–85.

Transactions Mississippi State Medical Association. West Point, April, 1884.

Puerperal or Childbed Fever. By T Griswold Comstock, A. M., M. D., St. Louis, Master in Obstetrics, Vienna. (Reprint.) 1884.

Proceedings, Addresses, and Discussions of the Third Semi-Annual Meeting of the Kentucky State Sanitary Council. Held March 26, 27, 1884.

Gun-Shot Wounds of the Small Intestines. By Charles T. Parkes, M. D. Address of the Chairman of the Section on Surgery and Anatomy, American Medical Association. Washington, May, 1884.

Lectures.

ACUTE PARENCHYMATOUS NEPHRITIS.

A CLINICAL LECTURE DELIVERED AT THE PHILADELPHIA HOSPITAL.[1]

BY JAMES TYSON, M. D.,

One of the Physicians to the Hospital, and Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania.

Gentlemen, — I have the opportunity to-day of showing you a form of Bright's disease which is not often met with in adults even in the wards of a large general hospital. I refer to acute parenchymatous nephritis. This form of Bright's disease is, as you know, frequently seen in children after scarlet fever and diphtheria, and is also known as acute nephritis, acute croupous nephritis, acute tubal nephritis, and acute catarrhal or desquamative nephritis.

The patient has given us the following history: He is seventy-five years old, and was admitted on December 4, 1883, eleven days ago. He states that his father died in middle life, he thinks from intemperance. His mother died at an advanced age. He had smallpox when a boy, and at the age of twenty-one had what he says was typhus fever. He has never had syphilis or gonorrhœa. He is a gardener by occupation, but has lately worked in a stove store. Up to December 1st, he was in sound health. He recalls no dropsy or other allied symptom previous to this time. At the time mentioned, he began to have headache, pain in the back, and noticed that his scrotum was swollen. He believes that the amount of urine was increased, and he had to get up twice at night to micturate. It must be remembered, however, that this is a common symptom in old men in good health. On admission the feet, legs, abdomen, and scrotum were œdematous, and there was also œdema of the lungs. He appeared to be remarkably strong and active for the amount of dropsy present. There were no effusions into the serous cavities.

Such being the history, let us study the present condition.

The dropsy has almost entirely disappeared. This is interesting as showing the remarkable quickness with which dropsy will sometimes disappear in renal cases. This is a characteristic of some cases of acute parenchymatous nephritis as distinguished from the chronic form of the disease. In seven days the dropsy has almost entirely gone. Our attention being attracted by the symptoms which I have mentioned, the next step was, of course, the examination of the urine. This was found to present an appearance very much like the specimen which I now show you. It was of a smoky hue, and its specific gravity was high, and it contained a considerable quantity of albumen. To-day the quantity of albumen is not so large, not nearly so large as we have in many cases of acute Bright's disease or in some of the chronic forms. On standing, a deposit occurs, and on microscopical examination it is found to consist of large numbers of epithelial casts, of hyaline casts, of blood casts, and of free blood corpuscles. The smoke hue is due to the presence of the blood, which, when present in moderate quantity, always imparts such a hue to an acid urine.

It is not necessary after what I have said in previous lectures to discuss the formation of casts. I shall simply say that epithelial casts are due to a coagulable exudation from the blood, which, after it has been thrown out into the uriniferous tubules, entangles in its coagulation detached or partially loosened epithelial cells. In consequence of the inflammation in the tubules the epithelial cells are loosened from their attachment, and as the fibrinous material contracts it drops out, carrying with it the epithelium. This epithelium is not normal; it is granular, and in some cases highly so. At the same time it has not reached the stage of fatty metamorphosis. It is rather in a state of "cloudy swelling." The blood casts are formed in a similar manner. The blood escapes into the Malpighian capsules, trickles down into the tubules, and the corpuscles become attached to the fibrinous material before mentioned, or the blood itself coagulates, forming the blood cast. Hyaline casts consist of the pure fibrinous material without blood or epithelial cells attached to it. They are formed in tubules in which the epithelium is still firmly adherent to the basement membrane or is altogether absent. In health the epithelium of the kidney is very firmly attached. This is a characteristic of renal epithelium, and in this respect it differs from almost all other forms of epithelium. The epithelium of the skin of the mouth and of all portions of the genito-urinary tract, excepting the kidneys, is constantly exfoliated. It is rare to have the epithelium of the healthy kidney thrown off, and such a thing as an epithelial cast from the healthy kidney does not occur. If the fibrinous material is thrown out into a tubule, the epithelium of which is perfectly healthy, the cast will escape leaving the epithelium behind, but if the epithelium is diseased and loosely attached an epithelial cast will result in this coagulating and entangling process. A hyaline cast has less significance than other forms of casts, because it is produced by slighter derangements of circulation in the kidney. Although hyaline casts do not appear in normal urine yet they may be produced by slight congestions. The hyaline casts which occur in the acute form of the disease are of small diameter, being the diameter of the tubule less the thickness of the epithelium. In chronic Bright's disease hyaline casts of large diameter are found, being produced by the exudation of fibrinous material into tubes which are bereft of their epithelium.

These are the points on which we base our opinion: In the first place the short duration of the case. This, taken in connection with the results of the examination of the urine, — the large amount of albumen, the presence of epithelial and blood casts with free blood corpuscles, serve to establish the diagnosis. Epithelial casts in which the epithelial cells are so slightly changed are never found in the chronic forms of the disease. Blood casts are only found in acute cases. Blood corpuscles are occasionally found in chronic cases, but much more frequently in acute. In the acute stage of Bright's disease the urine is generally of high specific gravity. This is due to two causes: The urine is diminished in amount, and given a normal amount of solids the specific gravity would, of course, be high. The solids are rarely diminished during the earliest stage, but as the case progresses they decrease, and all secretion may even be suppressed. The second factor which contributes to the high specific gravity is the admixture of blood, which sometimes appears in considerable quantities.

What is acute parenchymatous nephritis? It is an acute inflammation which starts in the uriniferous tubules, or, rather, in the cells lining them. I do not say that the process continues in the tubules during the whole course of the disease, or how long it remains there. As stated, other terms are applied to this form of Bright's disease. A good one is tubular or tubal nephritis, because it tells precisely where the disease is located. Parenchymatous nephritis is rather the favorite term to-day, and is also a proper one, as indicating the seat of the inflammation, for, as you know, the parenchyma of an organ is its proper secreting structure. Another term is desquamative nephritis, which has its reason in the fact I have already mentioned, that the epithelium is disposed to desquamate and drop out. The term simple acute nephritis is also applied to this form of renal disease. We usually make but one form of acute nephritis, and that is tubular nephritis. It may, however, occasionally happen that we have a diffuse acute nephritis, that is, an inflammation of the kidney, in which not only are the tubules affected, but the sparse connective tissue between them as well.

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[1] Reported by William H. Morrison, M. D.

What are the changes which take place in the tubules in this disease? They consist primarily in overgrowth and proliferation of the epithelium, and subsequently in its death and desquamation. Before proliferating, the cells enlarge; they become cloudy and granular, and more or less encroach upon the lumen of the tubules. This encroachment is further favored by proliferation of the cells, and it may go so far as to produce suppression of urine in those cases in which the inflammation is very general. Fortunately it rarely happens that all the tubules are affected at the same time. In consequence of this proliferation of cells and blocking up of the tubules the latter occupy more space, and the entire organ is enlarged, and it is particularly the cortex which is the seat of this enlargement. Instead of being a quarter of an inch or less in width the cortex measures sometimes half an inch. The enlargement of the kidney is, therefore, dependent upon the distention of these tubules, yards of which are closely packed in the kidney. If a section is made of the organ it will be found that the cut surface drips with blood, but on scraping the cortex with a scalpel it will be seen that it does not present a red color like blood, but that it is grayish or pinkish-gray in hue. This is in part due to the fact that the blood has been squeezed from the minute capillaries by the over-distended tubules, and in part to the change which has taken place in the cells, causing them to assume a gray color, so that the acutely inflamed kidney, while it contains a great deal of blood, wants one of the classic symptoms of inflammation, that is, redness. In chronic parenchymatous nephritis the kidney is white, because most of the cells have undergone complete fatty degeneration.

If the disease lasts long enough the connective tissue becomes involved in the inflammatory process, and we then have a diffuse nephritis. This connective tissue, which is present only in small amount in health, is capable of undergoing rapid overgrowth when inflamed. Chronic parenchymatous nephritis is, strictly speaking, a diffuse nephritis, because there has been superadded to the tubular inflammation an involvement and overgrowth of the connective tissue.

Acute parenchymatous nephritis is one of the easiest diseases to diagnose if the physician understands the use of the microscope, and to make an accurate diagnosis this is absolutely necessary. I need not repeat the distinctive points I have already mentioned, but an interesting fact which I did not mention is that in nearly all cases of acute Bright's disease the urine contains crystals of uric acid.

Next, as to *treatment*. Many cases of acute Bright's disease, if recognized early, require no treatment but rest in bed and an easily assimilable diet, of which the best form is milk. Although this is true, it does not do to leave these patients unwatched, for the course of the disease is uncertain. And, as a rule, you will not rest satisfied with this treatment, although what more is done will depend to a great degree upon the urgency of the symptoms. We wish to keep the kidneys acting in order to prevent the retention of urea in the blood and the consequent danger to life which arises from this accumulation. After instituting the general treatment which I have suggested, I see that the bowels are opened, for neither digitalis or any other diuretic will act as long as the bowels are constipated. If there is costiveness, some saline laxative, as magnesia or the citrate of magnesia or some of the natural aperient waters, should be given. After the bowels have been opened, digitalis may be given either in the form of the tincture or infusion, giving fifteen drops of the former, or a dessertspoonful of the latter, every three or four hours. If this does not produce the desired effect, I should not increase the dose of digitalis, for it is liable to derange the stomach, but I should associate with it one of the vegetable alkalies, as the acetate or the citrate of potassium.

When admitted this man was given one tenth of a grain of elaterium to act upon the bowels, and afterwards received fifteen grains of acetate of potassium and a teaspoonful of the infusion of digitalis every three hours, making four or five doses in the course of the day. Under this treatment he did very well and the œdema rapidly disappeared.

If the treatment which I have suggested does not produce satisfactory results and the symptoms grow worse, I sometimes use cups over the loins, relieving the renal arteries through the lumbar arteries, by the anastomosis which exists between them. After the cupping, I usually apply a corn-meal or flaxseed-meal poultice, the surface of which has been sprinkled with mustard. This keeps up a permanent counter-irritation, and it often starts the secretion of urine.

If these measures fail, free action by the skin should be promoted. This is best accomplished by jaborandi, and in this case it became necessary to administer this remedy. As I have said, the patient at first did well on the use of digitalis and the acetate of potassium, but day before yesterday the resident physician found him delirious and acting in a very singular manner. On investigation it was found that although the urine was not actually suppressed he was passing a very small amount. We at once concluded that his symptoms were uræmic and due to the retention of urea and its allies. This complication is frequently met with: a patient will be doing well, when suddenly there will appear coma, convulsions, or delirium as we had in this patient. In addition to delirium the man had slight convulsive seizures. We at once proceeded to treat him as we usually treat such cases in the hospital. An infusion of two drachms of jaborandi leaves in four ounces of water was made, and the whole quantity given by enema. We often make the infusion with only one drachm of jaborandi, but as the symptoms were urgent a double quantity was used. This did not produce perspiration, and in an hour the injection was repeated. In a short time he sweat profusely. He was also given one drop of croton oil, which acted promptly. The next morning all the symptoms had disappeared and the man was entirely rational. We are not always so successful in removing the uræmic symptoms, but frequently the result is all that could be desired. In this case the dropsy was also greatly relieved by the sweating.

The above well illustrates the usual course which is to be pursued in cases of acute Bright's disease. If the disease is promptly recognized and properly treated from the beginning, the patient generally gets well, but if overlooked, as it often is, the opportune moment may be lost never to be regained. Perhaps no disease demands for its prompt recognition and treatment a broader and more thorough medical education.

There are modifications of the treatment I have described which are demanded by circumstances. In private practice, instead of giving jaborandi I should use the alkaloid, pilocarpin, giving the nitrate or muriate subcutaneously. The dose is from one fourth to one half a grain as the urgency of the symptoms may demand. My usual custom is to give one fourth or one third of a grain, and if sweating does not come on within half an hour I repeat the dose. Jaborandi not only produces sweating, but it also increases the secretion of saliva and may induce purging. It is also a diuretic. We have in this remedy a most valuable addition to the therapeutics of Bright's disease. In order to keep up the diaphoretic action pilocarpin may be continued in doses of one tenth of a grain. This is readily done by the use of gelatine coated pills. One pill may be given in the evening, or one may be given night and morning. The system rapidly becomes habituated to the use of jaborandi and the dose has to be increased. Another good way of administering this drug is to use the inspissated juice by suppository. The fluid extract may of course be used by the mouth, but it is a less agreeable remedy.

If jaborandi cannot be procured, there are other ways of inducing sweating which we have now almost entirely given up, although they are very efficient. Hot-air or steam baths may be used for this purpose. In employing the hot-air bath the patient is covered with a rubber blanket, and a tube with an expanded extremity which is held over a spirit lamp is passed beneath the covering. In the steam bath the steam from an ordinary tea-kettle may be conducted through a piece of rubber tubing under the bed clothing. These methods are not as promptly effectual as the administration of jaborandi, but at the same time there are circumstances when they may be required.

There is another method of treating urgent uræmic symptoms which should be mentioned, that is, bleeding. I should not hesitate to bleed a patient suffering with uræmia if he is not relieved by the measures described. As you are aware the uræmic symptoms are dependent upon the retention of urea and allied substances in the blood, which when they have accumulated to a sufficient quantity, act upon the nervous system, producing delirium and convulsions, or coma. The condition is, in fact, an intoxication. If under such circumstances the patient is bled and a pint or a quart of this blood removed, some of the poisonous material is taken away and the patient is relieved. In puerperal cases I believe that bleeding relieves not only by diminishing the vascular and nervous tension, but by removing the accumulated uræmic poison which has produced the symptoms.

Another valuable remedy for the control of uræmic convulsions, which should not be forgotten, is chloral. So far as the relief of the convulsions go, jaborandi is a slowly acting remedy, because it operates by removing the poison from the blood. Something is needed to act upon the nerve centres and obtund them and make them less susceptible to the poisonous substance. Chloral often admirably answers this purpose. It may be given by the mouth or rectum. By enema the dose is one drachm. I have seen the convulsions stop almost instantly after such an injection.

There is still another remedy which has been strongly urged by some, which should be used with caution, and that is morphia. It is some years now since Dr. Loomis, of New York city, advocated the hypodermic administration of one half a grain of morphia for the relief of the convulsions in acute Bright's disease. There is no doubt that in certain chronic forms of the disease, more particularly in the contracted kidney, the effect of opium is to increase the danger of uræmia; and Dr. Loomis states explicitly that this treatment is only applicable to the acute disease. I confess to being less particular in the use of opium in chronic Bright's disease than I used to be, always excepting contracted kidney, and where other remedies fail I would use a hypodermic injection of morphia in the uræmic convulsions of Bright's disease, but I should arrange the order of remedies rather as follows: jaborandi, chloral, bleeding, morphia.

With such measures these cases can often be brought to a satisfactory termination; and although the appearance of uræmia is a serious sign, yet it does not necessarily follow that the patient will die, and recovery therefrom in acute cases is not uncommon. Uræmic convulsions in chronic Bright's disease is a far more serious condition.

Original Articles.

A CASE OF MULTIPLE CALCULI IN THE BLADDER.

BY A. T. CABOT, M. D.

THIS case owes its interest mainly to the character of the calculi removed, and the clinical history is therefore given but briefly. It is as follows: —

S. R. U., aged sixty-five, entered the Massachusetts General Hospital May 4, 1883, with the following history: The patient has had some difficulty in passing water since 1875. In the year 1880 he began to suffer from frequent micturition, with pain before and during the act. He has sometimes since then had a sudden stoppage when passing a full stream. Riding causes pain.

At present he cannot pass water without the aid of a catheter, and examination shows the prostate to be decidedly enlarged. On the day of entrance Dr. Bigelow examined him under ether, and, finding a stone, proceeded to crush and pump it out. The stone was soft, and broke readily. The lithotrite was introduced but twice. The fragments removed weighed ninety-six grains after they were dry.

On the following day the patient was comfortable, had had no rise of temperature, and was allowed to go home.

Twelve days after he left the hospital I saw Mr. U. by Dr. Bigelow's request. He was troubled at this time with considerable pain in the bladder and rectum. This was worst when the bladder was full and just after emptying it. The urine was extremely foul, and contained a considerable amount of pus. It was drawn with a soft rubber catheter once in four hours. The existence of large inflamed piles made it doubtful how much of the pain was due to the bladder. Thorough irrigation of the bladder improved the character of the water and somewhat mitigated the pain.

In July Mr. U. again entered the hospital, and I removed the hæmorrhoids, which had proved very annoying, with the actual cautery. During this stay in the hospital the irrigation was thoroughly carried out, with the result of a great improvement in the character of the urine.

July 24th he returned home, the pain having almost disappeared. Although he continued the irrigation, at which he was now quite expert, still the pain soon began to return, and assumed a peculiarly sharp character, which he described as like the pricking of pins, and referred to the penis and rectum. A passage of fæces or wind from the bowels greatly aggravated this pain. The urine now became gradually more purulent, and the pus assumed a thick, ropy consistency.

In September I sounded him carefully, without ether, and although I thought for one moment that I got a slight grating sensation, yet with the greatest perseverance I was unable to reproduce it.

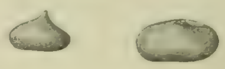
In November the catheter drew out for the first time a little calculus about the size of a canary seed, and now almost every use of the catheter produced one or two of these little stones.

Litholopaxy was at once advised, and Dr. Bigelow kindly lent his apparatus for this operation.

November 17th, I operated with the assistance of Dr. Post and Mr. Reynolds. The urethra was quite capacious, and with a No. 28 French straight tube a large number of small and moderate sized calculi were quickly pumped out. There being a constant clicking of larger stones unable to pass through the tube, a small lithotrite was introduced, and several stones were seized and crushed, the largest measuring about three quarters of an inch in diameter. After this débris was removed, one calculus of the size of a large bean persistently eluded the lithotrite, but finally caught in the eye of a No. 31 French tube, and was drawn out. The bladder was then found to be clear.

The patient had no rise of temperature after this operation, and the pain which had been so annoying entirely disappeared. The urine quickly cleared up, a few minute calculi subsequently passing with the water, and complete health was regained, with the exception of the fact that the obstruction in the prostate continued to require the constant use of a catheter.

The calculi removed at this last operation present peculiarities of shape which are quite singular, and which I will try to describe. They are about two hundred and twenty in number, and weigh two hundred and seventy grains. In size they vary from that of a mustard seed to one having a diameter of three fourths of an inch. The smallest are of a regular oval or rounded shape, but all of them that have acquired the size of a large grain of wheat or upwards have a little sharp spine or projection upon one side. This appearance can best be shown upon those calculi which have attained the size of a large bean. Those figured, chosen at random, present pretty well the characteristics of all. They are oval, flattened in shape, and the spines are situated near the middle of one of the flat sides. Occasionally the spine is upon the edge of a stone, and more rarely there are two or more spines upon one of the sides. A careful search among the whole number of calculi shows but one instance in which spines occur upon both sides of a stone. In a few cases, instead of a spine, a delicate ridge is seen running the whole length of one of the flat sides. The smaller calculi are brown in color, while the larger ones are covered with a whitish layer.



A section through several of the larger stones shows them to be made up of a dark nucleus exactly comparable in size and color with the smaller stones. Outside of this is a crust somewhat lighter in color than the nucleus, and this is covered on the surface more or less completely by the thick whitish layer already described. The line of section being carried, in one or two instances, directly through the spine, it is seen that the outer crust is much thicker on that side than on the other, and that the spine itself is formed almost wholly of this outer crust, although the darker nucleus sometimes sends a slight projection into it.

An analysis, kindly made by Prof. E. S. Wood, shows the inner, darker portion to be composed almost exclusively of calcic phosphate, with a little calcic carbonate, and a trace of triple phosphate, while the outer crust consists chiefly of calcic phosphate, with considerable calcic carbonate, triple phosphate, and ammonic urate.

Professor Wood pointed out the fact that there is generally a somewhat polished look, with indistinctly marked facets upon the spinous side of each of the larger calculi. Upon these facets the darker portion of the calculus shows through the thin, whitish layer which covers the rest of the surface. Many of the smaller stones are also seen by close examination to be indistinctly faceted.

The presence of these spines on a number of the calculi would of itself be a curious fact, and would suggest a special method of formation, but they acquire a much greater interest when it is considered that every calculus which has attained a moderate size is provided with one or more of them. In short, that all of the larger calculi have been exposed to some influence which has compelled them, almost without exception, to assume this peculiar form. The explanation of this is not easy.

The theory advanced by Professor Wood seems more plausible than any other which has been suggested or has occurred to me. His supposition is that the calculi lay in some part of the bladder where they were not much stirred about, possibly in a sac or pocket, and that they were enveloped in mucus which held them in a pretty constant relative position. Under these circumstances the fermentation and consequent deposition of salts would go on very actively in this stagnant mass, and the spines would be accounted for by the projection of parts of certain calculi into the interstices of the mass and the rapid deposition of salts upon these portions.

The facets about the spines would be caused by the friction of the calculi between which the spines projected. The occasional appearance of a ridge with facets on each side of it strengthens this view.

The points which at first sight are not sufficiently explained by this theory are: *firstly*, the fact that each and every one of the larger calculi possesses a spine; *secondly*, that this spine is almost invariably situated at or near the middle of one of its flat sides; and, *thirdly*, that in but one instance are there spines upon opposite sides of a stone. This latter seems an almost insuperable objection, for it would naturally appear that the calculus lying in the midst of the mass would possess spines projecting in various directions into the interstices about it.

These inconsistencies are explained, however, if we consider that the smaller calculi which are found to be evenly rounded or faceted on several sides occupied the centre and lower part of this mass, and that the larger calculi lay upon the surface.

That the mass of calculi does tend to take on this arrangement can be demonstrated by gently turning them about for some time in a bag or bottle.

If we once accept the probability that the calculi were thus arranged in the bladder, it can be readily understood that each of the larger calculi lying upon the surface would have one or more spines or ridges projecting into the interstices of the underlying mass, and these spines would naturally occur on one of the flat sides upon which the calculus would necessarily rest.

That the spines do not occur on opposite sides of any of the calculi shows that there was so little motion among them (owing largely, no doubt, to the enveloping mucus) that they did not often turn over and present what had been the free side to the action of the mass of other calculi.

The greater thickness of the outer crust on the spinous side as compared with the smoother side, which was exposed to the action of the urine and friction of the bladder wall, shows the greater rapidity of deposition upon the side buried in the stagnant mass, and is one of the many bits of confirmatory evidence which go to support the explanation which I have endeavored to give of this most singular phenomenon.

While this paper was awaiting publication, Mr. U., after four or five months of perfect ease, had a recurrence of his cystitis and a return of pain which caused him again to apply for advice. A sound revealing the presence of a stone, he was etherized July 24, 1884, and one hundred and twenty-seven grains of calculous matter were removed. The greater part of this was contained in a soft phosphatic stone about the size of a hickory nut.

There were, besides, about a dozen calculi, each of the size of a bean, and resembling in consistency those removed at the previous operation, but differing from them in the absence of the regular projections. One or two of them only posseesed little protuberances, distributed irregularly over their surface and of insignificant size.

Their small number, making mutual attrition less close, prevented, no doubt, the molding which shaped their predecessors.

THE ADVANTAGES OF MASSAGE IN RHEUMATIC GOUT.[1]

BY DOUGLAS GRAHAM, M. D., BOSTON, MASS.

"I' ll knead him; I 'll make him supple." — Shakespeare.

Rheumatic gout, rheumatoid arthritis, or arthritis deformans is too familiar to us all to need any lengthened description. We readily distinguish it in most cases by its slow and progressive character; by its chronic or subacute course with frequent exacerbations and remissions; by its spreading symmetrically from the small joints to the larger, usually in the upper extremities first; by the thickening, permanent enlargement and often deformity it occasions; by its never affecting the heart and not being hereditary; and by its attacking females oftener than males. The term rheumatism is often used to cover a multitude of diseases, as charity is to cover a multitude of sins, and when rheumatism assumes a chronic form after an acute attack it may be impossible to see any difference between this and rheumatic gout. Recent views regard arthritis deformans and kindred disorders as possibly of nervous origin. This might seem to be the case when the malady begins with a quiet pulse and clean tongue, and when the patient complains of languor, loss of appetite, pain and stiffness in the joints, and perversion of nutrition. But as to causation, the ground may be easily covered by saying that whatever deteriorates the system, whether by mind or body, in those predisposed to this or any other disease, may, and probably will, precipitate its onset.

It is to be regretted that our success in the treatment of this obstinate affection is not equal to our knowledge of its pathology. An ounce of relief or an extra inch of motion is worth infinitely more to patients and physicians than a foolscap of such information as that the disease is a panarthritis involving cartilage, bone, and synovial membrane; ligaments, tendons, and bursæ, with thickening of the bones and thinning of the cartilages. With strange inconsistence Professor Senator, of Berlin, in his treatise on Diseases of the Locomotive Organs, describes this malady as usually selecting joints which are most continuously and severely overtasked by sewing, knitting, watchmaking, and the like, while on another page he tells us that the thumb is generally spared and remains freely movable. For such a description he may be credited for drawing upon his imagination rather than from observation. I am sure we all know that the freedom of motion is longest preserved in those fingers which are used the most: first, in the index, second in the middle finger, while the thumb shows greater signs of being affected, and the ring and little fingers are generally worst of all. Moreover, Senator's description is again at variance with the only remedial course, of which he speaks in unequivocal terms by saying: "It is important in all the forms of this disease to maintain the functional activity of the affected joints as far as possible by means of active and passive movements. Absolute rest promotes stiffness of the joints, fixes the limbs, and atrophies the muscles." If his first statement were correct, then the treatment he so strongly recommends would be veritable homœopathy: disease produced by motion relieved by motion. But unfortunately this is not so, at least with regard to dosage, for in using massage and passive motion in these cases long and frequent visits and arduous work are necessary; but in my experience they amply repay both patient and physician for time and trouble expended. Led on by gradual improvement from the use of massage in five out of six cases of well-marked rheumatic gout, I kept up this treatment until unlooked for results were obtained, so that four of these cases regained tolerable use of the affected limbs, and in one recovery seemed to take place.

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[1] Prepared for the Section of Practice of Medicine of the American Medical Association.

Berghman and Helleday report three cases, Cronfeld one case, and Balfum, of Edinburgh, two cases of rheumatic gout treated by massage and movements with results similar to those I have obtained, and only one of them had a disappointing relapse. The mode of procedure in my cases was deep manipulation without friction or inunction, passive motion, as far as pain would allow and sometimes farther, and resistive motion as soon as it could be done, the details of which I have described more fully elsewhere. If pain disappears soon after it is caused by any of these operations it may be disregarded; if it lasts for several hours and increases after subsequent efforts, they must be suspended. Kneading with one hand so as to break up indurations or disperse effusions, while the other hand pushes along the circulation in the veins and lymphatics above the joint, is often a good procedure, and quickly leads to the absorption of products not too firmly organized. Blisters and powerful derivatives in the neighborhood of joints affected with rheumatoid arthritis are considered more likely to promote than to retard the affection, according to the studies of Senator. Massage of the adjacent skin and muscles acts as a physiological derivative and raises nutrition to a high degree by a rapid interchange of materials, owing to the force and speed of the circulation being increased and obstructed lymphatics and capillaries made permeable. In this manner the soft structures may be made to adapt themselves to nodosities and deformities that cannot be removed.

When the disease is very active, or the muscles fattily degenerated, the tendons frayed out and thinned and loose cartilages in the articular folds of the fibrous membrane, or when bony anchylosis has taken place we should not expect anything from massage.

All of my cases had been well nigh rubbed to death in the ordinary way, besides having exhausted the resources of the materia medica, baths, and mineral springs of all kinds, electricity, etc., before coming to me for massage.

Case I. Miss A. was sent to me by Professor Da Costa, of Philadelphia, in 1878. She was then seventy-eight years of age, and had been bedridden for eight months with rheumatic gout. The disease had affected every joint of her limbs and apparently had run its course and done its worst. There was eburnation of the articular surfaces and rattling of the bones, with distortions of almost every joint. There was neither anchylosis nor contracture, but only slight indolent thickening around the joints with great muscular weakness. The patient was nervous and depressed. Pulse 92, and dicrotic. After one application of massage she could put her arms under the bed clothes and pull them up around her neck. Four days afterwards, having had daily massage, she could reach back so far as to get an object behind the pillow on which her head rested, sleep was better, and she was greatly soothed by the manipulation. In seven days her pulse was down to 79, and steadier, and she walked across the room half supported. The following day she fed herself for the first time since her illness. In three weeks she could walk twice the length of her room with slight support. It seemed cruel to ask this patient to walk, so badly were her ankles deformed. But there was no pain; the sensitive structures of the joints were probably destroyed. This patient had massage twenty-three times in one month, and the use of her limbs and general condition were greatly improved. I fancy there may have been times during her illness when massage would not have been of much use to her. She was the most delicate of a family of six, having suffered from pleurisy, pneumonia, hæmorrhages from the lungs, etc., and she outlived them all.

Case II. Mr. S., about fifty years of age, was sent to me by Dr. Thomas G. Morton, who had clearly explained to him the nature of his affection and told him that benefit might result from a long course of massage. For a year the patient had suffered from periarticular thickening of the finger and wrist-joints of a semi-solid nature, less of the elbows, ankles, and knees, in all of which places there were frequent but not severe attacks of pain of a non-inflammatory character. His general health had greatly deteriorated, sleep was poor, appetite small, and he had lost flesh, but still he could go out every day and attend to some business. Daily massage was used for a while, afterwards every other day. Improvement was slow and almost imperceptible. At the end of ten weeks the periarticular indurations had decreased, the joints were more comfortable and more flexible, sleep and appetite had improved, and the patient had gained flesh. At the end of four months massage was discontinued, the patient being to all intents and purposes well, having regained his natural sleep and appetite and increased in weight to a marked degree. The circumference of his wrists with the improved nutrition being the same as when the induration was present. There was still slight enlargement of some of the phalangeal joints, but the patient could shut his hands firmly, whereas at first they could only be semi-flexed. He said if he thought he could have been cured in this way he would not have sold his house and business with the expectation of going to Europe to seek for relief.

Case III. Mrs. A. G., thirty years of age, enjoyed good health until she was nineteen years old, when rheumatic gout appeared first by swelling and pain in the last joint of the left thumb, and soon the other joints of both hands and fingers were similarly affected. Four months later the ankles became swollen. Then there was a respite for a year, and at the end of this time there was another exacerbation for five weeks. Six months later it was apparent that the hands and feet were "growing out of shape." About this time she became pregnant, and the disease was in abeyance during this state, but after the child was born the joints were generally affected as before. Again there was a year of improvement, followed by grief and taking cold, which caused a relapse, and in 1877 she walked with great difficulty. Then iodide of potash, arsenic, a sojourn at Caledonia Springs, and electricity were tried, but the patient grew worse. In the summer of 1881 Dr. Goodrich, of Bakersfield, Vt., rubbed the knee joints very hard and hurt the patient a good deal, but she improved so that she could walk with a cane and go up and down stairs, though the legs were greatly bent. She relapsed again in a few weeks.

This patient came to me in February, 1882, with knees flexed to almost a right angle. There was slight effusion in them, and dry creaking on motion. There was thickening around the ankle-joints, though the motion was free and strong. Hip-joints not affected. The ring and little fingers of both hands were hopelessly deformed, the first row of phalanges being extended far back, the second and third sharply flexed and anchylosed. The thumbs, fore, and middle fingers were somewhat out of shape, but remarkably good use of them was retained. The left wrist was strongly flexed, the elbows and shoulders comparatively free, though they had been severely affected. The patient was bright and cheerful, and looked healthy, notwithstanding that she was suffering from a general bronchitis and weighed but eighty-two pounds. Her appetite was fair and bowels constipated. A tonic pill to increase the appetite and regulate the bowels was given, and general massage used daily. Her joints were not very sensitive, and from the first the massage was agreeable; the aches and pains disappeared in too remarkable a manner for me to ask anybody to believe. In three weeks she was eating very heartily, and taking five goblets of milk daily, and was free from discomfort; and after vigorous extension of the knees, which hurt at the time, they felt better all day, and we had gained one and one fourth inch extension at the ankle. In two months the menses, which had been absent for eighteen months, returned, and they have continued to return ever since with greater regularity than they ever did before. In three months nutrition had improved to a marked degree. At the end of this time,the patient having been in preparation by a variety of impromptu gradual extension apparatus, I put on each leg long lever splints, which made extension from the heel, and pried down the knees by means of wide bandages above them on the anterior aspect of the thighs, while the short arms of the lever rested on the back of the thighs.[1] These were kept on night and day for twelve days, and during the last seven days of their use the limbs made daily extension. After they had been on for twenty-four hours the patient liked them, and later, when temporarily removed, she felt faint for want of their support. They were then removed for eleven days, and light splints applied, and with these the patient stood up. After six days more of the long splints the legs were about as straight as people's usually are in use. By this time the joints had become sore, and the patient was not sleeping well. Two weeks later the patient walked twice across the room, pushing a chair before her to balance herself; ten days later she did this twenty-two times, and in ten days more she walked without anything for support except light wire ham splints. Four weeks later she was going up and down stairs alone, and two weeks after this she frequently took a walk of half a mile with the aid of an arm and her ham splints. It was then six months from the time treatment was begun, massage having been kept up all this time. At the end of seven months and a half the patient returned to her home, wearing the usual supports for weak knees, but unfortunately when these were unfastened there was not much bend to the legs. This, however, has improved by the patient's efforts. It is now eighteen months since the patient went home, and she has continued to gain in every respect without treatment. The flexed wrist and movable finger joints made good progress under massage.

While I was attending this patient there came to me a report of a somewhat similar case treated in like manner with better results than could have been anticipated, and this inspired us with hope and perseverance.

Case IV. Dr. Carl Gussenbauer, Professor of Surgery at Prague, gave the massage himself in this case. The patient was a lady, forty years of age, who had suffered from rheumatoid arthritis for twenty-two years. The trouble began in one elbow, and later affected the finger-joints. Rest and local applications were without effect. In the following years all the joints of the body were attacked. During two pregnancies no new joints became affected, and those that had been were more endurable. The malady progressed in spite of medication baths, mineral springs, electricity, etc. The patient had not walked any for eight years. Pains by day and night disturbed her rest, and she had become thin, anæmic, and constipated. The heart's action was irregular, and there were attacks of syncope at times. In this condition Professor Gussenbauer undertook massage with great misgivings. He not only applied massage to the joints, but to the whole body: to the joints for the painful swellings that affected both upper and lower extremities, as well as some of the dorsal and lumbar vertebræ; to the whole body to favor the nutrition of the atrophied muscles. There was but a small range of motion in any of the joints of the limbs, owing to adhesions in them and in the sheaths of the tendons, producing the characteristic contracture, and these he hoped to gradually overcome by passive motion. The deformity of the articular extremities of the bones, of course, could not be removed. He *masséed* the patient daily, and gave her passive and active motion, and after fourteen days he had the pleasure of seeing the swollen joints decreased in size and their motion improved and less painful. At the end of a month the patient could walk about her room with a cane, and the improvement was so great that recovery seemed possible. For the next four months the patient was *masséed* by his assistant, Dr. Schmid. The result was that the pains and swellings of the joints and capsules all disappeared, and they became movable to almost a maximal extent except that of one elbow, which had undergone bony anchylosis. The muscular strength of the patient had increased so that it often tired out the operator to give her the active or resistive movements. She could walk in her garden for fifteen minutes without fatigue. Nutrition improved more and more, the anæmia disappeared, the pulse became regular, and menstruation returned, unaccompanied by fits of prostration, as formerly. *Tapotement*, or percussion with the ulnar border of the hand, with the palm, and with the fist, was freely used in this case.

In several cases of chronic articular rheumatism Professor Gussenbauer reports favorable results from massage.

Case V. While some patients become thin under rheumatoid arthritis others grow fat. This was the case with Mrs. J. L., fifty-eight years of age, who had suffered with the disease for fifteen years. In seven months under massage she regained free and natural use of her limbs, which she retained until a short time before her death. For the first two years her joints gave her but little trouble, but at the end of this time she was confined to her bed five months with arms so stiff and painful that when they were out of the bed clothes she could not put them in again alone. Later the trouble left the arms and appeared in other places, but never in the toes. Her history is one of pains and stiffness of joints and muscles, with occasional remissions, the disease all the time slowly progressing. Her condition had been made much more comfortable by alkalies and laxatives prescribed by her physician, Dr. J. P. Oliver, who kindly referred her to me for massage. Previous to her malady she had been very thin and active, but for the last ten years of her illness she had grown very fat and heavy. For the last year her mode of locomotion indoors had been by means of a wheel-chair, and it was with difficulty she could be got in and out of a carriage. On each side of the patella it was evident through the layers of adipose tissue that the capsules of the knee-joints were thickened, and it was to these places the pain of extension was referred, and this was limited to about three fifths its normal range. Flexion was natural, and dry crepitus could be heard and felt on motion. Massage and movements every other day, with the use of curved ham splints, and later straight ones, produced good results. In five weeks she was walking about the house with a crutch and cane, and the legs could be straightened so that the popliteal spaces would touch an applied straight ham splint, and free motion was gained to this extent. The splints proved a support and comfort in walking, and were worn for several weeks longer to overcome the tendency of the posterior femoral muscles to shorten. At the end of three months the patient could walk the length of a room and back again without support of any kind, after getting started by assistance for a few steps. She had then lost the pain in the joints that troubled her by night, and pulling the legs no longer hurt the knees as formerly. When the knees ached, walking relieved them. The indurations and thickening were disappearing, and a hard, painful spot behind the left hip had entirely gone, and the patient could turn easily in bed. In six months the patient walked easily and gracefully without crutch or cane or splint. A month later she got up from her chair alone, and walked as well as any one of her weight could be expected to do, and this improvement continued for six months longer, until an affection of a different kind supervened and suddenly carried her off. I need not say how sorry I was to lose this patient, who did me as much credit as any I ever had. The beneficial change in the knees was an indication of what had taken place in the other joints, in the fingers, wrists, and elbows, thinning of indurations, and increase of motion.

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[1] I first saw this used by Dr. E. H Bradford.

Case VI. Miss E. P., forty-five years of age, at the change of life, well nourished, and a picture of health, has suffered from rheumatic gout and its variations for five years. During its early appearance, while crossing the Atlantic and returning, all the symptoms disappeared only to return as soon as she landed. Two years after the disease began she was seized with severe gastric disturbance for several months, and during the worst of this the joints were remarkably well. With the disappearance of the stomach trouble the mischief in the joints returned. The patient had derived, and still continues to derive, marked benefit from forty to eighty grains of salicylic acid, given in divided doses during the day with bicarbonate of soda and carbonate of ammonia. This was prescribed by her physician, Dr. Lucy E. Sewall, who kindly referred her to me for massage. As the patient was improving I could see no need of adding this treatment, for cauterization of the knees was having a good effect, and making them feel better all day afterwards. It was agreed, however, to try massage on the worst limb, the right leg. There was a mass of feebly-organized, indolent tissue in front of the condyles, which was easily dispersed, and its absorption hastened by massage, even the first sitting producing a marked effect, so that the adherent skin became free, and the hyperplastic tissue softer. At the end of a week, with daily massage, this semi-indurated tissue had almost entirely disappeared, and the feeling as if the joint were held by an iron band in front of it had correspondingly lessened; the patient could stand more easily, and push the limb against resistance more vigorously; the œdema of the leg and swelling of the ankle, which were partly controlled by a bandage, had also improved. During the first three weeks daily gain was perceptible, and at the end of this time her physician asked me to apply the same treatment to the other leg, which had not been getting along so rapidly under cauterization as the worse one had been under massage. After this they improved *pari passu.* A splint was worn for twenty hours every other day on the right leg, and this was well tolerated, and soon overcame a tendency to bending of the knee. The hands and arms made progress, and in two weeks she could use them more freely, and write more easily. At the end of thirty-nine days, having had daily massage, the patient took a ride, getting in and out of the carriage with an ease that surprised herself. Three weeks before this she could scarcely take a step, and for a year she had not been able to walk in any way worth mentioning. Massage was then used every other evening, and she always slept well after it, but not when it was omitted. Manipulation made her lame and sore for several hours afterwards, only felt, however, on motion. She continued to gain under massage until she went to the country, two months from the time it was begun. She improved for three months while in the country, but on her return to the city she rather lost ground, which massage scarcely made up for. After two months more of this treatment it was suspended for two weeks, and during this interval she suffered from general stiffness, wakefulness, and fullness in the head, all of which disappeared promptly on resuming massage. And now, in spring time, with the most unfavorable weather, and arduous professional duties, the patient is again improving. She has good use of her arms, and the thickening of the knee-joint capsules is decreasing, and she walks pretty well with very little assistance.

Case VII. Mrs. C. J., fifty-two years of age, has had rheumatoid arthritis for eight years, which has pursued a relentless course in spite of twenty-three physicians and all sorts of treatment. The joints of her hips and back are the only places free from the disease, which at present is pursuing its ravages in all the joints of the upper extremities, having for the present got through with the lower ones. Her general health is good, but before this trouble she was delicate and dyspeptic. Massage every other day for six weeks, though removing the peri-articular swellings and thickenings, and extending the knee-joints a little, which are almost bent at a right angle, has had no other apparent effect except to make the joints lame and sore, and the patient tired. The upper extremities are almost anchylosed, and resent passive motion. The patient perceives no improvement from the massage. This is the most discouraging case I have yet encountered. After the disease has spent itself on the upper extremities there will probably be a chance for massage to do some good.

By means such as we have been considering, Fuller, of London, has told us that when the contracted tendons seem almost to require the surgeon's knife for their relief operative interference will often be rendered needless. In one case, by persevering for nine months, he straightened a leg that had been flexed for four and a half years. Indications for encouragement he clearly expresses in these words: "When, as is usually the case, the contraction depends upon simple gluing together of the structures external to the joint, with thickening of the capsule, and, possibly, some remains of effusion within the cavity, or into the bursæ external to the joint, I see no reason for despair as to straightening the limb, however long contraction may have existed."

Case VIII. Rheumatoid arthritis of a single joint, resulting from injury, is recognized. I do not think I have seen more than one case that would agree with this. The knee-joint had been injured ten years before, and there was thickening, grating, slight deformity and shortening, but free motion, though walking was exceedingly limited on account of pain, weakness, and the weight of the patient. She had been rubbed an hour a day for a year by a very nice person, with the result of always being tired after the procedure, and getting no better. Twenty minutes' massage with carefully increasing resistive movements every other day, for two weeks, improved her walking to an enjoyable extent. The induration was lessened, and the comfort of the joint increased.

No description of the effects of massage in rheumatic gout would be complete without reference to the case of old Admiral Henry. In 1810 he was seventy-nine years of age, and had suffered from this affliction for twenty-eight years. There were swellings of his knees, ankles, and insteps, which made him quite a cripple, and his fingers were also swollen and contracted. His stomach and bowels were hard, painful, and disordered. By means of various instruments made of bone polished smooth and hammers covered with cork and leather he persevered in the use of deep friction and percussion, night and morning, for three years. At the end of this time, it is said, he had completely succeeded in removing the swellings, and had restored himself to the use of his limbs. His operations were at first painful, but ceased to be so after a little while, and soon they became so pleasant and useful that after having gone through with them in the morning he felt better all day. At the age of ninety-one he wrote to a friend: "I never was better, and at present am likely to continue so. I step up and down stairs with an ease that surprises myself. My digestion is excellent, and every food agrees with me. I can walk three miles without stopping." This was in 1823, and he may be alive yet for anything I know.

The Admiral's pathology and therapeutics are of interest. He considered the chief cause of disease to be deficiency of circulation, and the best means of correcting this to prevent the nerves and muscles from falling asleep and getting fixed, for which purpose they should be kept loose by instruments worked among them. "By keeping the blood-vessels, nerves, and tendons in constant action by means of these instruments the blood is rendered pure; it passes quickly through the blood-vessels, leaving no *fur* behind it, so that ossification and stiffness are prevented." This quaint remark about the blood leaving no fur behind it is a noteworthy illustration of how a layman may express himself better than he is aware of, or, in common language, "hit the nail on the head." This fur of old Admiral Henry corresponds to what we know of the white blood corpuscles which move along so slowly in the circulation, having a tendency to adhere to the walls of the vessels, and which, when the current is retarded, as in points of inflammation, congregate in vast numbers, and often migrate into the extravascular tissues, thence to be resorbed or become the foci of pathological changes.

MENSTRUATION IN WOMAN AND ANIMALS.

BY ROBERT W. LOVETT, A. B. (HARVARD MEDICAL SCHOOL.)

The great obscurity which still surrounds the process of menstruation makes it desirable for us to use in the study of it every legitimate means, and it may be that a little wider view of the process may be gained by a study of the function as it exists in the lower animals.

In general there is in plants and animals at the season of reproduction a more or less marked manifestation of increased activity. In plants the analogy might be a trifle strained perhaps, yet their flowering season is of course their season of reproduction. We can hardly expect much analogy to menstruation in animals below the mammalia, but there are the foreshadowings of a periodical sexual activity very low in the scale. Birds, fishes, and reptiles have no uterus, although having of course the genital tracts from which the uterus is later developed. In birds "many acquire bright colors and other decorations in the breeding season alone," and "certain ornamental appendages become enlarged, turgid, and brightly colored during the act of courtship." (Darwin.) At the time of the oviposit fishes show a genital excitement, according to Guersant, their sexual orifice swelling and being clothed with a red tint. In the amphibia the oviducts become lengthened and consequently more coiled at the breeding season. Several lizards secrete especially at the coupling season an odorous, fatty liquid from glands at the inside of the thigh. Snakes also show an increased activity of the anal scent glands in the breeding season. But we must go higher in the scale.

In the mammalia, so far as known, every animal is subject to periods of heat. During this time alone will the female admit the male (with the exception of monkeys), and of course at this time only can conception occur. The time of this rut is determined by the surrounding condition of food and climate, so that the young shall be brought forth at the season of the year most favorable to their growth and early sustenance. Among wild animals, as a rule, conception takes place, pregnancy follows, parturition and lactation are accomplished, and at the next suitable season the rut returns to be again gratified. Wild animals are in heat only once or twice a year. When from the absence of the male or any other reason conception does not take place at this time, it is not known in the case of wild animals whether the heat returns sooner than it would otherwise have done, but in most of the domesticated animals it returns much sooner than if pregnancy had taken place, and keeps on returning until it is gratified, and this return is in a regular rhythm for each animal, and, so far as known, according to Darwin and Laycock, this return is always in seven days or in a multiple of seven days.

Domestication increases markedly the reproductive powers; puberty not only comes earlier than in the wild state, but also more young are produced. The favorable conditions for the early life of the young is probably the cause of the more frequent return of the heat in the domesticated animals. At this season, in all known animals having a vulvar aperture there is swelling (Wiltshire). Probably there is in all the mammalia at least a mucous flow from the external genitals at these times. The kangaroo, as a representative of the marsupials, has a bloody and odorous flux in April and September. As we go higher the blood is said by Wiltshire to become more prominent in the flow in proportion to the degree of development of the genital organs. At any rate, a more or less bloody flow is established in sows, ewes, bitches, asses, mares, and cows. In the latter Newmann found blood exuding from the internal surface of the uterus in the rut, and it is estimated by others that the cow loses at each period from one to two ounces of blood. The cow is subject to menorrhagia, and two cases are reported by Wiltshire where heifers apparently suffered from hæmatometra. Dalton says that cows are restless and agitated at rutting time, and Mivart says the same of the cat.

Unfortunately, it is impossible to draw any trustworthy conclusions from observations upon the anthropoid apes; when in confinement they are under such highly artificial surroundings that any inferences drawn as to their normal sexual processes must be very misleading. Many species never breed in confinement. Wiltshire states that monkeys at intervals of four weeks have a flow of nearly as pure blood as has the human female. Other authorities speak of a mucous flow from the swollen genitals, and all bear witness to the intensified sexual desire of the females at these periods, most of the females, however, being salacious at all times.

In the animals where the periodicity is known, it bears no relation to the gestation period. The periods which seem well established are as follows: The cow is in heat every three weeks; sheep and sows every two weeks; mares, buffaloes, and zebras every four weeks. Observations on this point are surprisingly few and imperfect. Cruikshank, Raciborski, and Bischoff have proved that ovulation takes place spontaneously at the rut. No one has proved that it does not take place at other times, to be sure, but it seems unlikely, and in sows, at least, single corpora lutea are not found. In any sow's ovary all corpora lutea look of the same age, and the general appearance points rather to the rupture of a number of follicles at once than to ovulation at random.

I am far from offering these scanty and imperfect observations as a proof of the identity of heat and menstruation, but the two bear a very close resemblance in their rhythmical periodicity, their discharge from the external genitals, and their accompanying constitutional disturbance, and therefore it seems hardly reasonable to deny the identity of functions of which we know almost nothing in animals and little enough in the human species. Wiltshire goes so far as to claim that the primitive seasonal influence has not yet died out in woman, as he affirms that she begins her menstrual life oftenest in the summer, and brings forth her offspring most in the spring of the year. The character of menstruation among savage women would be a most interesting link in the chain of evidence, had we observations on the point. Velpeau says that he has heard that women in Lapland and Greenland menstruate only three or four times a year, and Roberton says of Lapland women that the flow is scanty, and that sometimes they only menstruate in summer. But however we may regard the ancestry of menstruation, it exists as a fact, and the consideration of it in the human female presents itself under three heads: its manifestation in the general system, in the ovaries, and in the uterus.

As to the Systemic Manifestation. In some six hundred and twenty cases investigated by Biene de Boismont and Dr. Jacobi, about seventy per cent. suffered pain during menstruation. The cases were taken at random from all classes, and trades, and were healthy women. The recent investigations of Hermann and Uedeler show that among nulliparous women about the same per cent. suffer from dysmenorrhœa, whether their uteri are flexed or straight, and that in the three classes of nulliparous women, namely, those suffering much pain, little pain, and no pain at all, the percentage of flexed uteri is practically the same, all of which seems to show that dysmenorrhœa is a systemic accompaniment of menstruation in a much larger number of cases than is generally supposed. Jacobi found that the excretion of urea was increased before menstruation, reaching its highest point just before the flow. During the flow it falls below normal and remains below normal for a few days. The temperature is increased before menstruation, during the flow it falls, but not quite to the normal. The arterial tension is highest just before menstruation, and lowest just after it. That is, the woman is in her best estate a few days before each menstruation. A certain degree of lassitude and irritability seems normal to the menstrual epoch in the ideally healthy woman, and such would seem accounted for by the pelvic congestion; but most women suffer pain which is not as yet to be explained by any known process going on in menstruation.

The Manifestation of Menstruation in the Ovaries. The wide-spread theory of the necessary coincidence of the rupture of a Graafian follicle with menstruation was established by analogy with the lower animals and by a few autopsies, where in menstruating women freshly ruptured follicles were found. Beigel says: "The number of cases in which ripe follicles have been found in the ovaries of women who have died during menstruation is extremely small." Bischoff published ten cases in support of this theory, in all of which he knew the time of the last menstruation. In three of these cases the rupture of a follicle had not taken place at the last menstruation, and in two of the others there was present with the corpus luteum of the last menstruation a freshly ruptured follicle, which two events could not have been more than three weeks apart. He then says, "The results here obtained show that in the human female at each menstrual period, a Graafian follicle is ripened, swells, and usually bursts," a conclusion which seems hardly warranted by the cases.

Williams gives a series of sixteen cases. In six of these menstruation had been going on for four days at the time of death, and in only two of these six did he find a freshly ruptured follicle. Ashwell examined the ovaries of three women who had died during menstruation, and in no one of them was a ruptured follicle found. There are plenty of similar observations, but the recent work of Leopold on the subject is by far the most worthy of consideration.

He took into account only the fresh ovaries of women accidentally killed and ovaries removed by abdominal section. Of all these cases he knew the date and character of the last and of former menstruations. In the course of six years Leopold collected forty pairs of ovaries from which to select, and of these he took only those ovaries in which he was wholly sure of the facts. He then found himself with twenty-nine pairs, forming a pretty complete series from the first day of menstruation to the thirty-fifth day after it. In these ovaries he found freshly ruptured follicles at five, eight, twelve, fifteen, eighteen, and twenty-one days after the beginning of menstruation, and in the case thirty-five days after the last menstruation he found a freshly ruptured follicle and a fresh corpus luteum ten to twelve days old. By freshly ruptured follicles he means follicles ruptured within a few hours or a day or two. At all times ripe, prominent follicles were to be found projecting from the surface of the ovary, with thin walls, and surrounded by a circle of vessels. But the largest follicle does not of necessity rupture first. Leopold compares the ripening follicles to a heap of soap bubbles, the smaller of which may burst before the larger. It depends largely on the surrounding pressure; for example, a small follicle may be pushed to the surface and ruptured by the growth of a larger one underneath it.

A very important factor in the rupture of follicles at intermenstrual epochs must be found in coition, which causes a temporary congestion which would be very apt to burst any follicle which might happen to be nearly ripe at the time. Coste found that in rabbits coition hastened the rupture of the follicles, and Wiltshire states that in birds propinquity of the male hastens ovulation. In a word, the observations of Leopold show most decisively that ovulation and menstruation are not by any means always contemporaneous, although a congestion of the ovaries is apt to cause the rupture of any ripe follicles which may be in them, and consequently probably more follicles are ruptured at menstrual times than at others under the influence of the congestion. From this likelihood of rupture at any time he infers that conception in the human female is possible and more or less likely at any time from puberty until the cessation of ovulation.

But the ovulation theory had, and still has, a great influence, in that it explained the cause and process of menstruation most satisfactorily. Pflüger worked it out as follows: the growth of the Graafian follicles caused an irritation of the ovarian nerve terminations, this irritation accumulated in the centres until a certain amount was reached, when a reflex discharge of force took place and the pelvis was engorged with blood, which access of blood to the ovary was enough to cause the rupture of the follicle and the escape of an ovum. The occasional persistence of menstruation after double ovariotomy was hardly needed to disprove this theory; there were instances enough of ovulation without menstruation and of menstruation without ovulation. As to the former of these: ripened follicles and scars from burst follicles are found on the ovaries of infants (Beigel and Sinety). Freshly ruptured follicles are sometimes found in childhood, in the ovaries of women with amenorrhœa, and in the ovaries of pregnant women (Ritchie often found them at four and five months and even at nine months, and these women had not menstruated during pregnancy). In women after the menopause freshly ruptured follicles are often found (Tait). Conception before menstruation comes on is not very rare; in five hundred and fifty cases given by Beigel eight had conceived before ever menstruating. Instances of conception fifteen to twenty-five days after coitus are numerous. As to menstruation without ovulation, we are dependent for the proof of this upon the absence of freshly ruptured follicles in the ovaries of women who have died during menstruation. In Leopold's cases, already alluded to, the cases of five, seven, nine, eleven, twelve, fifteen, sixteen, and twenty days after the beginning of the last menstruation contained no corpus luteum fresh enough to have been formed at the last menstruation. Ashwell relates the case of a woman who had menstruated regularly for years, in whose ovaries was found no rent, scar, or tear. Stedman reported a case where a woman had menstruated regularly nearly to the time of her death, but whose ovaries were found cystic and atrophied.

In regard, then, to this ovarian source of the menstrual impulse, one case of the persistence of menstruation after a double ovariotomy (and there is an abundance of such cases) is of more weight than a dozen cases where menstruation stopped. There is certainly very strong evidence against the ovaries as the source of the menstrual impulse. But there are other sources to be considered, as Dr. Campbell pointed out to the Gynæcological Society recently. Fear, horror, and violent emotions in general are well known to have an immediate effect upon menstruation in many cases. The influence of the mammæ is marked; Dr. Campbell cites two cases of premature menstruation in children caused by mammary inflammation, and a case where long delayed menses returned in a childless woman who allowed her sister's infant to nurse her breasts for a few days in order to quiet it. A change of climate often stops menstruation temporarily; a sea voyage generally delays or hastens the next period, according to the length of time since the last menstruation, and anæmia as a cause of amenorrhœa is so common as scarcely to deserve mention. The relation of menstruation to mental disturbance is closer than is sometimes supposed. Among Schroeder's conclusions, based on 212 female insane, about half of whom were married, he says: "In a majority of cases with mental disease there was menstrual irregularity of some sort," and "These menstrual difficulties were of as early date and were influenced by the slightest symptoms of mental disease, but did not become prominent until the psychosis was developed." The general system as a source of the menstrual impulse seems to have been too little considered by observers.

But whatever the source of the menstrual impulse, the clinical expression of the process is a uterine bleeding; the cause, manner, and result of that bleeding we come now to consider. The tendency has long been to consider menstruation as an excessive pelvic hyperæmia, during which hæmorrhage was caused by a bursting of the walls of the vessels, or, as Pouchet held, by a desquamation of the uterine mucous membrane. Kundrat and Williams later insisted upon the desquamation, and Williams announced: "Menstruation, then, is neither a congestion nor a species of erection, but a molecular disintegration of the mucous membrane of the uterus followed by hæmorrhage." His observations in 1875 were based on twelve uteri, nine of whose owners had died of acute diseases. He advanced the view that menstruation was only one step in the cycle of uterine changes, which step we happen to see. The uterine mucous membrane, he says, is continually undergoing changes, consisting of rapid growth, insufficient nutrition of the surface layers, and consequent fatty degeneration and denudation, rupture of the vessels consequently, and hæmorrhage. The whole mucous membrane down to the muscular layer undergoes fatty degeneration, and is cast off cell by cell, and consequently the ends of the blood-vessels are laid bare and they bleed. This removal lasts from three to eight days, when from the cells of the *muscular* layer a new mucous membrane begins to form at the internal os and spreads over the whole uterus, covering it in about one week. Of course, when the bleeding has begun it is too late for the fructification of an ovum at that menstruation, and the ovum of the next menstruation, according to Williams and Kundrat, is the only one that can be fructified. Engelmann does not agree to this, but believes that in the neighborhood of a menstruation the ovum fructified is the one belonging to that menstruation. When we reflect that a casting off of the mucous membrane of the uterus, preceded by an albuminoid granulation of its cells, is one of the earlier post-mortem changes, we are the less inclined to accept Williams' results, especially after comparing them with later and more careful observations. Engelmann modified Williams' results by finding the fatty degeneration superficial only, but he found the hæmorrhage due to a fatty degeneration of the walls of the blood-vessels. "In not one of the many uteri examined at such periods was the mucous membrane, or even its superficial layer, found wanting," writes Engelmann.

If we could accept the results of Williams we might most satisfactorily consider menstruation as a disappointed pregnancy, a pregnancy in miniature. When conception takes place a process of nine months or more of uterine increase is gone through, followed by fatty degeneration and desquamation in the puerperal state. When no conception, the process is completed in a little over a week. But, unhappily, Williams' results are untrustworthy, and Engelmann's views are by no means extreme enough to warrant such a theory. But new methods were to come in and new results to be obtained. Moricke conceived the very original idea of scraping with a curette the uterine mucous membrane of his menstruating patients, and in this way obtained an admirable series of fresh pieces of the mucous membrane at all stages of the process. He concluded that the bleeding was due to diapedesis, and that there was no destruction of the mucous membrane, partial or complete, and no fatty degeneration. He points out the ease of falling into error as to denudation of the mucous membrane, and tells of two cases where shortly after death the mucous membrane had disappeared from the body of the uterus in consequence of post-mortem changes.

Lastly, we come to the observations of Wyder, which were recently undertaken to determine whether or no there is denudation of the mucous membrane during menstruation. In eight cases at or near menstruation he found the uterine mucous membrane completely preserved in three, partly missing in three, and completely wanting in two. In one of the cases of denudation given above it is clear that the denudation was not post mortem, in that ciliated epithelial cells were found in the inner layers of a blood clot contained in the uterus; with them were interglandular cells, but no glandular elements. From his observations Wyder gives the process as follows: there is a hyperæmia of the surface vessels, the blood escapes from the vessels by rhexis and diapedesis, presses apart the tissues, and flows in the direction of least resistance, which is to the epithelial surface. There it raises up the epithelium in blood blisters in part, and in part forms erosions by the falling off of epithelial shreds, and the blood flows away. Frankenhauser observed these blisters, which broke and left erosions, not only in the uterus, but also in the vagina of menstruating women. In the latter respect his observations are probably unique. But to return to this raised epithelium; it is disintegrated and carried off in parts, but other parts are not carried away, and although in union with good tissue, are insufficiently nourished and fatty degenerate, which is thus reduced to a very insignificant process. Where there is little bleeding the total damage may be very slight, and restitution follow almost immediately, but where the mucosa shares to any extent it is a longer process. There is great cellular hyperplasia in the middle and lower layers of the mucous membrane. In a word, there is a varying amount of denudation in consequence of the presence of blood in the tissues, which blood is from hyperæmic vessels by rhexis and diapedesis. In the bloody mucus coming from the cervix during menstruation Wyder found in the earlier days ciliated cylindrical cells, interglandular cells, free nuclei, and fat drops, but later in the process nothing but detritus.

But all this gives us no clue to the meaning and cause of menstruation; we are even more badly off than we were ten years ago, for while we had the ovulation theory to fall back upon we could account for menstruation readily enough, and so long as we could hold to the theory of fatty degeneration and denudation we had in menstruation simply a miniature pregnancy, in which the Hindoos agree with us, insomuch that menstruation before marriage disgraces a girl's whole family, being accounted infanticide; but we are less fortunate than the Hindoos in this respect; we can no longer account for menstruation so easily. In the lower animals the heat is most certainly the time of sexual desire, and, so far as the observations on the subject go, the season of ovulation. In the lowest animals in which we find hyperæmia and pigmentation of the genital tract at the breeding season (the foreshadowing of the heat) it can only exist in relation to sexual desire and ovulation, for they have no uterus, and they nourish no young, that is, the reproductive side of the process is undeveloped. The mammalia inherit this seasonal genital hyperæmia; with them also it is the season of sexual desire, but at the same time by it the uterus is put into the best condition for nourishing a fructified ovum, that is the reproductive side of the process.

In woman, on the other hand, the menstrual period is the season of absent sexual desire, and is by no means contemporaneous with ovulation. The human intelligence has rendered woman sexually independent of the heat; sexual congress is permitted at any time, and, therefore, she is subject to a condition not prevalent in the brute females, she is liable to conceive at any time. It seems as if, in view of the possibility of a pregnancy at any time, and the immediate demands upon her nutritive force which would come from such an event, woman had to be run at a higher pressure than was necessary for the needs of the non-pregnant female. Moreover, she is more different from the man than the brute females are from their males, and the reproductive processes are intensified in her. Since she is run at such high pressure frequent overflows of nutritive material are necessary in the non-pregnant female, and these overflows take place at certain periods of genital hyperæmia, inherited from the lower animals, that is, at the menses. That is to say, the reproductive side of menstruation is emphasized in woman, the sexual side in the brutes.

Any explanation of menstruation in our present state of knowledge must be incomplete and unsatisfactory, but in the meanwhile it may be to some of us a satisfaction to feel that we have at least a remote inheritance in menstruation if we are not able to assign any better cause for its existence.

REPORT ON PROGRESS IN THORACIC DISEASE.

BY FREDERICK C. SHATTUCK, M. D.

Naether[1] contributes an interesting paper on cerebral abscess as a complication of chronic lung disease, reporting eight cases which were under his observation at the Leipzig Clinic during a period of eleven years. The cases are classed as follows: —

Three of bronchiectasis with retained secretion and circumscribed pneumonia, in one of which there was thrombosis of a branch of the pulmonary artery.

One of chronic purulent bronchitis, the result of patency of the ductus Botalli.

One of fetid bronchitis and ulcerative tuberculosis of the lungs.

Two of gangrene of the lung, in one of which there was also bronchiectasis.

One of old empyema with fistulous opening through a contracted lung.

Seven of the cases were fatal, and in only one of these was the brain abscess single, a fact which shows that the trephine holds out small prospect of relief, and also that additions to our knowledge of the localization of brain disease are seldom to be derived from this class of cases.

In one case of bronchiectasis with sudden right hemiplegia and loss of consciousness, followed by slight aphasia, the patient had so far recovered after about three weeks in hospital, as to request his discharge. He was seen six months later, and had not wholly regained strength in the paralyzed leg. In default of an autopsy the diagnosis of abscess cannot be regarded as absolutely certain, but the age of the patient — twenty-seven — renders apoplexy improbable, and there was no evidence of syphilis or endocarditis.

A case of empyema followed by single abscess in the brain is also reported by Hall.[2] The chest had been tapped and a drainage tube inserted; but the cavity never closed completely, and nearly two years later headache, vomiting, left-sided convulsions, and coma came on. The wall of the cerebral abscess was nearly an eighth of an inch thick, and hard, which shows that the collection of pus was not of very recent formation. In the discussion which followed the reading of the paper before the Clinical Society of London, a member said he had seen two cases within a year in which cerebral abscess followed empyema treated by removal of rib.

Virchow first called attention to a connection between gangrene of the lung and brain abscess, and soon after Biermer published four cases of bronchiectasis with the same complication, which we now know may have its origin in any chronic ulcerating process of the lung or pleura. The metastatic nature of these abscesses seems to be generally admitted, but it is not clear why the brain is apparently the favorite lodgment for the minute emboli taken up by the pulmonary veins. Perhaps the brain is not the favorite seat of lodgment, emboli finding their way in those cases quite as often to other organs; however this may be, it is certainly in the brain that suppuration is set up by preference. Not being able to give a definite answer to this question the author wisely abstains from bringing forward any hypothesis.

It should be added that a microscopic examination of the pus afforded only negative results. Weigert found in it various low organisms, but they were peculiar neither in shape nor in their behavior toward staining fluids.

ENCAPSULATED EMPYEMA SIMULATING PERICARDIAL EFFUSION.[3]

A man of thirty-two was admitted into hospital with the history of acute disease of four weeks' standing, his health having previously been good. The physical signs pointed clearly to fluid, probably purulent in character, in the left pleura; the chest was tapped, pus was drawn off, and the next day an incision made in the back, but satisfactory improvement in the symptoms did not follow, although the drainage was good. Some days later a careful examination was made and it was noted that the cardiac region was still prominent and tender on pressure; the heart's impulse could not be seen or felt, though there was a slight undulation in the fourth interspace just inside of the mammillary line. The area of dullness had the triangular shape characteristic of pericardial effusion, and the heart's sounds were distant and feeble, though clear. An exploring needle was introduced in the third interspace, the seat of greatest prominence, and pus was withdrawn. The same afternoon an incision was made at the seat of puncture, and pus, estimated at one and a half to two litres in amount, was evacuated, the discharge at first coming in jets synchronously with the action of the heart. The finger introduced into the wound felt the heart pulsating. The patient was more comfortable for a time, but died three days later with symptoms of peritonitis and pyæmia.

The pericardial cavity was obliterated, the membrane being nearly as thick as the finger, and it was found that the abscesses opened by the knife were both pleural and without intercommunication. The anterior collection of pus at its inner side lay in contact with the pericardium, and thus simulated closely effusion into that cavity. It is difficult to see how the mistake in diagnosis, which worked in no way to the disadvantage of the patient in this case, could have been avoided. Such cases must be very rare, but it is well to know that they occur: the author suggests that possibly among the cases of incision of the pericardium with recovery and consequent lack of post-mortem evidence, there may have been one similar to his — external, not internal, pericarditis.

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[1] Deutsch. Archiv für klin. Med., xxxiv., 2, p. 169.

[2] British Medical Journal, 1884, i., p. 222.

[3] Pel. Berliner klin. Wochenschrift, 1884, p. 113.

A PRACTICAL POINT IN THE TREATMENT OF PLEURAL EFFUSIONS.

Dr. Broadbent,[1] in a clinical lecture, says that when he hears distinct bronchial breathing generally over the chest in cases of pleural effusion, he feels sure that a consolidated lung is immersed in the fluid, and he consequently does not tap unless the symptoms are so urgent as to demand interference. A solidified lung cannot, of course, expand, as does one which is simply collapsed or even compressed, unless it is bound down by adhesions; and experience has shown him that on the resolution of the pneumonia the fluid is usually rapidly absorbed.

He seems to hold the sound views that with grave symptoms a pleural effusion should be withdrawn, whatever the complication; that the course of moderate effusion may often be shortened by tapping; but that, if the lung be consolidated, — one evidence of which is the persistence of bronchial respiration over the whole or a large part of the chest, — it is better to wait, if the condition of the patient warrants such a course.

THE MECHANISM OF THE FRICTION SOUND OF PLEURISY.

Moxon,[2] in common with many others, is satisfied that he has often heard pleural friction, so called, over portions of the chest occupied by fluid, where, consequently, the layers of the membrane, not being in apposition, could not rub. Is the sound, therefore, not produced by creaking of the lymph on the pleura when it is stretched in inspiration?

CHEYNE-STOKES RESPIRATION IN AN INFANT.

Dr. O'Connell, of Sioux City, reports the case in the *British Medical Journal.*[3] He delivered a patient, after an easy labor, of an apparently healthy child, three weeks before full term, according to the patient's reckoning. Normal respiration was speedily established. Five hours after birth the child became ill, and he arrived an hour later to find it apparently dead and laid aside. "On my moving the body the child took a spasmodic inspiration, like a first breath. After a few seconds another inspiration followed, then a third, and so on, with gradually decreasing intervals, until respiration became normal. The heart's action, too, became normal, and the body grew warm and natural in color. After a short time his breathing began to grow quick, and ran up to hyperpnœa, and then declined to apnœa. During the apnœal stage, which lasted five minutes, I failed to perceive the least motion of the thoracic or abdominal walls, neither could I hear the child breathe. With the stethoscope I could hear the heart faintly beating forty times per minute. No drug of any kind had been given to the child. Nothing amiss could be found on careful examination of the body. The bowels had moved spontaneously. Still, as it would twist, draw up the lower limbs, and cry, as if from colic, an enema of simple tepid water was administered, which caused a large alvine evacuation, with seeming relief. At the times when the child appeared to suffer from the recurrent abdominal pain I noticed slight twitching of the facial muscles, with rolling of the eyes. Then followed a paroxysm of Cheyne-Stokes respiration. In seven hours there were a dozen attacks of this abnormal form of breathing. The child died in an apnœal stage twelve hours after birth. No necropsy was allowed.

"Both parents drank a good deal. During her pregnancy the mother partook freely of beer, if not of stronger drinks. She was also suspected, on good grounds, of using bromides, chloral hydrate, and opiates. Her first child, a male also, was very puny and delicate. It was a typical example of Cheyne-Stokes respiration. It is very unusual to see the apnœal stage last so long as five minutes, but I took the time by my watch. I am unable to suggest any explanation in this case."

HEART DISEASE IN BERLIN AND MUNICH.

A discussion has been going on of late as to why heart disease is more than twice as common in Munich as in Berlin, a fact shown by the statistics of the autopsy rooms of the hospitals in the two cities, the material coming, of course, in both from the same class of the community. Schmidbauer proved the fact of the predominance of heart disease in Munich, and then explained it by the enormous amount of beer consumed in that city, 566 litres annually for each inhabitant. His conclusions excited considerable comment, and among his critics is Beetz,[4] who shows that, perhaps from climatic causes, articular rheumatism is more common in Munich in almost exactly the same proportion as heart disease, a fact which goes far to invalidate Schmidbauer's theory. Hypertrophy of the heart is not a direct result of the abuse of alcohol, and, according to Schrötter, an increase in the amount of the blood resulting from the ingestion of large quantities of fluid does not increase the size of the left ventricle, as, on theoretical grounds, it might be expected to do. The consumption of such an amount of beer as is customary in Munich involves the passing of a vast deal of time in close rooms, without bodily exercise, and this must materially enhance the deleterious influence of the beer itself on the general health and the nutrition of the cardiac muscle. The discussion affords a fresh illustration of the great care which should be exercised in drawing conclusions from statistics, and is not without interest to us in America, where the consumption of beer is so steadily on the increase.

CARDIAC MURMURS AUDIBLE AT A DISTANCE FROM THE BODY.

Out of about 900 cases of heart murmur studied by Lublinski[5] during the last six years in three the adventitious sound could be heard by the naked ear at distances of ten to seventy-five centimetres from the chest wall. Two were cases of aortic disease, one of stenosis of the pulmonary orifice. In every case the patient was conscious of the abnormal sound, which interfered with the sleep of one, and caused great anxiety to a second, as well as to his friends, who could also appreciate it.

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[1] Lancet, 1884, i., pp. 925 and 971.

[2] Lancet, 1884, i., p. 51[illegible]

[3] 1884, i., p. 220.

[4] Deutsch. Med. Wochenschrift, 1883, p. 720.

[5] Zeitschrift f. klin. Med., 1884, p. 523.

Murmurs of this great intensity are most common in aortic stenosis, which, when pure, causes great hypertrophy of the left ventricle without much dilatation of the cavity; they have, however, been observed in all valvular lesions save those of the tricuspid and in pulmonic regurgitation. In some cases the great intensity is lost when the heart fails for any cause, which shows that the vigorous contraction of a powerful heart muscle may be a necessary factor in their production; but in other cases they are persistent, largely irrespective of the force of the heart's action. The three cases referred to, for instance, entered the hospital for cardiac failure in different degrees, were much benefited by treatment, but the change in the murmurs was very slight. In such cases Lublinski thinks it probable that the valves are either very rigid from cretified deposits, or markedly fenestrated, or else that there has been rupture of one of the chordæ tendineæ. Occasionally aneurismal murmurs can be heard at a distance; and Stokes reports two cases, in young women, where the intense murmur was probably functional, as it, together with the symptoms, disappeared under treatment.

DISEASE AT THE TRICUSPID ORIFICE.

It would seem that not only is disease much more common in the right side of the heart than has been supposed, but that it is, in adults at all events, generally acquired, and not congenital, as has been stated by nearly all the recognized authorities. New light has been thrown upon this subject by Fenwick [1] and Duroziez,[2] especially the former, who has collected seventy cases of tricuspid stenosis, and fifteen of incompetency.

Tricuspid is always associated with mitral stenosis, and, in more than twenty-five per cent. of the cases, with aortic stenosis also. Duroziez, — who contributes fourteen of the cases, — it is true, alludes to one in which the constriction was uncomplicated, a case not included in Fenwick's collection. He examined the patient during life, and heard only a systolic murmur over the lower portion of the sternum, but he did not see the heart himself, the autopsy having been made by an interne, who reported that the tricuspid admitted one finger with difficulty, and that the other orifices were healthy. In fifty per cent. of the cases there was a clear history of acute or subacute rheumatism, a proportion which holds good for valvular disease to which no suspicion of congenital origin attaches. Nearly all the cases were in patients more than twenty years of age, and one in a woman of sixty-four; most of them were between twenty and forty. The subjects of the disease were females in all but eight of the seventy cases, a fact which, to say the least, renders it highly improbable that the origin is congenital. Duroziez states that pure mitral stenosis is also nearly confined to the female sex. Fenwick thinks such an assertion too strong, but promises to investigate the point thoroughly. He explains this peculiarity of sex as follows: "I contend that it results, in the vast majority of cases, not, as is still commonly taught, from congenital malformation, or even from intra-uterine disease, but from disease in adult life, and simply and solely from an agglutination of the granulating edges of two opposed and inflamed valves, and this, too, for a purely mechanical reason. I would illustrate my meaning by an example. Let us consider what takes place in any ordinary deep granulating wound on the surface of the body. If the edges be kept in apposition under favorable circumstances direct union will occur between them. If only a limited amount of cohesion be obtained the parts will unite from the bottom, but if they be kept constantly and widely apart each side will separately scab over, heal, and contract. And as on the skin, so, I take it, is it with the valves. If they have a certain amount of rest nature will do with them as she does under like conditions anywhere else. The apposed lines of granulating edges will unite, and stenosis be produced. If the parts are in constant and considerable separation each inflamed border will dry up and cicatrize, and direct incompetence will, of course, ensue. And I contend, therefore, that stenosis is more common in women, because in them the life work is less onerous, the heart action less powerful, the back pressure, therefore, slighter, and consequently the valve disturbance less than in men. And then in men the muscle-straining labor, the compensating heart power more violent, and so the comparatively greater *vis a tergo* and valvular action, keep the inflamed edges non-adherent till nature has puckered and shrunk them, and so produced primary incompetency. Common sense, therefore, furnishes a simple mechanical explanation of the facts which I have shown with relation to the sexes. If further proof be needed it is readily obtainable." To understand fully what follows it must be prefaced that of the fifteen cases of primary tricuspid insufficiency eight were in men and seven in women, a very different proportion from that which obtains in women, though it could be wished that the number of observations were greater. To quote again, "In every case of tricuspid stenosis in men I showed that acute rheumatism had been suffered from, and so severely or so often as to have disabled the patient, and so have changed for a time the hard-working man into a bedridden invalid, and for that period, of course, have placed the heart action at or below that of any woman. On the other hand, in the female cases with incompetency the occupations of only two are noted, but these were both intemperate, and both hard workers, with heavy weights to lift or carry, — one as a fruit seller, the other as a washerwoman, and so their work, and, presumably, their cardiac strain, was probably as hard as that of most men."

It would thus seem that tricuspid disease has been thought extraordinarily rare, chiefly because it has not been looked for carefully, and Fenwick makes an appeal to the members of the Pathological Society in future heart cases to take particular note of the circumference of the tricuspid orifice and the condition of the valves. According to Bizot the average circumference is normally one fifth of an inch less in women than in men, while in the mitral the difference in the sexes is only one one hundredth of an inch.

Duroziez confesses that in only one case in which he made the diagnosis during life has he had the opportunity of verifying it after death. The murmur occurs at the same time, of course, as that due to the mitral constriction, and the latter obscures the former, or, the valves lying very near one another, the murmurs are merged together. Distention of the jugular veins is common alike to constriction and insufficiency at the tricuspid, and it is well known that the latter condition of the orifice often occurs in cardiac failure secondary to mitral disease, simply from over-distention of the right ventricle. If the jugulars are so distended that their valves become incompetent the blood wave can be propagated from the right auricle into those vessels, and, theoretically, presystolic pulsation should be seen in them. Such pulsation does not seem as yet, however, to have been observed.

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[1] Trans. London Path. Soc., 1881, p. 42; 1882, p. 64; 1883, p. 35.

[2] L'Union Médicale, 1883, December 23 and 25.

Recent Literature.

Elementary Principles of Electro-Therapeutics, for the use of Physicians and Students. Prepared by C. M. Haynes, M. D. Chicago, Ill.: The McIntosh Galvanic and Faradic Battery Co.

This is apparently written for the purpose of increasing the sale of the company's batteries. The batteries of no other maker are described; McIntosh is appended to all the apparatus. We do not believe in any such partisan medical literature. As well might a book on surgery be "prepared," one quarter of which should be devoted to descriptions of the instruments manufactured by the firm printing the work. The McIntosh Company did not need such an advertisement.

The directions for use of electricity in all the various affections to which it can be applied are very full. In many respects the therapeutics of electricity is given very satisfactorily; there are, however, several careless statements, and some omissions. While the book is a safe guide to the use of the various forms of electricity, it cannot be recommended as a scientific production.

The National Dispensatory: Containing the Natural History, Chemistry, Pharmacy, Actions, and Uses of Medicines; including those recognized in the Pharmacopœias of the United States, Great Britain, and Germany, with numerous References to the French Codex. By Alfred Stillé, M. D., LL. D., and John M. Maisch, Phar. D. Third Edition, thoroughly revised. Philadelphia: Henry C. Lea's Son & Co. 1884.

This work, as indicated by its title page, may be regarded as a general commentary upon the last edition of the Pharmacopœias of the four chief civilized nations, although the Pharmacopœias of the United States and of Germany, both of which appeared in the year 1882, and are greatly in advance of those of all other nations, form the chief basis of this revision. The new French Codex, however, which was only published this year, is yet incorporated. The references to the British Pharmacopœia, the last edition of which appeared in 1867, although some later additions were made in the reprint of 1874, remain unchanged in this revision of the Dispensatory.

In addition to the strictly official articles, a large number of extra-pharmacopœial drugs and preparations have been added to those in the previous editions. It is now illustrated by three hundred and eleven wood cuts, many of them representing microscopic structure.

The most recent reviews of the physiological action, so far as it relates to therapeutics, are given. The doses are given both in the metric and the older apothecaries' weights. In this connection it is interesting to note that the old dose for laudanum remains unchanged, and thus this work does not support the statements so widely disseminated by those interested to break down our standard for drugs under the adulteration law of this State.

The work is one of which all physicians and pharmacists would find it greatly to their advantage to have a copy.

B. F. D.

FOREIGN BODIES IN THE EYE.

Dr. Agnew, of New York, writes:[1] "When a patient comes to you complaining of a sensation as if a foreign body were in the eye, you should first examine the eyeball from every point of view. You should then turn over the eyelids and examine their inner surfaces. And here I am reminded of a source of error to which I would call your attention. A few days ago a case came under my observation which illustrates the point. The gentleman had had occasional attacks of conjunctivitis for a year or more. He had then a sensation as if a foreign body were in the eye. On turning out the right lower eyelid, all that was revealed to sight was a slight redness of the conjunctiva. But there was something in the way in which the sensation of a foreign body in the eye was exaggerated that made me suspect he had a single inverted eyelash. Ordinarily he felt as if some irritant was there which was tolerable, but suddenly there would be a cramp-like action of the eyelid, the irritation would grow rapidly worse, and the eye would fill with tears, followed by the discharge of a little mucus, and temporary relief. His beard was of a sandy color, his hair was light brown, and his eyelashes were almost colorless. I looked very carefully along the edges of the lids in search of inverted eyelashes, and saw, on the innermost edge of the lower lid, a slight curving of the inner angle. By allowing a tear to gather upon this inner edge, I saw that there was a difference in refraction in different portions of the tear, and it soon became evident that a delicate decolorized eyelash was there, which, instead of growing from the outer edge of the lid, sprang from the free edge of its inner border. I turned the lid over, and found that this delicate eyelash, which was between the edge of the lid and the eyeball, had been so long caught in that position that it had worn a little groove in the edge of the eyelid; the spasmodic action of the orbicularis, from time to time, so long continued, had embedded the eyelash in the substance of the lid. I removed it, and no further trouble was experienced. This patient had been treated in Europe for acute conjunctivitis several times, and it is possible that the eyelash was on those occasions the cause of all the trouble. An operation will be required to destroy the follicle which produced the misplaced eyelash. So, when a patient comes to you complaining of a sensation as though there were a foreign body in the eye, between the eyelids and the eyeball, you must first look for conjunctivitis. Whether this be present or not, you should then proceed to examine the eye very carefully to see whether a foreign body be present or not. Scan carefully the whole surface of the cornea and of the scleral conjunctiva, and then turn over the upper eyelid and carefully inspect its inner surface. You may then scrutinize the edges of the lids, as I have described, in order to see whether the source of the irritation be an inverted eyelash."

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[1] American Practitioner, May, 1884.

Medical and Surgical Journal.

THURSDAY, AUGUST 28, 1884.

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TWENTIETH ANNUAL REPORT OF THE BOSTON CITY HOSPITAL.

THE present report of the Trustees and Superintendent of the Boston City Hospital for the year 1883–1884 is the twentieth, and covers the completion of the first score of years since the foundation of the hospital. The report therefore presents, in addition to the usual details of a year's work, a summary of results for each year of the twenty, by which a general idea of the hospital's growth in size and efficiency may be obtained.

The whole number of patients in the hospital during the past year was 5061, and they were under treatment an average of 20.7 days each at an average cost to the city of board for each patient of $8.70 per week. The largest number of patients in the hospital at any time was 348; the smallest number in the hospital at any time was 235; the daily average number of patients was 286.29. The number of patients treated in the out-patient department, classified according to their diseases, was as follows: Medical diseases, 3156; surgical diseases, 6493; diseases of the eye, 1632; diseases of the ear, 382; diseases of the skin, 1023; diseases of women, 465; diseases of nervous system, 475; diseases of the throat, 615; total, 14,241.

During the past year the largest number of patients in the hospital at any one time was 348, seven more than the previous year; the smallest number at any one time was the same as last year, 235. The average length of stay was one and one half days less. The number of weeks' board was seventy-five more. Last year 5991 applicants were examined for admission; this year, 6152. Last year 1568 applicants were denied admission; this year, 1372, or 196 less. This has been accomplished only by a more rapid movement in the population of the hospital, the cases being more largely of an acute nature sooner recovered; and also by a compulsory movement of incurable cases to the charge of their friends or to some other institution.

The number of patients admitted with accidental injuries was 531. Of all patients admitted 173 died within forty-eight hours after admission, which is twenty-four more than last year. The rate of mortality was .094 per cent. If from the total number of deaths we deduct those brought to the hospital in a dying condition, the annual mortality is reduced from .094 to .059.

The net cost of maintaining the hospital was $2447 less than last year. The cost of subsistence was less, but salaries and wages in many instances have been increased, the trustees deeming it a wise economy to secure and retain trained and tried officers, nurses, and employees, whose services unquestionably increase in value with increased experience.

Since last year the city has made an appropriation of $40,000 to build a much needed home for nurses. This building, now under way, will be four stories high, built of brick, and designed to accommodate fifty-nine nurses, most of the rooms being intended for one occupant. The rooms now occupied by nurses will thus become available for patients, and the capacity of the hospital, now unequal to the demands made upon it, enlarged from 380 to 450 beds. The home for nurses is thus the first of the pressing needs insisted upon in previous reports to meet with practical recognition. Better accommodation for the out-patient departments, increased facilities for the care and isolation of contagious diseases are crying necessities, and would repay the city many fold for the comparatively small outlay demanded. The superintendent, Dr. Rowe, justly says: "Scarlet fever and diphtheria have been epidemic for several years in this city. This will, undoubtedly, continue until there are sufficient and suitable hospital wards to isolate every case, so that the last residence of the patient can be fumigated and rendered non-infectious by the destruction of the disease germs. The same policy should be pursued with diphtheria and scarlet fever as is now in force with small-pox. When this is done there may be hopes of eliminating these devastating diseases, and the mortality, especially among children, greatly diminished."

These are not the kind of things, however, in which the ordinary city politician is interested. A rate of taxation of $17.50 a thousand is not, in his estimation, too much for the patient tax-payer, but the justification is found elsewhere than in rescuing his humbler and poorer fellow-citizens from disease and death.

The controversy between the trustees and the State, as represented by the Board of Charity, over the cost of treating the large number of cases having no legal settlement, still continues, and involves an annual sum of about $27,000 over and above the amount accepted by the State, which is now added to the expenses of the City Hospital.

DIME MUSEUMS AND VENOMOUS SERPENTS.

THE account of the death of a showman, named Reilly, in New York last month, some twenty-seven hours after having been bitten by a large trained diamond rattlesnake, five feet in length, from Mexico, is not destitute of interest in view of the recent multiplication of dime museums and small shows of which such reptiles, with the attendant snake charmer, so often form a part. Moreover, although the rattlesnake, in common with other venomous reptiles, has become extremely uncommon in the neighborhood of our large cities and throughout our Eastern States (even the Blue

Hills of Milton having almost lost their distinction as its *habitat*), they are extremely common and troublesome in the Southern and Western States and Territories, as, for instance, Texas and Nebrasaka, where stimulation is resorted to both as prophylaxis and treatment, sometimes judiciously, and too often heroically. In the case of Reilly it was reported that as soon as bitten he applied his lips to the wound and exerted all the suction of which he was capable, and then partook very freely of whiskey, a quart being stated as the amount. At the hospital to which he was taken the treatment was mainly a free administration of whiskey and ammonia subcutaneously and hot poultices locally, — a treatment shown by the result, as might have been anticipated, to be quite unavailing.

As some of the most valuable recent contributions toward an elucidation of the composition and action of the venom of this particular serpent have resulted from the investigations of our own countrymen, — we allude especially to Drs. S. Weir Mitchell and Reichert, of Philadelphia, — it would seem that, rare as they may be, we should be prepared to treat such cases of poisoning intelligently when they occur, and our snake performers should, in imitation of their more practiced *confrères* in India, prevent their occurrence by a previous careful removal of the old and supplementary poison fangs of the reptiles they exhibit. That ignorance or recklessness, and not a scrupulous desire to give patrons an honest measure of horror for their entrance money, is the cause,of such neglect, seems, from what is known of dime museum management in other particulars, unquestionable. In this very establishment the partner, one Clark, eat fire, and Mrs. Clark represented the customary Circassian girl; the snake charmer's conscience should therefore have been sufficiently indurated to permit his performing with fangless snakes, and his histrionic talents sufficiently developed to enable him to imitate his eastern prototype again in feigning the necessary symptoms of poisoning, when struck by his pets, applying his secret charms, and gradually recovering.

The mode of ejection, the composition, and the action of the venoms of different classes of serpents, though differing in details, have much in common, and the investigations of Mitchell in this country upon crotalus poison, and of the officials of the Calcutta Snake Poison Commission, Messrs. Wall, Richards, and others upon viperine (Daboia) and cobra poisons, supplement and confirm each other in a marked degree, as far as treatment is concerned, at least. Dr. Joseph Ewart, for several years at the head of the Calcutta Snake Poison Commission above referred to, writes a correspondent, commenting upon Reilly's misfortune: "It is a pity that our being devoid of any antidote was not at once recognized and acted upon. Some years ago I strongly represented this, as others had done, and urged excision as the only hope of saving life; and since then my old assistant, Dr. Wall, has proved by experiment that if done in time by careful dissection, under an anæsthetic, and the resulting wound be freely washed out by a solution of permanganate of potash, the whole of the virus injected into the cellular structures may be promptly removed and otherwise certain death be successfully averted." In connection with incision or excision the question of time is the important one, and to increase the favorable chances a ligature should always, when practicable, be applied between the bitten part and the heart.

Dr. Ewart elsewhere writes:[1] "Although of late years much has been done to illustrate the action of snake poison, to ascertain its pathological effects and its chemical composition, we have not as yet discovered an antidote. We have ascertained that liquor potassæ, permanganate of potash, nitrate of silver, and other reagents which have the power of precipitating its active principles, when mixed with it out of the body render it harmless. M. Lacerda thought that he could neutralize it when deposited in the tissues by following it up with injections of a one per cent. solution of permanganate of potash. If this could be done before a fatal quantity had reached the blood, and all the poison injected could be brought under the influence of the alleged antidote, it might succeed. Wall has shown that it has no antidotal power when put into the blood in large quantities. And the practical impossibility of precisely following the course the poison has taken in the soft structures renders it a very uncertain and doubtful remedy. The antidotal power of intravenous injections of liquor ammoniæ was disproved by Fontana a century ago."

Weir Mitchell reached very similar conclusions in 1861[2] and in 1868.[3] Excision or even amputation, incision with free suction, as by cups, supported by the early ligature, applied continuously or intermittently, are the only means which can be relied upon to avert the issue in dangerous cases, and cases are, in general, severe according to the size and vigor of the rattlesnake, and the entrance of one or both fangs. The severity of the early symptoms may, as a rule, determine the justifiability of a resort to so serious a measure as amputation. Mitchell failed to find any general antidote or any reliable local application, such agents as tannin, iodine, etc., merely checking locally the usual tendency to hæmorrhage from the capillaries. The benefit of suction by the mouth, unless preceded by incision, or unless the wound itself be such as to permit free hæmorrhage, is but slight. The process of suction is safe enough for the performer, unless there should be abrasions of the mucous membrane, for Mitchell has shown that rattlesnake venom is absolutely harmless when swallowed, because it is incapable of passing through mucous surfaces, and because it undergoes some change during digestion.

Both our own and the India authorities agree that reliance must be placed mainly on the early removal of the poison. Stimulants are useful, as in other depressing assaults, to support the strength. With stimulants and the intermittent ligature the system will undoubtedly often support an attack which would otherwise prove fatal. The virus of poisonous snakes is not injurious to their own species, nor does it affect injuriously any of the venomous varieties of the Ophidia, and Dr. Ewart still hopes for the discovery, from a study of these points, of a successful and reliable antidote for man.

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[1] Poisonous Snakes and their Poisons, November, 1883.

[2] Treatment of Rattlesnake Bites, etc., etc., North American Medico-Chirurgical Review, March, 1861.

[3] Toxicology of Rattlesnake Venom, New York Medical Journal, January, 1868.

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MEDICAL NOTES.

— A fact of some political significance is announced from France, to wit, that the French government has bestowed the order of the *Legion d' Honneur* on Dr. Koch, in recognition of his services in the cholera district rendered during his short stay in France.

— The *Lancet* remarks, apropos of capital punishment in France: "At length it is beginning to be recognized in France that the brain of a decapitated criminal lives, and consciousness is maintained for an appreciable time, which to the victim may seem an age, after death — an opinion we strongly expressed many years ago. This ghastly *fact* — as we have no doubt it is — being perceived, it is beginning to be felt that executions cannot any longer be carried out by the guillotine. Prussic acid is now proposed. If instantaneous death be desired, this is clearly inadmissable. The period taken to terminate life by poison of any kind must needs vary greatly with the individual. In not a small proportion of instances we fancy death by prussic acid would be considerably protracted, and although long dying is not so horrible as living after death — so to say — yet it is strongly opposed to the interests of humanity to protract the agony of a fellow-creature dying by the hand of justice. Electricity is another agent suggested. We doubt the possibility of applying this agent so as to destroy life instantly. We confess that, looking at the matter all round, we incline to think that hanging, when properly performed, destroys consciousness more rapidly, and prevents its return more effectually than any other mode of death which justice can employ. It is against the bungling way of hanging we protest, not against the method of executing itself. That is, on the whole, the best, we are convinced."

— At the conference recently convened by the Medical Society and the National Health Society of Great Britain, the subject for discussion on the 1st instant was Recreations and Gymnastics. After the reading of several papers Sir James Paget maintained that the English system of gymnastics, — namely, out-door games, — was far superior to the German, Swedish, or any other system.

— The *Leisure Hour* relates the following anecdote of Abernethy, which illustrates his abhorrence of garrulity on the part of his patients, and how a bright woman, by her cleverness in humoring this well-known trait of his, succeeded in winning the rare meed of a compliment from the great surgeon. She made him three visits, and the conversation at each of them is worthy of attention by busy practitioners and "case-takers" in general. At the first visit, holding out her wounded finger as she entered the surgeon's consulting room, the lady allowed him to open the following conversation: Abernethy — Cut? Lady — Bite. Abernethy — Dog? Lady — Parrot. Abernethy — Go home and poultice it. The second visit was fruitful of three utterances over the extended finger. Abernethy — Better? Lady — Worse. Abernethy — Go home and poultice it again. At the third interview the finger, extended for the third time, occasioned these words: Abernethy — Better? Lady — Well. Abernethy (with enthusiasm, while his twinkling eyes showed his proper appreciation of the lady's fine humor) — 'Pon my honor, madam, you are the most sensible woman I ever met. Good-by!

— The "fresh air" philanthropists are doing their good work at the present time. That their kind intentions are not always met with the appreciation that they deserve seems to be indicated by the following anecdotes which we clip from a non-medical contemporary: —

A woman at Litchfield, Conn., had agreed to take a boy and his sister for their second visit to the place. The boy came alone, however, and being asked about his sister, replied: "Mother would n't let her come to Litchfield this year. She says she got the malaria coming out with the fresh air fellers last year." The children live on Baxter Street, New York.

Again, among the young waifs brought out from the city a young lad stood looking at the circus pictures when a couple of ladies came up, and one of them, pointing to the boy, said: "That is one of the 'fresh air' children." The other lady remarked, "He looks as though he might be; I 'll speak to him." So she said, "My boy, are you one of the 'fresh air' children?" "Well," he replied, "not so very d——d fresh!" Which ended the dialogue.

— A writer in the *Southern Clinic* advocates the following plan of using chloral hydrate as a vesicant: Powdered chloral sprinkled on adhesive plaster and melted by a gentle heat (not more than enough to cause plaster to adhere to the flesh) is applied, while warm, to the part where the blister is wanted; within a few minutes a gentle heat is felt, increasing in intensity for a short time, then gradually easing off, and at the end of about ten minutes the part is free from pain. At the expiration of this time, or as soon as the pain has subsided, the plaster, if removed, will disclose a surface as effectually blistered as by a cantharidal plaster after six hours. Thus within about ten minutes the work of an old-fashioned blister is accomplished, with many advantages over the latter: (1) rapidity of action; (2) the ease of application; (3) the non-occurrence of strangury; and (4) it may never be taken off to have the blister dressed, but may be allowed to remain until the plaster loosens and comes off itself, the blistered surface in the meanwhile healing kindly.

— That the "love of money is the root of all evil" seems to have received confirmation in a novel sense from the observations of Professor Reinsch at Erlangen (*Allg. Med. Centr. Z.*, 31, 1884), who on examining a number of coins found, to his astonishment, that all coins which showed some encrustation. little sediments, etc., on their surface, contained living bacteria. Reinsch then collected coins of all nationalities, and made the same observation in all coins that had been in circulation for a number of years. When the adherent dirt particles are removed with a perfectly clean (aseptic) knife, and dissolved in distilled water, a sufficiently powerful microscope will at once reveal the bacteria. The dirt sticking to coin seems to offer to these microzymes a soil specially fertile and favorable to their development. Considering the immense circulation of money passing through millions of hands it may be probable that coins form no small factor in the transfer of zymotic disease. If this be true it would seem probable that a paper currency, from its greater uncleanliness, would serve as a more favorable channel for the transfer of infectious diseases than a metallic one. Zymotic considerations, therefore, may be added to the politico-economic arguments against the Greenback party. Immersion in a boiling solution of caustic potash, which has been found to remove all the bacteria from coins, is hardly practicable in the case of bills. Yet in spite of the danger there will probably be found those who will neglect to repudiate and discard this carrier of infection.

— A recent paper by Assistant-Surgeon R. C. Newton, United States Army, in the *Medical News* (July 5th) gives the particulars of an outbreak of intermittent fever in an army post in Indian Territory, with a topographical sketch of the camp. A creek which carries much floating vegetable débris in the spring freshets, and deposits it along its banks as it recedes, is to the north of the post. The north wind has been observed to be the malaria-bringing wind. The barracks are so disposed that certain ones are directly exposed to this north wind, while others are sheltered by the former buildings. Figures as to the number of cases and the total days' service lost on account of malarial sickness show a marked correspondence to the amount of exposure of the several barracks to this north wind. It is also worthy of note that the troops stationed at this post are colored, and that the disease is as frequent in them as in whites.

— An interesting case, unfortunately attended with a fatal result, is reported by the *Medical Press* (July 16th) from Grays, in Essex, England, the victim being a little girl, three years of age, the daughter of an officer of the Shaftesbury training ship. While on the way to school, accompanied by an elder child, the deceased tripped and fell, and in doing so struck the angle of the right eye with the sharp point of a piece of slate pencil held in one hand. A slight amount of hæmorrhage ensued; but after the shock of the accident the child seemed none the worse for some time. In about three weeks, however, she complained of pain in the eye and head, and symptoms of acute inflammation rapidly supervened; convulsions set in, and in a little more than twenty-four hours the little sufferer was dead. The medical evidence at the inquest attributed the result to meningitis induced as a consequence of the injury to the eye, the wound inflicted on which had, however, entirely healed; and the case possesses many features of interest in this connection. At present no details have been given respecting the constitution of the patient, except that she is described as having been a "very healthy child;" but the occurrence of such cases has been sufficiently often recorded to make it not improbable that a correct explanation has been given in this instance.

— An important legal decision was, according to the *Maryland Medical Journal*, recently rendered in one of the Western States which may have a very important influence in preventing suits for damage from malpractice. Two surgeons had been employed in a case, but in different ways, and for different compensation. The patient not being satisfied with the treatment refused to pay either of the bills rendered. A suit was brought by one of the surgeons and a judgment was given in his favor by the court. The patient then brought suit for malpractice, but the surgeon put in as defense that this question had been adjudicated in the previous suit and could not be again raised. This defense the court held to be a good one, deciding that the former suit was a bar to the second one. According to this decision a surgeon need not fear a suit for damages from malpractice if the value of his services has been acknowledged in a suit to recover the amount of his bill. In other words, the surgeon may possibly forestall a suit for damages from malpractice by instituting a suit for the amount of his professional services.

— The next International Medical Congress will be held in Washington, the invitation of the American Medical Association conveyed through Dr. Billings at Copenhagen having been accepted.

— The annual revenue of the British Medical Association, we learn from its official organ, exceeds $100,000. One half is derived from annual subscriptions of members, and nearly as much is obtained from advertisements and sales of the journal, the remainder being from interest on investments. The excess of income over expenditures in 1883 was $12,020. The Association now has over $85,000 invested in government and railway securities.

NEW YORK.

— The second annual report of the Central Council of the Charity Organization Society, which has just been published, shows that during the last year the agents of the Society made 23,091 reports in regard to applicants for assistance. The Society keeps a street register on cards in such a way as to group together all the families applying for charity or represented in the city penal institutions, and 19,658 houses are included in it. In one section of the city, the report states, there were found three short blocks with eleven liquor shops in each, the bulk of the support of the latter being evidently drawn from the gifts of the benevolent to the wretched denizens of the locality. "This picture," it continues, "serves to suggest the two leading causes of the vast pauperism with which this Society has undertaken to cope — intemperance and misplaced alms." Of 694 persons found begging in the streets fifty-five per cent. were able-bodied; forty-one per cent. could have earned their support wholly or in part; and but four per cent. had apparent excuse for asking aid of any one. The following are samples of some of the cases investigated: A white-haired man was "blind" on Broadway by day, and at night a well-known poker player in Baxter Street, with full powers of vision. A paralyzed tramp was in partnership with an able-bodied one. The latter would stay at home and write heart-rending appeals, which the former carried around, and at night they would divide the profits. Eighty-nine of the 694 street beggars were committed to Blackwell's Island for various terms.

— The annual meeting of the American Society of Microscopists was held at Rochester, August 19th, 20th, and 21st. During the proceedings an address was delivered by Rev. Dr. W. H. Dallinger, president of the Royal Microscopical Society, and Prof. Alfred N. Bennett, of London, who also came as a delegate from the latter Society, read a paper on Fungi Found in Sewage Effluvia. Among the other papers was one on The Hair Microscopically and Medico-Legally Considered, by Dr. William J. Lewis, of Hartford. The sessions were concluded by an evening reception in the State Arsenal, tendered by the Rochester Academy of Science.

— Prof. Frederick S. Dennis, of Bellevue Hospital Medical College, has filed plans for the Carnegie Laboratory, for the construction of which Mr. Andrew Carnegie has presented the college with $50,000. It is to be built on Twenty-Sixth Street, opposite the hospital grounds, and will be fifty feet square, and seventy feet in height.

Miscellany.

SCIENCE IN TRADE.

The *Sanitary Engineer*, speaking of the application of the scientific spirit to the things of common life, says: —

"The importance of scientific investigation in sanitary matters is a thing we have often had occasion to insist on, and is, in fact, the urgent need of the present day. This is well known and generally assented to by the public, and the fact that a general demand for it exists is sufficiently proved by the vast amount of pseudo-scientific literature which is being produced as the best means of advertising certain things and persons. The merits of certain baking-powders, disinfectants, water-closets, ventilating cowls, etc., etc., are set forth by certificates of analyses and tests given by Professor So-and-so, and the preparation of such certificates is becoming a rather lucrative profession. While many of these certificates and elaborate puffs, in the shape of formal papers, are prepared by men who are so entirely unacquainted with scientific methods that they betray their ignorance and the mercenary motives which actuate them in almost every sentence, there are a few who possess enough knowledge of chemistry and physics to avoid making gross blunders, and are yet not over-scrupulous in the use which they will make of their knowledge if a sufficient pecuniary consideration be presented.

"It is true that such men are rare, for scientific training fosters the love of truth, and the amount of patient work which it demands is such as to have a strong tendency to secure the survival only of the fittest, which, in this case, means those who will make an honest and proper use of the knowledge they have obtained. Nevertheless, a man *may* be a scientific man, and, at the same time, very shaky in his morals, and such men are very dangerous. There is comparatively little danger, however, from the professional certificates, seeing that it has now come to be generally understood that such certifiers convey really reliable information rather with regard to the character and pecuniary necessities of the men who make them than in regard to the articles to which they relate."

DEFOE UPON THE PLAGUE IN LONDON.

The great plague of London began in December, 1664, and continued in some measure till September, 1666, when the great fire put a stop to it by burning up the foul matter upon which it fed and throve. Meantime from 68,000 to 100,000 persons had fallen victims. Despite the fact that fires were kept burning for three days, with the view of somehow purifying the air, yet the sanitary science of the day consisted chiefly in isolation rather than in disinfection. Defoe's account of the scourge, while generally held to be in part imaginative, yet presents us the most vivid account of it we have, and by contrast is very suggestive of the wholly different plan upon which the officers of public health proceed at the present time when epidemics are present or are threatened. We reproduce the classic account already, doubtless, familiar to many of our readers: —

"It was now the beginning of August, and the plague grew very violent and terrible in the place where I lived; and Dr. Heath coming to visit me, and finding that I ventured so often out in the streets, earnestly persuaded me to lock myself up, and my family, and not to suffer any of us to go out of doors; to keep all our windows fast, shutters and curtains close, and never to open them; but first to make a very strong smoke in the room, when the window or door was to be opened, with rosin and pitch, brimstone and gunpowder, and the like, and we did this for some time; but as I had not laid in a store of provisions for such a retreat it was impossible that we could keep within doors entirely. And here I must observe again that this necessity of going out of our houses to buy provisions was, in a great measure, the ruin of the whole city, for the people catched the distemper on these occasions, one of another, and even the provisions themselves were often tainted, at least I had great reason to believe so. However, the poor people could not lay up provisions, and there was a necessity that they must go to market to buy, and others to send servants or their children; and as this was a necessity which renewed itself daily, it brought abundance of unsound people to the markets, and a great many that went thither sound brought death home with them.

"It is true people used all possible precaution. When any one bought a joint of meat in the market they would not take it out of the butcher's hand, but took it off the hooks themselves. On the other hand, the butcher would not touch the money, but have it put into a pot full of vinegar, which he kept for that purpose.

"The buyers carried always small money to make up any odd sum, that they might take no change; they carried bottles for scent and perfume in their hands, and all the means that could be used were employed; but then the poor could not do even these things, and they went at all hazards. Innumerable dismal stories we heard every day on this very account.

"Sometimes a man or woman dropped down dead in the very market, for many people that had the plague upon them knew nothing of it till the inward gangrene had affected their vitals, and they died in a few moments; this caused that many died frequently in that manner in the street, suddenly, without any warning. Others, perhaps, had time to go to the next bulk or stall, or to any door or porch, and just sit down and die, as I have said before. These objects were so frequent in the streets that when the plague grew to be very raging on one side there was scarce any passing by the streets, but that several dead bodies would be lying here and there upon the ground; and in those cases the corpse was always left till the officers had notice to come and take them away, or till night, when the bearers attending the dead-cart would take them up and carry them away. Nor did these undaunted creatures who performed these offices fail to search their pockets, and sometimes strip off their clothes, if they were well dressed, as sometimes they were, and carry off what they could get."

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THE PATHOGENIC MICROBES OF GONORRHŒA.

The *Medical News* (August 16th) remarks upon this subject that the gonococcus which was discovered in 1879 by Neisser is discussed in a recent number of the *Nordiskt Medeinskt Arkiv* by Dr. Edward Welander in an elaborate article, in which he concludes that they are characteristic of the disease. His observations are to the following effect: —

The gonococcus is always found in groups, never in chaplets; it is seen in the interior as well as at the exterior of pus-cells, frequently in large groups upon the epithelium, and, besides, in a free state in the secretion. The proofs that they are the pathogenic microbes of blennorrhagia are, according to Welander, that he has found them in one hundred and twenty-nine cases of acute, and in fifteen cases of chronic blennorrhagia, in the male, and in the purulent urethral secretion of forty-nine females, while he has not found them in other secretions; in twenty-five cases of blennorrhagia in all of which the gonococcus was found, he ascertained the persons who communicated the disease, and in them, too, the gonococcus was present. Further, inoculation with secretions which did not contain the gonococcus gave negative results, while blennorrhagia followed those cases in which purulent matter containing the gonococcus was used. Still, the scientific proof is wanting, for the few culture-experiments that have been made are incomplete, or discredited; and so far the cultivation of the gonococcus has proved exceedingly difficult.

In the treatment various antimicrobic remedies have been tried, such as carbolic acid, corrosive sublimate, and iodoform, but the results have not been satisfactory. Welander regards an abortive treatment during the first two or three days as quite proper, and his method is first to cleanse thoroughly the anterior portion of the urethra, chiefly the navicular fossa, with cotton and forceps, thus removing a quantity of epithelial cells with the gonococcus in or upon them, and then cauterize with a solution of nitrate of silver.

So far, it seems that the discovery of the gonococcus has not helped the treatment of blennorrhagia; but it certainly is a great gain to be able to say positively when the contagiousness of the disease has ceased, and when, for example, a man may enter married life safe from the danger of communicating disease to his wife, and thus making her suffer for his sins, giving her not only different forms of intra-pelvic inflammation, but, according to Dr. Noeggerath's views, making her sterile. In medico-legal cases the discovery may prove of the greatest importance. Thus in cases of leucorrhœa in children, against whom it has been charged that rape had been attempted, and disease thereby communicated, the absence of the gonococcus in the vulval or vaginal discharge would at once disprove the charge.

As an incidental practical point, Welander suggests that the oculist may be enabled, by determining the presence or the absence of the gonococcus, to ascertain the nature of a purulent inflammation of the conjunctiva.

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MALE HYSTERIA.

The subject of hysteria in males has lately been brought prominently before the Berliner Medicinische Gesellschaft, says the *Medical Times*, August 9, 1884. A prolonged discussion upon some of the points raised served to show very clearly that the nature and origin of the phenomena so frequently grouped together under that convenient title, are as far as ever from any clear and comprehensible definition. The constant association of hysteria with affections of the uterus, or indeed of any single organ, has long since been disproved, but its frequent association with disease or disordered function of some of the viscera, is clearly shown by many recorded cases. It is only of recent years that the occurrence of hysteria in males has been fully recognized, and the proportion of male to female cases formerly given by Briquet as 1 to 20, is probably somewhat below the mark.

Heredity is a marked feature in these cases, and there is usually a history of nervous irritability in childhood. The period of youth and puberty is the most common time for hysterical phenomena in males, whereas in women there is no period of life exempt from the liability. In his paper on the subject Herr Mendel relates some typical cases, and points out that in some instances a kind of dual existence appears to be present in which the patient may be in perfect health with intervals of hysterical disturbance of the nervous system, the memory in each state retaining no impressions of the events taking place in the other. He draws a marked distinction between hysteria and hypochondriasis. In cases of the latter class, the patient seeks out a cause for his discomforts, and fixing his mind upon the one point, cannot be reasoned or persuaded out of the truth of it, no matter how absurd and inconsistent it may be. The hysterical patient on the other hand exhibits a greater variety of functional disorders, is much influenced by his surroundings, and gives every evidence of nervous instability. Hence the rapidity with which hysterical cases may be cured when entirely removed from old associations and the sympathy of relatives. Among the complex symptoms characteristic of hysteria, is that of local pain. Until recent years this local pain has generally been believed to be pelvic and to be associated with the ovaries.

Many cases, however, were cited in the debate on Herr Mendel's paper in illustration of the fact that such painful spots may also be found elsewhere. Pain localized in the right ovarian region was found to persist unaltered in a case in which the ovary and a tumor connected with it had been removed by Herr Landau, and hence it could not be due to direct local causes. In his remarks upon the case, however, the operator expressed belief that the pains are essentially to be regarded as forms of visceral neuralgia, having some peripheral origin, most probably in the genital apparatus. In an interesting case related by Herr Senator, two painful spots were discovered, symmetrically situated over the parietal bones, in a boy who exhibited very marked hysterical symptoms. Pressure on these spots, even during sleep, at once set up violent crying and struggling. The case was rapidly cured by isolation. The relation of these painful spots to the condition of hemi-anæsthesia in women is not as yet determined, but a few cases have been recorded by Remak and Landau, in which a bimanual examination of the ovary of the affected side proved the organ to be exquisitely tender. In one instance, with similar symptoms, the painful spot was localized in a movable kidney.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 16, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Whooping-Cough.	Diphtheria and Croup.
New York	1,340,114	657	340	34.65	10.80	23.10	1.95	4.05
Philadelphia	927,995	392	195	34.75	8.25	24.75	1.50	3.00
Brooklyn	644,526	299	174	39.60	6.93	29.27	4 95	1.65
Chicago	632,100	243	154	38.22	4.92	27.06	.82	2.46
Boston	423,800	196	99	36.72	7.14	25.50	4.08	1.02
Baltimore	408,520	158	79	17.01	11.97	11.97	1.89	3 78
St. Louis	400,000	177	79	35.84	11.20	16.80	1.12	2.24
Cincinnati	272,400	103	50	24.25	12.51	19.40	.97	.97
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	102	55	32.34	9.80	25.48	—	—
Pittsburg	180,000	94	55	15.90	4.24	—	4.24	9.54
Milwaukee	142,400	81	66	51.60	6.00	46.80	2.40	—
Providence	119,405	47	26	37.80	25.20	29.40	2.10	4.20
New Haven	62,882	29	13	20.40	13.60	13.60	3.40	—
Nashville	54,400	24	13	37.80	12.60	16.80	—	16.80
Charleston	52,286	33	16	21.70	6.20	12.40	—	—
Lowell	71,447	25	13	24.00	4.00	16.00	—	—
Worcester	69,442	25	10	48.00	8.00	36.00	8.00	—
Fall River	62,674	30	25	56.10	—	46.20	—	—
Cambridge	60,995	19	12	47.34	—	26.30	—	5.26
Lawrence	45,516	13	5	38 45	1.69	38.45	—	—
Lynn	44,895	24	8	29.12	24.96	20.80	—	8.32
Springfield	38,090	12	6	50.00	16.66	33.33	—	8.33
Somerville	31,350	13	8	53.83	15.38	45.14	7.69	—
Holyoke	30,515	17	11	47.00	11.77	35.32	5 88	—
New Bedford	30,144	16	6	37.50	32.25	32.25	—	—
Salem	29,503	13	5	15.38	23.07	7.69	—	—
Chelsea	24,347	9	3	11.11	22.22	—	—	—
Taunton	22,693	8	4	50.00	12.50	50.00	—	—
Gloucester	21,400	4	2	25.00	—	—	25.00	—
Haverhill	20,905	5	1	20.00	20.00	20.00	—	—
Newton	19,421	3	3	33.33	—	33.33	—	—
Brockton	18,323	8	3	37.50	37.50	25.00	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	7	2	57.12	14.28	14.28	—	—
Fitchburg	13,433	6	2	16.66	16.66	16.66	—	—
Ninety-two Massachusetts towns	—	87	30	26.18	17.85	23.80	—	—

Deaths reported 2979 (no reports from New Orleans and Buffalo): under five years of age, 1573; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 1037, diarrhœal diseases 714, consumption 304, lung diseases 143, diphtheria and croup 85, whooping-cough 64, typhoid fever 55, malarial fevers 29, scarlet fever 29, measles 28, cerebro-spinal meningitis 16, erysipelas eight, puerperal fever seven, small-pox one, typhus fever one. From *typhoid fever*, Philadelphia 12, St. Louis 11, Boston six, New York and Chicago five each, Brooklyn and District of Columbia two each, Milwaukee, Providence, New Haven, Charleston, Lowell, Holyoke, New Bedford, Chelsea, Brockton, Newburyport, Andover, and Stoneham one each. From *malarial fevers*, New York and St. Louis 10 each, Baltimore six, Brooklyn two, Charleston one. From *scarlet fever*, Philadelphia and Chicago five each, St. Louis four, Boston and District of Columbia three each, New York, Brooklyn, and Baltimore two each, Pittsburg, Lowell, and Cambridge one each. From *measles*, New York 12, Chicago eight, Brooklyn three, St. Louis two, Philadelphia, Pittsburg, Milwaukee, and Cambridge one each. From *cerebro-spinal meningitis*, New York three, Philadelphia, Cincinnati, Newburyport, and Fall River two each, Chicago, Boston, Cambridge, Springfield, and Salem one each. From *erysipelas*, New York five, Boston, Baltimore, and St. Louis one each. From *puerperal fever*, Brooklyn two, Philadelphia, Boston, Milwaukee, Nashville, and Charleston one each. From *small-pox*, Philadelphia one. From *typhus fever*, Cincinnati one.

Cases reported in Boston: scarlet fever 50, typhoid fever 20, diphtheria eight, measles three.

In 111 cities and towns of Massachusetts the total death-rate for the week was 19.68 against 20.44 and 19.11 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending August 2d, the death-rate was 23.3. Deaths reported 3909: acute diseases of the respiratory organs (London) 198, diarrhœa 689, measles 109, whooping-cough 76, scarlet fever 74, fever 48, diphtheria 21, small-pox (London 11, Liverpool, Hull, and Sunderland two each, Sheffield 1) 18. The death-rates ranged from 12.7 in Huddersfield to 34.6 in Preston; Blackburn 23.6; Bradford 21.7; Leeds 24.4; Leicester 28.7; Liverpool 28.9; London 22.9; Manchester 27.5; Nottingham 24.4; Sheffield 2; Sunderland 22.4; Wolverhampton 23.3. In Edinburgh 15.59; Glasgow 24.5; Dublin 23.0.

The meteorological record for the week ending August 16th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
August, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 10	30.114	62	71.6	56	75	92	100	89	N	E	NE	8	10	5	C	O	O	—	—
Mon., 11	30.090	62	67.6	60	96	84	93	91	N	SE	SW	11	9	1	O	C	O	—	—
Tues., 12	30.201	64	70	59	92	72	95	86	W	SE	NE	3	5	8	F	O	O	—	—
Wed., 13	30.137	60	63	58	96	95	100	97	NE	N	N	8	15	6	O	O	R	—	—
Thurs., 14	30.089	65	72	59	90	87	100	92	NW	SE	SW	5	8	6	O	C	C	—	—
Fri., 15	30.067	67	83	60	81	69	97	82	NW	SE	NE	5	10	3	C	C	O	—	—
Sat., 16	30.182	68	79	61	83	85	100	89	N	SE	Calm.	1	8	0	C	C	O	—	—
Mean, the Week.	30.126	64.0	72.3	59				84.9										22.25	0.35

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM AUGUST 16, 1884, TO AUGUST 22, 1884.

Birmingham, H. P., first lieutenant and assistant surgeon. Granted one month's leave of absence. S. O. 162, Department of the Missouri, August 12, 1884.

Wilson, George F., first lieutenant and assistant surgeon. Relieved from duty at Fort Walla Walla, W. T., and to take station at Vancouver Barracks, W. T. S. O. 120, Department of the Columbia, August 13, 1884.

Woodward, J. J., major and surgeon. Died August 17, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING AUGUST 23, 1884.

Rixey, P. M., passed assistant surgeon. Orders to U. S. S. Lancaster revoked. To continue on special duty.

Martin, C., medical director. To be retired August 21, 1884.

Heyl, T. C., surgeon. Detached from U. S. S. Independence, ordered to U. S. S. Adams.

Ayers, J. G., surgeon. Detached from U. S. S. Adams, placed on waiting orders.

Curtis, L. W., assistant surgeon. Detached from U. S. S. Adams, placed on waiting orders.

Stephenson, F. B., passed assistant surgeon. Detached from Navy Yard, New York, ordered to C. S. S. Bache.

Derr, E. Z., passed assistant surgeon. Detached from C. S. S. Bache, placed on waiting orders.

OBITUARY. DR. JOSEPH JANVIER WOODWARD, U. S. A.

Surgeon Woodward, major and brevet lieutenant colonel, was born in Philadelphia in 1832. After pursuing his academic course in that city, he was graduated in medicine from the University of Pennsylvania in 1853. He practised medicine in Philadelphia until he was appointed an assistant surgeon in the army, August 5, 1861. He served with credit and distinction through the war of the rebellion, not only as concerned the performance of his duties to the government, but also with regard to the advancement of his profession. He recorded observations on camp dysentery and on typho-malarial fever, which were of a nature to throw positive light upon many difficult questions connected with those affections and their management in armies; his original work in microscopy, and particularly in photomicrography, after the termination of the war, was such as to give him a world-wide reputation. His most lasting monument, however, will be the excellence of the literary work done by him, in conjunction with the late Surgeon Otis, in preparing the early volumes of the Medical and Surgical History of the War of the Rebellion. Not only the medical corps of the army, but the profession at large, has sustained a serious loss in the death of Dr. Woodward.

Dr. Woodward had been ill for some months, and his death, while not altogether unexpected, has cut short a brilliant career at a comparatively early age.

Books and Pamphlets Received. — Fifth Annual Report of the State Board of Health of Illinois. Springfield, Ill. 1883.

Announcement of the Fourth Annual Session of the Medical Department of the University of Denver, Colorado. Collegiate Year 1884–85.

Report on Ophthalmology. By William Ellery Briggs, M. D., Chairman of Committee. From the Transactions of the Medical Society of the State of California.

Proceedings of the Sanitary Conference of State Boards of Health. Held at New Orleans, La., June 2–4, 1884.

The Proceedings of the Naval Medical Society. Vol. II. No. 1. Washington. 1884.

The Medical Graduate and his Needs. By George C. Wellner, M. D. Detroit, Mich.: George S. Davis. 1884.

On the Diagnosis of Tumors of the Anterior Mediastinum. By James C. Wilson, M. D., Philadelphia. Reprint from Journal of the American Medical Association. Chicago. 1884.

The American Exhibition of Arts, Manufactures, Products, and Resources of the United States of America (London, 1886).

Diseases of the Heart and Thoracic Aorta. By Byrom Bramwell, M. D., F. R. C. P. E. With 317 Illustrations. New York: D. Appleton & Co. 1884.

Original Articles.

A CASE OF HOMICIDE BY A WOUND OF THE VULVA.[1]

BY F. W. DRAPER, M. D., OF BOSTON,
Medical Examiner.

"WHEN deeply incised wounds are inflicted upon the genital organs of either sex, the fact of their existence in such a situation at once proves willful and deliberate malice on the part of the assailant. Accident is wholly out of the question, and suicide is improbable except in cases of confirmed idiocy and lunacy."[2] These emphatic words of Taylor will serve as an appropriate introduction to the following notes of a case whose presentation is justified by the fact that it is an interesting example of a very rare form of homicidal violence.

The chief participants in the affair to be related represented a low grade of city life and morals. Michael O'Neil, the convicted assailant, and his wife, Hannah, the victim, occupied a tenement of three rooms, so wretchedly furnished and appointed as scarcely to merit the name of human habitation. Intemperate, improvident, and ignorant, they lived here in wretched squalor, without apparent hope or desire for better things, and showing to their two young children a wicked example of shameless degradation. In such a home the mother came to her death under the following circumstances: —

During the afternoon and evening of Sunday, December 10, 1882, O'Neil and his wife, with two men, named Haley and Ryan, indulged freely in liquor in O'Neil's kitchen. The woman entertained her guests sometimes with songs, sometimes with loud disputes with her husband. In the course of one of these wrangles, O'Neil forcibly informed his wife that if she carried out her expressed intention to place one of their children in a public institution, he would "fix her for it." The carouse continued till after midnight, and the recollection of the two visitors concerning what transpired in the later hours of the evening was naturally vague and unreliable. But it is quite well established by the testimony of Haley, confirmed by that of an officer who passed by the house at midnight and heard Mrs. O'Neil singing, that between twelve and one o'clock Ryan went to bed on a mattress laid on the kitchen floor, while, a little later, Haley shared with O'Neil, his wife, and their two children his host's only bed, the woman lying across the foot of the bed and the children in the middle. What transpired during the remnant of the night could not be fully established in evidence. The occupant of the kitchen floor admitted that he was too intoxicated to be aroused by anything that occurred. Haley testified that some time in the night, while it was still dark outside, he was awakened by one of the children crying for her mother; to his question where the mother was, the reply was that she had gone out. Haley and the two children were the only occupants of the bed at this time, O'Neil and his wife having disappeared. Haley went to the kitchen to get a drink of water, and there he saw Ryan lying on the mattress; and O'Neil, dressed and apparently asleep, at full length, partly on the mattress and partly on the floor. After satisfying his thirst he returned to bed and went to sleep. Some time later he was awakened by O'Neil getting into bed. Haley asked O'Neil where Hannah was; O'Neil replied that he did n't know, he supposed that she was in the other room, that she was all right and would look out for herself. Haley then fell asleep and knew nothing more till the milkman knocked at his usual hour, between five and six o'clock. That disturbance having passed over, Haley took another nap lasting, as he estimated, about half an hour, and was next aroused by O'Neil leaving the bed; he himself arose also and went to the kitchen while O'Neil passed into a small, unfurnished room adjoining the bed-room. In a moment O'Neil shouted to Haley to come and help him, that Hannah was stiff with cold; going to his aid, Haley found O'Neil in the act of raising his wife from the floor. Her only apparel consisted of a chemise and stockings, the rest of her clothing being in a pile at the foot of the bed on the bed-room floor. The two men lifted her up from the floor and carried her to the bed. As they did so, O'Neil noticing blood on his wife's chemise and person, exclaimed, "Oh! my God! look at the blood!" He quickly covered her with the bed clothing, then said, "She must have done something to herself and I 'll be blamed for it." Haley saw then that the woman was dead, and he said to O'Neil that his best course was to notify the police at once. O'Neil washed his hands, talking much meanwhile about his inability to bury his wife, as he had no money. Ryan was now awake and joined Haley in advising O'Neil not to go to work, but to report the affair forthwith at the nearest station-house. This counsel was not taken, but O'Neil left his house and went to the wharf where he was employed. Later in the morning he called upon some of his wife's relatives (her mother and brother) to notify them of her death. He told the mother that "Hannah had done something to herself so that she should n't have any young ones," intimating, as the mother understood him, that an attempt to procure an abortion was the cause of the death. To the brother he offered still another explanation, that she died "in one of her curious spells," and that he was afraid that he would get into trouble about it.

Meanwhile the police had received information of the woman's death, and the case came at once to the writer's notice for his investigation. I found the rooms in the possession of two officers who had O'Neil and Ryan under detention pending the inquiry. O'Neil's statement was that his wife Hannah went to bed about ten o'clock the previous night. After a while he and Haley went to bed in the same bed with her and the children, his wife lying across the foot of the bed. Some time in the night, when it was he did not know, Hannah left the bed. About twenty minutes past six he was awakened by Haley, who asked him where his wife was. He looked about and found her lying on the floor of the inner room, unconscious, cold, and breathing slowly. He put her into bed and left her. He explained his abandonment of her in that low condition by declaring that he supposed her to be playing one of her old tricks of getting on the floor when she had been drinking and avowing that she was going to die. He denied all knowledge of what had occurred to her in the night, and when his attention was called to the presence of blood on her clothing, he said, somewhat excitedly, "If anything 's happened to her, she 's done it herself."

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[1] Read at the annual meeting of the Massachusetts Medico-Legal Society, June 10, 1884.

[2] Taylor's Principles and Practice of Medical Jurisprudence, i., p. 677.

I found the woman's dead body lying upon its right side in a natural posture, at the front of the bed, fully covered with the bed clothing. It was still (at half-past nine in the morning) appreciably warm; rigor mortis was present in the elbows and knees. The only personal apparel was, as already mentioned, a chemise and stockings. The lower and posterior part of the chemise was saturated with blood; and the external genitals, the nates, and the upper part of the thighs, front and back, were blood-stained. The source of the hæmorrhage was not discovered at this time.

Proceeding to inspect the adjacent unfurnished room, where the woman had been found before her removal to the bed, I saw an ordinary, medium-sized wash-tub in the middle of the floor, containing fluid and clotted blood to the amount of four quarts. On the floor, between this tub and the corner of the room nearest the door of entrance, there was a blood stain measuring thirty inches by fifteen inches, with fresh, thick clots upon it. Lying at one side of this stain were an old dress skirt and an apron much soiled with blood. Careful examination of the floor of the bed-room and of the kitchen (all the floors were bare) failed to detect any blood stains in addition to the one above described.

The autopsy was made in the afternoon of the same day, or, as nearly as could be estimated, about nine or ten hours after the death. Omitting unessential details, the following appearances were disclosed: —

The body was that of a stout, strong, though very untidy woman, apparently in vigorous health at the time of her death. There was marked pallor of the surface except upon the right side of the neck and thorax, where patches of livid discoloration corresponded with the dependent part of the body as it lay, after death, in bed during the cooling stage. There were small ecchymoses in the following situations: above the right breast, on the front of the left arm, on the front of the right wrist, just below the bend of the right elbow, on the outer side of the left forearm, on the inside of the right thigh, and on the outer side of the left knee. Along the upper surface of the lower lip, just within the dermal border, there was a broken line of narrow ecchymoses, suggesting that the lip had been tightly compressed between the teeth.

The upper part of the vulva was the seat of the only lesion from which the hæmorrhage, previously mentioned, could have proceeded. This lesion, as the specimen exhibited shows, was a wound with regular, clean-cut, slightly curvilinear edges, one inch long. Its upper extremity was immediately below the clitoris, in the middle line of the vestibule or space between the clitoris and the urethra. It took a direction downward and outward, curving slightly to the left, its lower end being a little to the left of the meatus urinarius. It was half an inch deep at the deepest point. Its course from the surface inward was not direct, or parallel with the antero-posterior plane of the body, but there was a slight beveling from the left toward the right. In a wound so superficial and limited it was impossible to demonstrate the vessels involved in the incision, but the arteries most exposed to division were the terminal branches of the right internal pudic and of the inferior vesical.

The internal examination discovered nothing noteworthy or abnormal beyond the marked anæmia of all the organs and tissues. The stomach contained half a pint of undigested food. The womb and its appendages were healthy. The mucous membrane of the uterine cavity was slightly reddened, and the right ovary contained a typical corpus hæmorrhagicum of menstruation. The vagina showed no trace of blood. The brain was healthy. The exsanguine state of the body was the single striking feature which the examination revealed.

The autopsy having thus conclusively determined the cause of the death to have been hæmorrhage from a wound of the vulva, the next and equally important stage of the inquiry had for its object to decide the manner in which the wound was received.

Was the wound an accidental one? Nothing occurred in the entire course of the investigation to lend support to such a view. A moment's reflection upon the situation of the lesion will convince one that an accidental injury at that part of the vulva is hardly to be thought of as possible. The nates, the perinæum, the fourchette, and the posterior portions of the labia majora are the regions, if any, which receive accidental violence, while the neighborhood of the clitoris could be the seat of a wound by casualty only upon the supposition of the most extraordinary posture of the body in its relation to the wounding instrument. This wounding instrument, moreover, was not discovered in the room with the blood, and the absence of blood stains elsewhere in the dwelling indicated clearly that the entire affair had its scene in this bare apartment. Finally, it is scarcely credible that a woman, injured severely, and aware that she was becoming exhausted by profuse hæmorrhage, would suffer herself to bleed to death rather than to call her husband or her female neighbors to her help. It did not appear that any hint of her distress came to any one until she was found in the morning lying in a pool of her own blood; and this failure to summon assistance is a controlling objection to the theory that an innocent casualty caused the death.

Was the injury inflicted by the woman herself with suicidal intent? Her husband so asserted, but his assertion had no support in the facts or the probabilities of the case. Experience has shown that attempted suicide by mutilation of the genital organs is a very rare occurrence, and the recorded instances are confined almost wholly to the subjects of insanity and idiocy. The person bent on self-destruction does not usually take half-way measures, or inflict upon himself injuries whose issue seems to him clearly to be open to doubt. The surgeon and the anatomist know that wounds of the vulva are particularly grave because of the vascularity of the parts and the consequent danger of alarming hæmorrhage; but no one could seriously suppose that an ignorant woman, representing the lowest grade of intelligence, would select her vulva for a suicidal wound, when a cut across her neck or a thrust into her breast offered a much more accessible and certain passage to death. The wound itself, aside from its situation, offers some difficulties to the theory of suicide, for its dimensions, its depth, especially its direction, are not easily explicable upon the supposition that the woman's own hand held the knife.

But it is clear, without regard to these somewhat theoretical considerations, that certain indispensable data are wanting if we would establish that the wounding was done by the patient herself. Obviously a weapon or some sharp instrument was required for its accomplishment. No such weapon or instrument was found in the room. If the wounding was done in another room, and the woman then went to the room which was the scene of the hæmorrhage, or if, having cut herself in the latter room, she had then made her way to some other part of the house to hide the weapon or to destroy it, and had then returned to take her seat over the tub to slowly bleed to death, some sign of these journeyings would have appeared in the form of a trail of blood stains on the floor of the kitchen or bed-room or both; and this evidence was wholly wanting.

What, then, is left as a reasonable explanation of the wound, the hæmorrhage, and the death, except that they depended for a cause upon the act of some person other than the deceased? We must admit that all the facts in the case are in harmony with this view, and that nothing inconsistent therewith was developed in the course of the inquiry. The act of violence was not seen, it is true, by any third party; it occurred under circumstances known only to the single surviving participant in the affair, and his lips remain silent.

But it is in just such cases that medico-legal diagnosis has its greatest fascination. In a homicide, the evidence of which is complete through the testimony of eye-witnesses or the confession of the accused, there is but little to attract the medical jurist; his connection with the investigation becomes then a matter of form merely, and assumes relations of secondary importance. It is when the truth has to be sought out by devious channels, when an aggressive defense of a suspected individual puts the burden of proof most heavily on the servants of the State, when circumstantial evidence is the only reliance, and there are in reality two sides to the question, — it is in these exigencies that legal medicine has its greatest opportunity and its chief charm. The Parkman case would have lost half its interest and instructiveness if the janitor or some other person at the medical college had seen Webster strike down his victim. The famous cases of murder by poisoning are absorbing because of the doubts which they admit, and because of the manner in which those doubts are met by the tests of the laboratory, and by the close reasoning of the unpurchased expert. So, applying the ever-safe method of elimination to our examination of this vulval wound, studying its situation and direction, the circumstances which, at some distance, preceded and followed it, the data present, and the not less important data absent, the character and habits of the woman, her conduct with her carousing companions, the behavior of the husband and of his guests before and after the death of the woman, — in fine, considering all that the "view, personal inquiry, and autopsy" supplied as material for a differential diagnosis, and excluding such hypotheses touching the manner of the death as appear manifestly inconsistent with the facts, we are then in a good position to answer affirmatively the question, Was the death by homicide? The identity of the person who inflicted the fatal injury, his motive and his weapon, are matters of remote interest in their relation to the abstract question of the cause and manner of the death. They are almost exclusively within the province of the police detective, and do not concern the medical examiner except as they may supply confirmatory facts to buttress his conclusions. A brief allusion will be made to them in connection with the present case for the purpose of completing the story.

It must have been made plain in what has preceded that from the very beginning of the investigation suspicion fell upon O'Neil, the husband; indeed, he drew it upon himself by his own behavior. If he had been a cooler and less ignorant culprit he would have avoided the mistakes into which his apparent consciousness of wrong-doing led him. No one saw him in the act of injuring his wife, but the readiness, almost the eagerness, with which he tried to throw the blame of her death upon herself, his prompt avowal that he would nevertheless get into trouble on account of it, his retreat from the scene, and his frivolous excuses for doing so, — these turned attention toward him as the probably guilty agent. In harmony with these acts were certain points in direct evidence, such as the testimony that O'Neil left his bed for an interval during the night, and was discovered lying on the kitchen floor, his wife meanwhile missing; and the testimony of a woman up-stairs, that just before four o'clock in the morning she heard O'Neil and his wife quarreling, and was sure she identified the voices. Meagre as was the evidence, it satisfied the court of inquest which found O'Neil accountable, the municipal court which held him on the charge of murder, the grand jury which indicted him for manslaughter, the jury which found him guilty under this indictment, and the judge who sentenced him.

The motive for this crime is wholly a matter of conjecture. We may imagine that O'Neil and his wife, both inflammable in disposition, as the previous evening's events showed, found some cause for a quarrel after their guests had been disposed of for the night. The previous criminal relations of the woman with one of the men then enjoying her hospitality suggests that the use and abuse of the sexual organs may have been the theme of dispute. We may imagine that, as an outcome of the dispute, whatever its subject, O'Neil suddenly resolved to mutilate his wife in a way that should teach her a salutary lesson. It is not necessary to assume that he meant to injure her seriously, far less to wound her fatally; his purpose, probably, was chastisement only. His guests were deep in the sleep of drunkenness, or so appeared, and he himself was sufficiently alcoholized to render him more reckless than delicate in his cutting. We can suppose that the woman, finding herself hurt about her genitals and bleeding freely from the wound, took her seat over a convenient wash-tub, expecting, as one attacked with epistaxis expects, that every minute would see the spontaneous subsidence of the flow. Her husband having been her assailant, she would not call for his help, as she would have done very naturally if either of the other men had injured her. So, bleeding to syncope, as she sat on the tub, she at length fell to the floor, and presently died. Meanwhile the husband, not realizing the extent of his violence, and anxious not to awaken his bed-fellow, sought rest on the kitchen floor, where he was seen by Haley. Later, when all was quiet, and he felt quite certain that he could move about without disturbing any one, he resumed his place in bed, and remained there till the morning brought its sanguinary revelations.

The instrument, like the motive for its use, was almost wholly a matter of speculation. A knife was introduced in evidence at the trial, and the medical witness readily testified that it might have made the wound of the vulva. This knife was identified as O'Neil's: Haley had seen him cutting tobacco with it during the afternoon of their carouse. It was a knife such as a shoemaker uses for trimming soles; it had a blade about four inches long, which had become somewhat concave at its edge by long use and repeated grinding, but its rounded point was well sharpened. This blade was fixed firmly in a wooden handle. This weapon, if such it was, was found secreted behind a looking-glass in the kitchen, on the morning of the woman's death. It was given by the finder to another woman, who placed it in her stove for safe keeping over night. A fire was made in the stove by a third person, who had no knowledge of the contents of the oven, and the consequent baking and charring destroyed all evidence of blood-stain, if any existed. The person who found the knife testified that it was clean and bright when she first saw it.

But it will be proper to ask if such a wound necessarily implied the use of a knife to produce it. May not the lesion have been a contused wound, the result of a kick, the blow being received in such a direction and situation as to cause a solution of continuity simulating an incision. It is well known that the appearances of a cut may be closely imitated by a smart blow from a blunt instrument upon soft parts overlying bone, and cases are not wanting in which a wound of the vulva produced by a kick or a fall has given rise to grave doubt whether or not a weapon has been used.[1] While admitting the possibility of fatal hæmorrhage from a contused wound of the pudendum, and even granting that a kick with the shod foot might divide the tissues and leave something of the appearance of a cut upon them, it must nevertheless be insisted that the vertical direction of the lesion in the present case, its clean-cut, regular edges, its smooth inner surfaces, the absence of swelling and of ecchymosis in the adjacent parts, are quite strong points of proof that a cutting rather than a blunt instrument was used.

But however wisely or wildly we may speculate upon questions whose solution is difficult or impossible through a want of satisfactory data, the most important feature of the case remains well-founded, as an instructive medico-legal fact, and it is to this that I give the concluding word. This is the material and significant reality that within the space of five hours (taking outside limits of time) a strong, plethoric, and healthy woman bled to death by a wound of the vulva an inch long and half an inch deep. Such an occurrence, if standing alone as one observed for the first time, would be regarded as extraordinary, perhaps as incredible; but it is fortunate in being in accord with similar observations recorded in surgical and medico-legal writings. It is really a typical example of an interesting class. Ogston[2] quotes the case of a woman who died in ten minutes after receiving two wounds about the genitals, one on the left labium and the other at the entrance of the vagina at its upper part; the fact that she was pregnant, and that the vascularity of the parts was thus increased, may have had some influence upon the rapidity of the hæmorrhage. Taylor[3] alludes to the case of a woman, eight months pregnant, who "fell from a chair, which also fell with her. There was hæmorrhage, and she died in a quarter of an hour. The blood had flowed from a wound an inch and a half long, situated between the right labium and the urethra." In another case[4] "a contused wound of the clitoris proved fatal. A woman, aged thirty-six, received a kick from her husband in the lower part of the abdomen while she was in a stooping posture. When seen, in about three quarters of an hour, she had lost from three to four pounds of blood; she was sinking, and expired a few minutes afterward. The wound was at the edge of the vulva, extending along the ramus of the pubes; it was about an inch long and three quarters of an inch deep. The left crus clitoridis was crushed throughout its length." These cases are of use in teaching the medical witness that, whether in the presence of a jury or elsewhere, he should be economical in the use of terms like "impossible," or "incredible," or "inconceivable."

A CASE OF ACUTE HEMIPLEGIC CHOREA; WITH AUTOPSY AND REMARKS.

BY RALPH M. CANFIELD, M. D., AND JAMES J. PUTNAM, M. D.

The following case is, from several points of view, one of unusual interest: first, as being a typical example of a comparatively rare affection, unilateral chorea in the adult, traceable to a distinct organic lesion in the brain; then, because it is remarkable that this lesion — involving, as it did, a portion of the crus cerebri — did not give rise to paralytic symptoms of more pronounced character; and, finally, because of the points in diagnosis and treatment to which it calls attention.

The patient was a man of fifty-nine years, of large frame, and of robust type. For the past fifteen years he had been quite intemperate, and this habit had grown upon him, until for the past eight months he had taken daily six or eight potions of best rye whiskey, with now and then a spree of two or three days' duration. Otherwise his life had been an average one, and his family history is one of peculiar longevity, with no cerebral or other marked diseases. His wife says that for a year past he has been more irritable than formerly.

For some weeks previous to the onset of serious symptoms his family had noticed choreic movements in his right arm and leg, and for the last week a slight dragging of the leg. In ascending stairs, however, he had used his feet equally well, so that there could not have been any paralysis in consequence.

On August 5th his wife came to ask medical advice, and gave the above history, adding that the movements had become more violent and constant, but that they ceased entirely during sleep. The previous night, however, sleep had been impossible. The patient was ordered twenty grains each of bromide of potassium and hydrate of chloral, which gave him a comfortable night. The next day he was examined carefully and the following condition noted, which remained without essential change until shortly before his death: —

The right arm and leg were found to be in violent and constant motion of a distinctly choreic type, but involving the muscles of the larger joints — hip, shoulder, etc. — even more than those of the smaller.

The face was apparently still, but the articulation was nevertheless somewhat thick. At times the right side of the face seemed to move less well than the left, but the tongue was protruded straight. The movements increased in violence when any attempts were made to use the limbs, and although the patient declared himself unable to check them by voluntary effort, yet it was striking to observe how, if the arm were drawn quietly to the side and the patient strictly enjoined to lie still and close his eyes, the movements would cease for a moment and the patient sink into a half sleep.

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[1] Taylor's Principles and Practice of Medical Jurisprudence, i., p. 678.

[2] Lectures on Medical Jurisprudence, p. 186.

[3] Principles and Practice of Medical Jurisprudence, i., p. 677.

[4] Lancet, October 31, 1846, p. 478.

No diminution of gross strength could be observed in the affected arm or leg. The knee and ankle reflexes, which were normal on the right side, were wholly absent on the left. The plantar, cremaster, and umbilical reflexes were absent on both sides. The sensibility to the prick of a pin seemed less over the affected side, though this may have been due in part to the engrossing influence of the movements. No finer tests were possible. The patient complained of no pain or sense of numbness, but said the skin felt sore or raw, as if flayed, over the right arm and leg.

His intellect was slightly clouded, but at times, when aroused, he seemed quite rational.

The surface temperature of the right arm and leg was markedly higher on the right side, but perhaps not more so than could be accounted for by the constant motion. Still, these parts had a turgid feel, and the skin over them, as well as that over the right side of the face, was slightly reddened. There was no change in the acuity, or field of vision, nor in the movement of the eyes. Pulse full and strong; somewhat tense. Respiration normal. Heart not enlarged; sounds normal.

In spite of the movements the patient was able to walk across the floor to the bath-room without help. Micturition voluntary.

The temperature at this period was normal, or slightly elevated (99.5° F.); but in the last days of the patient's life it ran up to 102° F., the pulse and respiration becoming at the same time rapid and feeble.

The bromides, chloral, morphia, and valerianate of zinc were given in full doses, at different periods, to check the movements, but as they failed to do so satisfactorily the fluid extract of conium was substituted. Sixty minims of this were given the first day, and the dose was gradually increased until, on the third day afterward, he took six drachms in twenty-four hours. Then for the first time the characteristic effects were seen, namely, paresis, first of the eyelids, soon afterward of the arm, and later of the leg. The conium was then discontinued for the time.

The next day he seemed quite comfortable and took a generous diet, including milk punch, beef peptonoids, eggs, chicken, etc. The involuntary movements had almost ceased, and he slept quite naturally during the night and somewhat during the day.

On the following day the movements reappeared. The conium was again commenced and carried up to full doses with but very little, if any, effect, and six days later (August 19th) Fowler's solution was substituted. Twenty-four minims in the twenty-four hours were given at first, and the dose was gradually increased until, on August 22d, he took forty-eight minims, which produced the characteristic symptoms of puffing of the lids, etc. The effect of this seemed to be beneficial, but it had been evident for some time that the patient had been failing in both mind and body, and was now nearing his end.

On August 23d the pulse became small and weak, the temperature began to go up, the respiration became frequent and hurried, and his exhaustion increased rapidly. The stimulants were increased, but the system failed to respond. He became semi-comatose, and died August 25th, having been unconscious for the previous twenty-four hours.

On the day before his death the respiration numbered fifty-two and the temperature was 102° F. On the morning of his death the respiration had reached ninety-two.

The autopsy was performed forty-eight hours after death. As the weather was warm the abdominal organs had become somewhat discolored and decomposed, rendering it difficult to affirm the presence or absence of finer changes of structure in them. The brain, however, was well preserved, and we shall confine our report to that, as being manifestly the seat of the disease.

Calvaria rather dense, but of even thickness and without erosions; dura unusually adherent in spots.

Dura normal, sinuses nearly empty of blood.

Pia not at all, or but slightly, opaque; contains a moderate amount of fluid in its meshes. No marked atrophy of convolutions. Vessels contain but little blood. About one ounce of nearly clear fluid left in skull after removal of brain.

Vessels at base of brain excessively atheromatous, the larger ones not collapsing at all when cut across. The lumen of some of the vessels is materially encroached upon by this degenerated tissue, which is separable in large flakes. All exposed vessels examined for plugging, but none found.

Ventricles of brain essentially empty.

Cut surface of hemispheres pale; clings to section knife; no puncta cruenta; gray matter everywhere ill-defined.

Parallel frontal sections [1] were next made through the brain from before backward at intervals of about half an inch or less. No lesions were seen until the cut passing through the base of the anterior transverse convolution and the anterior extremity of the nucleus lenticularis was reached.

Scattered over the cut surface of the latter ganglion, in the *left* hemisphere, were several minute, brownish spots of softening, two or three millimetres in diameter, not involving the capsula interna. In the corresponding ganglion of the *right* hemisphere, one or two similar spots were seen, and another, somewhat larger, in the white substance just above the nucleus lenticularis, and just at, or outside, the limits of the capsula interna, strictly speaking.

One or two similar spots of softening were seen on several subsequent sections, but they were confined to the nucleus lenticularis except at one spot, in the left hemisphere, where a portion of the capsula interna adjacent to a spot in the upper edge of the nucleus lenticularis seemed a little softened. Some of the spots were rather linear than round, and evidently marked the course of vessels, although no distinctly thrombosed vessel were seen.

Up to this point both hemispheres had been nearly equally affected (the left, to be sure, the most), but the next and largest lesion involved the left side alone. This was first seen on the cut dividing the crura cerebri just after their emergence from the brain, as a dark brown spot about two millimetres in diameter, at the junction of the middle and outer third of the pes cruris, a little below the substantia nigra. Careful examination subsequently showed that this spot was the lower edge of a mass of somewhat softened and partially necrosed tissue, of the size of a large pea, though of more oval shape, and with its long diameter passing obliquely inward and upward through the inner half of the crus. The substantia nigra was involved, and the neighboring portions of the tegmentum cruris, but the lesion did not penetrate the thalamus opticus, which appeared healthy on all sections. The only ganglionic matter involved besides the substantia nigra was (probably) the so-called ganglion of Luys. In other words, this collection of diseased tissue lay in the inner half (mainly in the inner third) of the crus cerebri opposite the posterior portion of the thalamus. It involved the substantia nigra, together with the pes cruris beneath, to the depth of five or six millimetres, and the tegmentum above almost to the centrum rubrum. It was bounded behind by a (frontal) plane drawn through the posterior edge of the corpus candicans, and in front by another plane nearly one centimetre in advance of this.

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[1] After the manner of Pitres.

The diagrams given by Meynert at page 694 of Stricker's Handbook of Histology (American edition), and by Wernicke at pages 64 and 66 of his Lehrbuch der Gehirnkrankheiten, indicate very well the level of the lesion.

Cerebellum, pons, and medulla oblongata were normal, except that, like that of the rest of the brain, their tissue was very anæmic.

Microscopic examination of the softened tissue in the crus, as well as of the minute spots in the nuclei lenticularis, showed them to consist of disintegrated brain tissue, masses of granular bodies and granules of free fat, and occasional crystals of hæmatoidine. The walls of the smaller vessels contained masses of pigment, and their sheath was often crowded with granular bodies. The cells of the substantia nigra in the affected part were also seen to be in every stage of degeneration. Some of them were still recognizable from their pigment, while others had evidently lost their pigment, though still of characteristic size and shape.

The mode of onset and the progressive course of the disease in this case, — the clouding of the mental functions, the disappearance of the reflexes, the slight unilateral impairment of sensation and motion, — marked it, even before death, as being probably of organic origin, and to be ranked with the so-called pre- and post-hemiplegic disorders of movement. Nevertheless, before inquiring into the physiological pathology of the chorea in its relation to the lesions actually discovered, it is important to bear in mind that equally violent and exactly similar movements are capable of coming on, and lasting for long periods, without the influence of any gross lesion whatever.[1]

A knowledge of this fact ought surely to make us careful *what rôle* we assign to the hæmorrhages and softenings that have been observed in cases like that before us, though it does not in the least impair the value of the many observations, which show, on the whole, a remarkable constancy in the seat of the majority of the lesions with which these disorders of movement, *so far as they have been of organic origin*, have been found to be associated.

It is unnecessary to review the history of this subject at any great length.

These disorders of movement were first called attention to by Mitchell, in 1874, and by Charcot at about the same period, under the name of post-hemiplegic chorea, and since then have especially engaged the attention of many observers.

The investigations of Gowers[2] have made it clear that there is a whole family of symptoms of this class, embracing the post- (and pre-) hemiplegic chorea and the athetosis of Hammond, as well as a variety of intermediate forms, characterized by slow or quick, regular or irregular movements, some of them occurring only in connection with voluntary motions on the patient's part, others spontaneous or (as in the present case) only exaggerated during voluntary efforts.

Almost invariably these disordered movements are associated with incomplete paralysis either in the progressive or the regressive stage, but occasionally they occur without paralysis, and in one case a totally paralyzed limb has been reported to be the seat of the spasmodic movements. (Bernhardt.[3])

The different members of this family of symptoms are certainly closely related, since it sometimes happens that in the history of a single case several of these different forms of movement are successively or simultaneously present.

We must wait until more is known of the anatomy and physiology of the central nervous system, and until a larger number of autopsies have been made, before we can satisfactorily discuss the physiological pathology of these interesting phenomena.

Judged from the standpoint of gross anatomy, the bulk of the evidence points to the thalamus opticus and its immediate neighborhood, especially the region supplied by the posterior external thalamic artery, as the favorite seat of the lesion,[4] and here it was found in the case before us, as well as in the similar one recently reported by Greiff. (Vide below.)

Significant as this fact is, however, it cannot be taken as proof that the symptoms are always due to a disordered action of that ganglion, for in other cases the apparently effective lesion has been found in the nucleus lenticularis, the capsula interna, the pons and medulla, the cortex cerebri, and, finally, it has been shown that similar symptoms may occur without any gross lesion whatever (see above), as in the chorea of children.

Although we cannot assert the cause of these symptoms, we can say that the explanation offered by a number of observers (Kahler and Pick, Démange, Greiff,[5] and others), that they are due to a direct irritation of the great motor tracts of fibres running from the brain to the spinal cord, is anatomically and physiologically improbable, and that it has really only its apparent simplicity to recommend it. Were this explanation correct, then lesions of these tracts at any part of their course should have this effect, whereas, in fact, it only follows lesions at or above the level of the medulla oblongata.

This is a significant fact when we remember that these are the lowest stations which contain coördinating arrangements of any complexity. Furthermore, it is noteworthy that no experimental excitations below the level of these organs are capable of causing generalized convulsions in animals. (Nothnagel.)

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[1] [illegible], Arch. f. Psychiatrie, etc., [illegible], p. [illegible]

[2] On Athetosis, etc., Med. Chir. Trans., vol. lix., 1876; and Brain, 18[illegible].

[3] Berl. kl. Wochenschr., 18[illegible], No. [illegible].

[4] See the [illegible] by Kahler and Pick, Beiträge zur Pathologie, etc., [illegible], 1879; also Grasset, Maladies du Système Nerveux, p. [illegible]

[5] Arch. f. Psychiatrie, etc., Bd. xiv., p. [illegible]. This observer reports a case [illegible] closely resembling our own both clinically and pathologically.

In other words, it would seem that the efficient factor is the irritation, not of the motor tracts of fibres, but of the ganglia lying near them.

It is true that many of the lesions found in these choreiform cases are in such a position that they *might* irritate the motor tracts. This is true also of our case. But so also there are other disturbances which these lesions might, and indeed must effect, and chief among them is the damaging of the associating tracts between the various cerebral centres, with which the direct motor tracts in the cerebral portion of their course are everywhere interlaced. This is, physiologically, almost equivalent to an injury of the centres themselves.

In our opinion, the most natural way of regarding these choreic movements is to suppose them produced in disease by similar means to those which would produce them in health.

There are various coördinating ganglia in the brain which, in health, probably act sometimes together, sometimes separately, in the production of coördinated movements. In disease these same ganglia are also sometimes set in action, but by some other than the normal mode of excitation, and in such a manner that the results of their activity suggest the motion of a machine, of which the parts are out of gear or the balance-wheel destroyed. Why lesions in or near the thalamus opticus should be especially prone to produce this result cannot be explained.

In whatever way the motor-coördinating apparatus is called into this uncontrolled activity, the movements which come to the front are probably those expressing the average mode of activity of the ganglionic masses concerned, that is, they are movements of most habitual recurrence; and it is therefore not remarkable, that cases with different lesions, and with lesions in different localities, should bear a certain likeness to each other. Neither can we agree with Nothnagel in regarding it as improbable that similar lesions should give rise now to slow and regular, now to quick and irregular movements, unless, indeed, we deny that the individual himself makes use of one and the same nervous centres for movements of these different grades, a position which could not be maintained.

The case before us could not, to be sure, be used as an argument against the view of Kahler and Pick and Démange, since the lesion bordered closely on the motor (volitional) segment of the crus cerebri (the middle third), and even encroached on it to some extent. The bulk of the lesion, however, lay partly in the inner third of the pes cruris, partly in the fibres of the tegmentum, and it is this latter part of the lesion which, reasoning from the other cases reported, we suspect to have been the really efficient factor. It is not to be forgotten that there were several very small patches of softening in the nucleus lenticularis. Their influence in the result is problematical; but from the fact that they were present to a nearly equal degree on both sides, it is not probable that they caused the purely unilateral choreic symptoms. Possibly the injury done to the substantia nigra, which receives fibres from the nucleus lenticularis, and discharges others into the pes cruris (Wernicke), may have played its part also in the result.

At all events this case is certainly to be ranged with the now considerable number of those in which the region supplied by the posterior thalamic artery has been found diseased, a fact for which at present no explanation can be given.

THE CASES OF THE SURVIVORS OF THE LADY FRANKLIN BAY EXPEDITION.

BY EDWARD H. GREEN, PAST ASSISTANT SURGEON, U. S. N.

As a preliminary to a medical history of the cases of the survivors of the Lady Franklin Bay Expedition, it is well to give a brief *résumé* of their mode of life at Camp Clay, their quarters, rations, etc., so as to better appreciate the condition in which they were found.

On September 29, 1883, Lieutenant Greely landed with his party at Baird Inlet after thirty days' exposure drifting on an ice-floe. The record left at that time stated the *party was all well.* Having sent an advance detachment ahead, it was found and reported that a *cache* of provisions existed at Cape Sabine (fifteen miles farther to the northward than he was at this time); it was deemed expedient to move the whole command up to that neighborhood, rather than send for the provisions and winter at Baird Inlet. Finally, on October 25th, they moved around to a point between Cape Sabine and Cocked Hat Island (latitude 78° 45′ N., longitude 74° 15″ W.). The site of their winter quarters was sheltered between high ridges of mountains, which screened them in a measure from the northerly and southerly winds. A glacier was situated at the foot of the mountain on either side of them about a mile distant. They constructed a house of loose rock and moss, the walls being three feet in thickness; the roofing consisted of old canvas stretched over a boat; the dimensions of the house were twenty-five feet long, seventeen feet wide, and four feet high, making the cubic air space 1,700 feet. In this the twenty-five members of the party lived all winter, having a cubic air allowance of about seventy feet for each man. The whole party could barely squeeze in and lie at length, two or three being obliged to occupy the same sleeping bag; the effect of this diminished air space will be seen later on. Their hut was but one hundred yards removed from the ice-foot of the Sound, and two hundred yards to the south of them was an artificial lake, from which they drew their water supply by melting ice. As the sea water strained into this lake, they were drinking brackish water all the while.

On November 1st Lieutenant Greely took a careful account of his stock of provisions, and found there was but a whole ration for each man (estimated as an army ration, about forty-six ounces solid food per diem) for forty days. Dr. Pavy and he advised together, and it was with some reluctance that they determined to divide up the rations so as to make them last until March 1st, putting aside from time to time, so that at the end they would still have ten days' supplies left with which to attempt the trip to Littleton Island if the straits were frozen over. Dr. Pavy did not think the party could exist on the ration during the winter, but the common voice was to make it go as far as it would, so each man was given the following daily allowance: —

Meat and blubber	4.33	oz.
Bread and dog biscuit	6.5	"
Canned vegetables and rice	1.4	"
Butter and lard	.75	"
Soup and beef extract	.90	"
Berries, pickles, raisins, and milk . . .	1	"

making the daily allowance for the four months 14.88 ounces. During the winter the following amount of game was secured, which added to their stores: two seals, yielding about 120 pounds of meat: one bear, yielding 300 pounds of meat; eight foxes (four pounds each), and sixty dovekies (Uria Brünnichii), a small bird weighing about a pound.

March 1st found the party intact, with the exception of Sergeant Cross, who died in January with well-marked scorbutic symptoms, the only case of pronounced scurvy that developed; and Hans, their Eskimo hunter, who was lost in his boat while hunting seals early in February. The straits having been kept open during the winter by a succession of violent gales, the attempt to cross to Littleton Island had to be abandoned, and their ration was still further reduced to the following allowance: meat, 6.8 ounces; bread and dog biscuit, 3.2 ounces, — the rest of their stores being exhausted. The stores were divided up so as to last until May 12th. The sun had returned by this time, after an absence of 128 days, and those employed as hunters caught the sea fleas, or shrimp, a small crustacean, one eighth to one fourth inch long, consisting of about four fifths shell and one fifth meat. From one to three ounces of these a day, according to the catch, were allowed in addition to the ration. After the last reduction, the party began to weaken and die off rapidly.

About the 24th of March the whole party was overcome with asphyxia and nearly lost their lives, owing to the atmosphere being surcharged with carbonic acid. They had lit their alcohol stove in the hut to cook a meal, without previously having removed the rags from the vent-hole in the roof; the remaining oxygen of the air was soon consumed by the stove, and the whole party were seized with faintness, vertigo, and dyspnœa. It was with the greatest difficulty they struggled from their sleeping-bags, and stumbled and were helped into the open air, many fainting away and dropping unconsciously after reaching the opening; being poorly clad for a temperature such as prevailed outside at the time (— 46° F.) many were frost-bitten. The after effects of this mishap remained for a long time and weakened many of them.

After May 12th everything like a regular ration was exhausted, and they struggled on as best they could, catching the shrimp (which they boiled), gathering reindeer moss, which, when boiled, yields a mucilage, similar to Iceland moss, and boiling up the seal-skin linings of their sleeping-bags from which a gelatinous moss was extracted. It was not till they had exhausted the supply of moss around the camp that they gathered the black lichen (*tripe de la roche*) growing on the rocks, and boiled that. Dr. Pavy urged strongly against its use, as he had the authority of Kane and Hayes that when eaten it would produce a diarrhœa which, in their weakened condition, would be fatal. They had no fuel for artificial warmth, and barely sufficient to allow for melting the ice for procuring drinking water and to cook a meal every other day, so that the living temperature of the hut for the winter was from 5° F. to 10° F.

They recognized the fact that the nearest they could approach a state of hibernating, the better were their chances of getting through. Only those employed as cooks and hunters exerted themselves much, and they were given a double ration; the rest of them occupied their sleeping-bags, and slept sixteen to eighteen hours out of the twenty-four. In answer to complaints of hunger, Dr. Pavy's motto was, "*Qui dort, diné;*" which was philosophical, without being filling.

There seemed to be but little acute suffering from the lack of food. It was only after the introduction of food into the stomach that the craving became great. For days they went without food without actually suffering; the deaths seemed to take place finally from heart trouble (*hydrops pericardii*); the feet and face became œdematous; for a day or so the individual would complain of pains over the heart, have a spasm of pain over præcordia, a slight general convulsion, and all would be over. Their chief suffering during the winter was from constipation. Many went eight to ten days without a stool, and one as long as sixteen days; the fæces became so hardened and impacted in the rectum that at each operation they were obliged to dig the fæces out with their fingers, the abdominal muscles being too weak to extrude the mass. Nearly every one would faint, after having a stool, from sheer exhaustion.

When it is considered that for nine months they were on the ration as detailed, had nothing but brackish water to drink, no artificial warmth, living in a temperature of 5° F. to 10° F. for the winter, with a cubic air space of seventy feet per man, the condition in which the survivors were found will not be wondered at. There were but seven out of the twenty-five found alive; these were: A. W. Greely, first lieutenant U. S. A.; Henry Beiderdick, hospital steward; D. L. Brainard, sergeant U. S. A.; Thomas Connell, private U. S. A.; Joseph Ellison, sergeant U. S. A.; Julius Fredericks, sergeant U. S. A.; Francis Long, sergeant U. S. A. The four first mentioned were taken on board the Flagship Thetis, and placed under my care, and with them this paper will principally be concerned.

On landing at the camp, the condition of the party was so desperate that a delay of two hours was necessary to restore them sufficiently to permit their being removed on stretchers to the boats and taken off to the ships. Thomas Connell, private, was "in extremis," was pulseless, unconscious, and unable to swallow, limbs cold, and respirations barely noticeable; auscultating over the heart, the sounds were heard very indistinctly. By propping him up, forcing open the jaws, a teaspoonful of brandy was slowly poured into the back of the throat. The effect of the stimulant was soon noticeable, as a faint pulse appeared at the wrist; in ten minutes he could make an effort to swallow, when more brandy was administered, followed by some warm condensed milk at intervals. The rest of the party were served with brandy, milk, and beef essence, and finally transported to the ships.

The time and space would hardly be allowed me to give more than a brief detail of the cases; and as they closely resembled each other both in symptoms and treatment, I will confine myself to the case of Lieutenant A. W. Greely more particularly, alluding to anything peculiar in the other cases.

June 22d, eleven P. M. A. W. Greely, lieutenant United States army, aged forty. Disease, asthenia. On admission fainted, after being carried below, in the ward-room, and vomited. Administered ammonia spts. aromat. m. x., renewed in ten minutes; placed in the berth; given a teaspoonful of raw fresh beef, minced; his clothes were carefully cut off, and heavy red flannels, previously warmed, substituted.

On examination his body emitted a sickly, offensive odor, as of stale urine; emaciated to a degree. Skin hanging from limbs in flaps; face, hands, and scalp blackened with thick crust of soot and dirt (had not washed or changed clothing for ten months).

Nervous system: Excitable and irritable. At times almost irrational, eyes wild and staring; insists on talking, craving news, and demanding food; complains of no pain.

Digestive system: Tongue dry and cracked; heavy brownish black coat; ravenously hungry; abdominal cavity empty, and lying almost in contact with vertebral column; no movement of bowels for six days; liver, dullness on percussion, confined to right hypochondriac region.

Respiratory system: Respiration 12 per minute; auscultation and percussion reveal no abnormal condition of lungs; vesicular murmur puerile.

Circulatory system: Pulse 52, soft and compressible; auscultation shows marked murmur (blowing) in systole over base of heart.

Integumentary system: Skin cold and clammy, sickly odor emanating from it, shriveled and sallow. Temperature 97.2° F. (under tongue).

Locomotor system: Great muscular waste; unable to move or stand without support. Body, weight 120 pounds. Weight before leaving Fort Conger in August, 1883, 168 pounds.

Urinary system: No specimen obtainable.

Treatment: From eleven P. M. till eight A. M., alternating every half hour, teaspoonful of raw fresh beef, minced, with teaspoonful of milk punch. Enjoined strict quiet. Pulse then rose to 60 per minute, soft. Temperature 97° F.

June 23d. Nervous system: Mind still active and restless; compelled to allow him some home letters to read, after which became more composed; has not closed his eyes; talks rationally, but shows loss of memory, as often repeats himself.

Digestive system: Had a small, highly offensive stool; felt quite faint afterward; passed considerable wind from bowels; abdomen tympanitic; tongue still dry and coated.

Circulatory system: Pulse slightly stronger, 60 per minute. Respiration 12 per minute.

Integumentary system: Same offensive odor. Temperature: A. M. 97.8° F.; P. M. 98° F.

Locomotor system: Still unable to raise himself up without help; muscles very soft and flabby. Some stiffness and pain in the joints.

Urinary system: Urine passed in twenty-four hours. 1630 cc., specific gravity 1014, acid, highly albuminous ($\frac{1}{10}$ tube).

Treatment: Continue raw fresh beef at intervals of an hour with a raw onion, finely cut up, added; also milk punch one ounce every two hours; no medication.

June 24th. No sleep; mind more tranquil, but too active; great desire to talk and read; less persistent in demanding food; complains of soreness in limbs; tongue presents a moister appearance; bowels slightly distended with gas; no stool; pulse 62, not so thready; heart sounds stronger, still a pronounced anæmic murmur; blood examined microscopically shows large increase of white corpuscles, at first the field ($\frac{1}{10}$ objective) appeared filled with the nucleated corpuscles; close examination showed the proportion to be about one to twenty red; the red corpuscles show but little disposition to cohere and run into "*roleaux*," and lacked the distinctive biconcave disk shape; edges full and round (not ragged); urine passed in twenty-four hours, 1660 cc., highly albuminous; no casts revealed by microscope; skin clammy, dirty mottled yellow; temperature: A. M. 97.6° F.; P. M. 98° F.; muscles sore; slight œdema of hands and ankles.

Treatment: Sponging with tepid water, afterward briskly rubbed with flannels and a little lin. sapo.; small quantity of oatmeal, thoroughly boiled, four ounces allowed in morning; beef essence Liebig's ℥i. in hot water every four hours; continue scraped beef and onion; no medication.

June 25th. Marked improvement; mind more tranquil; talks quietly without excitement; slept two or three hours naturally; awoke refreshed; tongue beginning to clean; had a large, dark semi-solid stool, odor offensive in the extreme; evidently but little biliary secretion poured into alimentary canal; pulse 65, some strength; respiration 14, principally costal; skin losing clammy feel; emanations still sour and offensive from it; temperature: A. M. 98.2° F.; P. M. 98° F.; muscles sore, ankles puffed.

Treatment: Shampooing muscles with dry cloths; no change in diet; no medication.

June 26th. Allowed to sit up in bed and read a little; slept six hours soundly during the night; mind tranquil; has a loss of memory of words; tongue cleaning, still heavy coat at the back; bowels moved twice; stool pitchy and offensive; abdomen tympanitic, considerable borborygmus. Pulse 65; heart sounds stronger, murmur still pronounced. Urine passed in twenty-four hours 1800 cc., specific gravity 1016, albumen not decreased; no change in condition of skin. Temperature: A. M. 98° F.; P. M. 98.8° F.

Treatment: Sponging and friction; same dietary with tr. ferri muriat. five c. c. t. i. d.

June 27th. Still extremely weak; voice stronger; mind easier; amnesic aphasia marked; appetite still morbid, always hungry; considerable flatulency; no stool. Aspect of skin somewhat improved in appearance, still dirty yellow (no spots). Temperature: A. M. 98.4° F.; P. M. 98.8° F.; pulse 66; respiration 14. Urine albuminous ($\frac{1}{12}$ tube), 1950 cc. in twenty-four hours, specific gravity 1018. Muscles beginning to fill out; very soft.

Treatment: Dietary increased to eight ounces broiled steak in morning; continued tr. ferri muriat.

June 28th. Gaining strength; dressed and sat up for a couple of hours, then felt exhausted and returned to bed. Mind quite tranquil; slept well; appetite still morbid; bowels moved; no change in character of stool; liver still inactive. Pulse 66, fairly good tone; anæmic murmur not so marked. Temperature: A. M. 98.2° F.; P. M. 98° F. Urine passed in twenty-four hours 1860 cc., specific gravity 1018; albumen present.

Treatment: Takes food at five stated intervals: six A. M., oatmeal, four ounces, broiled steak, eight ounces; ten A. M., Liebig's beef essence, one drachm in teacup of warm water; two P. M., one soft-boiled egg, with milk toast; six P. M., raw minced beef and onion; ten P. M., Liebig's essence of beef. Continue tr. ferri muriat., six c. c. t. i. d.

June 29th. Dressed and assisted to walk in ward-room a few steps. Muscles soft, very weak; limbs filling out; body weight, 129½ pounds (gain of nine and one half pounds for the week); pulse 68; urine 1650 cc. in twenty-four hours, albumen less; temperature, A. M. and P. M., normal; bowels moved naturally, stool still pitchy and offensive.

Treatment: Continue the same.

June 30th. Sleeps naturally, and awakes refreshed; allowed to read and talk; walks around for an hour or so with support; limbs filling out; feet œdematous toward night; appetite still morbid, unable to be satisfied with his allowance; good movement of bowels; albumen disappearing; heart sounds stronger; temperature normal. Continue restricted diet and iron.

July 1st. Felt quite refreshed on awaking; had slept well during the night; enjoyed morning meal, and ate without asking for more; as the sun was shining brightly, was assisted on deck, and sat in the air, well bundled up, for an hour; had but little appetite for midday meal. At four P. M. a small, dark, offensive stool; strained considerably, and was much exhausted afterward (nearly fainted). Administered spts. frumenti, half ounce, in aqua, at six P. M. Complained of severe pains in abdominal muscles and over the region of the liver (pains resembling hepatic colic); considerable febrile disturbance; pulse 98; temperature 100.2° F. Administered quin. sulp., at eight P. M.

July 2d. Feels much prostrated and weak; muscular pains and soreness over abdomen and back; complexion sallow; appetite poor; temperature: eight A. M. 98.8° F.; twelve M. 99° F.; four P. M. 99.2° F. Exhibited hydrang chlorid. mit., three cc., at eight A. M. Repeated dose at two P. M. Bowels moved three times; last evacuation watery; felt weak, but free of cramps; headache disappeared. Light diet of oatmeal and milk. Discontinued tr. ferri muriat.

July 3d. Still weak; muscular soreness over abdomen; no sharp pains; two loose evacuations from bowels; appetite returning; pulse 68; temperature normal; whiskey toddy, half ounce, t. i. d.

July 3d. Considerable improvement; pains have disappeared from muscles; tongue cleaner; complexion better; allowed to sit up to his meals; urine much improved, albumen ($\frac{1}{30}$ tube) specific gravity 1022; resume tr. ferri. muriat.; also vin. Portense ℥i. t. i. d. before meals.

July 4th. Gaining strength gradually; muscles soft; knees weak; encouraged to take some exercise daily, weather permitting, in the open air; digestion good; appetite under better control; liver still torpid; regular movement of bowels; skin clearing; lost clamminess; sleeps well; continue same. From this time forth gradual improvement; blood again examined microscopically shows marked diminution of white corpuscles. On July 8th no albumen found in urine. On July 12th anæmic murmer very indistinct. On July 17th arrived at St. John's; condition sufficiently to warrant his going ashore for exercise; muscles still weak and sore; filled out rapidly.

July 19th. Had a slight attack of intestinal indigestion; was living ashore at the consul's, and committed an error in diet; suffered for three days.

July 25th. Allowed to eat three full meals daily, with certain articles restricted; encouraged to exercise in open air. On the trip from St. John's to Portsmouth, N. H. (July 26th, August 1st), ran into damp moist weather; felt much prostrated, and muscles ached. Given quin. sulp. 18 cc. every night during the passage. On being transferred at Portsmouth, his body weight was 169 pounds, representing a gain of 49 pounds in six weeks: 9½ pounds first week, 15 pounds second week, 8 pounds third week, 7 pounds fourth week, 5½ fifth week, 4 pounds sixth week.

Remarks: Vital depression as exhibited by the tempt. not marked; digestion fairly good all the time; nervous system soon calmed; microscopic examination of blood disappointing, exhibiting no unhealthy character of red blood globules; albumen disappearing; anæmic murmur disappearing, showing simply due to hydræmic condition of blood; liver not secreting; large gain in weight, due to rapid assimilation of food; owing to great muscular waste large urinary excretion (1950 cc. in one day), due doubtless to almost total inactivity of sudorific glands.

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CAUSES OF DISCOLORATION IN GOLD FILLINGS IN TEETH.

BY WILLIAM HERBERT ROLLINS.

As pure gold is not supposed to discolor, the causes must be other substances which may be introduced in one or more of several ways: they may be present in or on the gold foil when received from the makers; they may be introduced by the operator in making the fillings; they may be present in the mouth itself.

The best way to begin the investigation was evidently to collect the discolored portions of fillings and analyze them. As yet no satisfactory result has been reached in this way, because the quantities were too minute.

The fillings themselves were next examined. Iron, silver, tin, and mercury were found. In which of the ways mentioned did these metals get into the fillings? The first attempts made to answer this question were to get samples of gold foil from the prominent makers, number them, and send them to Dr. Hills, of the Harvard Medical School, to be analyzed. The results of these analyses showed that none of the samples were pure. This was unexpected, as the makers guarantee their foils to be one thousand fine, or absolutely pure. Silver was found in every sample and iron in some. Extensive analyses made by the same chemist a year later showed the same results. The gold prepared by R. S. Williams always contained the least impurities. As the gold when received from the makers was always found impure, a short description of the manufacture may be of value as showing how impurities may be introduced.

The gold out of which foil is made is the mint gold, containing about two parts in a thousand of impurities. The makers dissolve this in aqua regia, filter, precipitate with ferrous sulphate, or more rarely with oxalic acid, wash the precipitate, melt it, and after casting roll to ribbons between steel cylinders. It is then beaten to the required thickness between pieces of glued skin, which are never clean.

Gold in this form I shall call plain foil, to distinguish it from the forms in use. Plain foil is not in the market. It must be obtained by special order. To get this plain foil into the numerous varieties required by those who fill teeth, it passes through several processes and then becomes soft gold, cohesive gold,

gold cylinders, gold blocks, gold pellets, etc., etc.; indeed one maker advertises over fifty varieties.

Cohesive Gold. Plain foil is heated (usually on an iron plate.)

Soft Gold. I am not sure how this is made, as makers of foil have their secrets, but as surface impurities have been found on this kind of foil it is probable that, in some cases, the softness is due to those impurities which prevent two surfaces of this gold from uniting, and thus produce the so-called softness.

Corrugated Foil. Alternate sheets of gold and thin paper are made into a pile, placed between two pieces of iron and heated in a furnace till the paper is consumed. The sheets of gold are then separated, the ash of the paper removed as much as possible, after which the leaves are placed in books, or used in the manufacture of gold blocks, gold cylinders, gold ribbons, etc., etc.

Gold Blocks, Gold Cylinders, etc. These are the forms of gold in most general use. To make them the foil (usually the corrugated kind) is subjected to various rolling, pressing, and cutting processes by iron machinery.

This brief description of the manner of making gold for dental use enables us to see how easily impurities may be present in the finished product.

Silver, which is always present in the gold before refining, is almost sure to be present after the process, through careless manipulation and poor acids. Iron is likely to be introduced from the ferrous sulphate, from the mould, from the steel rollers, from the plates on which the gold is heated, from the hands, from the machinery used to form it into pellets, cylinders, etc. Other impurities are almost certain to come from the skins used in beating, from the paper used in corrugating, and from the dust of the shop.

To test whether impurities could be introduced by a careful person in making fillings, the following experiments were tried. The foil used was plain foil, and contained no impurities except a small amount of silver, as shown by a very careful analysis by Dr. Hills: —

First experiment. The foil was prepared in the ordinary way, as follows: It was cut with steel scissors, heated on iron, handled with steel tweezers, condensed with serrated steel pluggers, burnished with a steel burnisher. Dr. Hills' analysis showed that iron was present in these fillings.

Second experiment. The same foil was treated as before, only iridium instruments, made by the American Iridium Company of Cincinnati, were used instead of steel. Iron was found in these fillings.

Third experiment. The same foil was cut with bamboo, handled with gold tweezers, heated on platinum and condensed with iridium points, and burnished with an agate burnisher. No iron was found in these fillings.

This brief description can give no idea of the amount of care and time which has been spent on these investigations. I give a short abstract from one of Dr. Hills' reports, but even this conveys no adequate idea of the amount of delicate works in the analyses: —

"It is proper that I should state that great pains have been taken in the analyses to arrive at correct results. In the beginning great difficulty was experienced in obtaining chemicals of the requisite purity, and it was only after considerable time and trouble that acids absolutely pure were secured. In order to make certain that, if any of the metals tested for were found, they were contained in the gold itself, blank analyses were made before each analysis of the gold, using the same apparatus and chemicals."

Thus far the only metals whose presence we have accounted for are iron and silver. The next question which arises is, How came the tin and mercury in the fillings in which they were found?

Almost every dentist now uses amalgam in greater or less quantity. This remains on the instruments in minute amounts, often invisible; and when, by accident or otherwise, the same burnishers perhaps are used in making a gold filling, a little of the amalgam gets upon the surface, showing itself after a time as a discolored filling. That this is a frequent cause of discoloration I have no doubt, and only by performing all amalgam operations in another room with an entirely separate set of instruments can we hope to get rid of the trouble. As an illustration, I should like to mention the following case: An amalgam filling had been made in the morning, the hands carefully washed, and other fillings of gold made before lunch. In the afternoon a large gold filling had been almost completed, but needed a little burnishing. The gold burnisher was moistened with soap and applied to the filling, which directly changed color. An examination of the burnisher showed the same trouble. For a long time I was unable to account for the mischief. At last it was traced to the soap, to which a little of the amalgam must have clung when the hands were washed in the morning after using the amalgam.

In the beginning of the paper three ways were suggested in which impurities might get into gold fillings. I have shown that in the first and second of these ways impurities are introduced, and with regard to the third way the following may be said: Certain medicines, as iron, when allowed to remain in contact with the teeth, cause a discoloration of the débris which collects about the fillings and on their surfaces. In the mouths of those who smoke, the deposits of epithelial cells mixed with lime and germs which collect about imperfectly cleaned fillings become darkened. This discoloration makes fillings in some cases almost black. Discolored fillings are due to many different causes, as I have shown. In conclusion, the following suggestions, if faithfully carried out, will do away with some of these causes: —

Demand purer gold from the makers. Use this in the form of plain foil, because this is least liable to contamination.

Never touch gold foil with steel instruments of any kind. If it is necessary to heat the gold, do this on platinum.

Keep a separate set of instruments for amalgam. Insist upon a thorough cleaning of the mouth every time food or medicines are taken.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

THE DESCENT OF THE TESTICLE AND THE NATURE OF THE GUBERNACULUM.[1]

This vexed question is ably discussed by Dr. Bramann, of Königsberg, who has studied it anew under the guidance of Professor Schwalbe. He begins with the inevitable historical introduction, which in this case is more interesting than it often is. Without mentioning the smaller points of difference, we may say that the gubernaculum testis is described by some as a hollow cylinder of peritonæum, but others hold that inside of the serous covering there is connective tissue or muscular fibre, or both. Seiler, Burdach, Müller, and Bischoff agree that it consists of a central cord of loose connective tissue extending upward from the scrotum, and continuous in part with the subcutaneous connective tissue. At its upper end it is attached to a jelly-like body. On the passage of the cord through the inguinal canal this connective tissue receives a covering of muscular fibres from the internal oblique and transversalis, which extend half-way up the gubernaculum. Outside of this the structure has a light layer of connective tissue from the fascia transversalis, and finally is covered by the peritonæum.

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[1] Archiv für Anatomie und Entwickelungsgeschichte, 1884, Heft 3, 4.

There is also much divergence as to the origin of the processus vaginalis: namely, the pouch of peritonæum lining the scrotum into which the testis descends. We may merely mention the old view, that it is formed by the pressure of the testis, as having, we believe, no modern supporters; but although it is agreed that the pouch is ready to receive the testis before the latter enters it, there is great uncertainty as to the period of its appearance. Some authorities claim that it is found in the four-month fœtus, others that it appears after the descent has begun.

Again, authors are not agreed as to the mechanism of the descent of the testis. One theory, and perhaps the most general one, is that the gubernaculum turns itself inside out like the finger of a glove; another, less clear, rests on the alleged opening out of the folds of peritonæum covering the gubernaculum, and according to the third the fibrous tissue of the gubernaculum shrinks. The theories just mentioned, excepting perhaps the last, that of the "shrinking," refer rather to concomitant changes than to the actual cause of the descent of the testis. Some hold that this cause is muscular traction, others the shrinking just mentioned, others the unequally rapid growth of different parts by which the position of the gland is necessarily changed, and others again the pressure of the growing abdominal organs. It is needless to say that we have mentioned only the leading tenets of the different parties in this controversy. To consider details would be well-nigh endless.

Dr. Bramann has investigated the matter by the dissection of more than forty fœtuses, and he has made both transverse and longitudinal microscopic sections of the gubernaculum.

Owing, apparently, to an unequal rate of growth of the walls of the body and the viscera, the testis descends toward the ring till the third month, when it again moves upward. It begins its final descent at the end of the sixth or beginning of the seventh month. The gubernaculum, when fully developed, arises at the external abdominal ring from the aponeurosis of the external oblique. It is joined by muscular fibres from the internal oblique and transversalis. In the main the description corresponds pretty nearly with that of Seiler and others, only the gelatinous body is wanting, the muscular fibres extend more than half-way up, and, originally at least, it does not arise from the scrotum. If it be pulled upon in an upward direction, the abdominal wall will follow, but the scrotum will not.

As the testis descends (the left one is the first to move), the gubernaculum appears to shorten, but this is deceptive, owing to the protrusion of the processus vaginalis into the scrotum. It is only when the testis has approached the internal ring that any real shortening occurs; till then the gubernaculum has simply moved bodily downward.

The processus vaginalis is to be seen as a small pouch of peritonæum as early as the third month, but it does not extend into the scrotum until the descent of the testicle begins. The gubernaculum lies in the posterior wall of the processus vaginalis, and as both descend, the former is turned inside out, its tissues passing over the latter so as to form the envelopes of the testis and vas deferens. This, however, applies only to that part of the gubernaculum below the point where it is pierced by the vas. From this it follows that the cremaster is formed from the muscular fibres of the gubernaculum.

As to the cause of the final descent Dr. Bramann has little positive to say. He denies that the shrinking of the gubernaculum pulls the testis downward, for in the first part of the process, as has been stated, the gubernaculum is not shortened, and later it is not fixed to the bottom of the scrotum. Still, our author admits that the shrinking of the central areolar part of the gubernaculum, which is continuous with the connective tissue of the scrotum, does play a part. He believes also in the influence of the pressure of the enlarging abdominal viscera. As a proof of this he cites the fact that when the sigmoid flexure is much distended with meconium, the left testis descends first. We are inclined to doubt, if not the principle, at least the illustration, on account of the uncertain position of the sigmoid flexure in fœtal life.

ON THE NATURE OF CERTAIN LIGAMENTS.[1]

Mr. J. B. Sutton has written a paper with the above title that is of much interest to those who consider anatomy from a scientific standpoint. He first treats of certain ligaments in the seal connecting the heads of corresponding ribs. These ligaments had already been described by Professor Mayer, of Bonn,[2] as *ligamenta conjugalia costarum*, and independently by Professor Cleland.[3] We will follow Mr. Sutton in reproducing the latter's description of these curious structures: "None of the ribs of the seal has the articular surface divided in two, but each of those that arise opposite intervertebral discs has a depression on the inferior margin of its articular surface similar to that on the head of the femur, and from this springs a strong and rather flat ligament, which, sheathed in synovial membrane, passes above the intervertebral disc, and is attached in the same way to the rib of the opposite side. It lies close to the disc which is grooved for it, and is covered by the superior common ligament. As it nears its attachment at each side it is flattened out, so as to lie like a fibro-cartilage between the rib and the intervertebral articular surface, and the head of the rib rolls on this structure. The synovial investment of the ligament and upper edge of the intervertebral disc are continuous with the joint on either side, so that there is one common synovial capsule in connection with the articulation of the heads of each pair of ribs to the vertebræ."[1] This ligament has been found in many mammals, but apparently the synovial connection exists only in the seal. Mr. Sutton has discovered this band in the human fœtus from the seventh month till birth. Within a few months more it disappears, fusing with the disk in front, and contracting an intimate union with the posterior common ligament. The synovial connection is not found. Following Cleland, Mr. Sutton believes this to represent an important vertebral element, but he emphasizes the point that this ligament is represented by the transverse ligament of the atlas and by the odontoid ligaments, which seems very probable; but we cannot agree with him that "the singular condition of the ligament in the seal explains in a beautiful way the existence of a synovial cavity in so curious a situation as the back of the odontoid process." In the first place the situation is by no means a curious one, for it is elementary that synovial sacs occur where there is motion between two resisting bodies; and, secondly, we fail to see that the presence of these synovial sheaths in an aberrant type like the seal explains anything at all about the odontoid in other animals. If they were found in fœtal animals, the argument would be much stronger.

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[1] Journal of Anatomy and Physiology, April, 1884.

[2] [illegible]

[3] Edinburgh New Philosophical Journal, 1861. Structure, Action, and Morphological Relations of the Ligamentum Conjugale Costarum.

Mr. Sutton has made some interesting observations on the ligaments of the knee and foot. He finds that the internal lateral ligament of the knee-joint was originally a part of the adductor magnus, which in the four-months' fœtus runs to the head of the tibia. He holds also that the long external lateral ligament was originally the tendon of the peroneus longus, which in a fœtus a little older than the one just mentioned was found springing from the external condyle of the femur, and having but a very loose attachment to the head of the fibula. He finds a similar arrangement in the adult gibbon, and states that this muscle may often (in comparative anatomy) be found connected with the ligament.

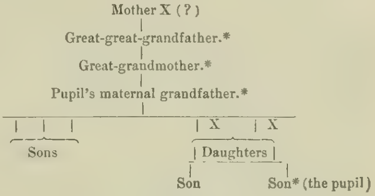
"If a human fœtus, even as late as the sixth month of intra-uterine life, be examined by making a section vertically through the tendo Achillis, os calcis, and cuboid, it will be seen that ligament and tendon form one continuous band, and that the attachment of the tendon to the under surface of the os calcis is only of the loosest kind. After the seventh month of intra-uterine life the tendon becomes divided by extra growth occurring at the posterior extremity of the os calcis, the anterior portion becoming long and short plantar ligaments, the other gaining a permanent attachment to the lower border of the os calcis." The explanation of these changes is to be found, according to Mr. Sutton, in the stretching action the muscles undergo during growth, when the relative length of the segments of the limbs is changed.

VARIATIONS OF THE THORACIC DUCT.[2]

Mr. Arthur Thompson has examined the course of the duct in subjects in which there is no innominate artery, and the right subclavian is given off after the other branches and then runs across to its own side. In three cases which he has examined he finds that the duct opens on the right side of the neck instead of the left. In two of these cases the duct runs in front of the abnormal subclavian, and in one behind it. Little is known, unfortunately, of the early stages of the development of the thoracic duct, but we know that it not rarely is double for short distances, and that it is in close connection with the large arterial trunks; for these reasons Mr. Thompson believes that the explanation of the simultaneous occurrence of these anomalies is to be found in the history of the arterial development.

HEREDITARY DEFORMITY OF THE HAND.[1]

The following curious case of heredity, reported by Professor Turner, is remarkable for its completeness. One of his students showed the professor his left hand, of which the ring finger was more than an inch shorter than the middle finger. The phalanges were normal, the shortening being due to want of development of the metacarpal bone. We reproduce the family tree, as well as some of Professor Turner's remarks concerning it. The persons who presented the deformity are marked *. It is to remembered that "mother" at the top of the tree was the great-great-great-grandmother of the pupil.



"Thus my pupil's maternal great-great-grandfather had the deformity. He transmitted it to a daughter, and she to a son, who was my pupil's grandfather. There seems also to be a belief in the family that the great-great-grandfather's mother had the deformity.

"Again, my pupil's grandfather had three sons and two daughters. The sons were free, but the daughters had it. One of these daughters was my pupil's mother; he had a brother and sister who died in infancy, but does not know if their hands were deformed. Most likely they were not, or it would have been noticed. His mother's sister had a son in whom it did not occur. A peculiarity in the tree at once strikes one, namely, that the deformity has alternated from mother to son, and then again to the female line.

"Another peculiarity in the same family is a widening of the thumb and great toe, which sometimes occurs along with the short metacarpal bone, at others where the metacarpal bone is normal. My pupil has it, also his mother and her sister. One of his maternal uncles has it, and a daughter of that uncle, but they have not the short metacarpal."

— One of the comic papers has this paragraph: "A patent medicine manufacturer died in New York last week. Before he died his friends asked him how he would like to be buried. He had just strength left to say: 'Insert me top column, next to reading matter, fifty-two times, electro by mail,' and then he closed his eyes, and passed away to that bourne where there are no omissions nor wrong insertions."

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[1] Mr. Sutton does not appear to be aware that this ligament in the seal has been described also by Professor Lucæ under the name Ligamentum Capituli Costæ Intermedium. According to him the lateral parts are twisted instead of being flat. Robbe und Otter. Ahband. Senckenberg. Natur. Gesel., Bd. viii., 1872.

[2] Journal of Anatomy and Physiology, July, 1884.

[1] Journal of Anatomy and Physiology, July, 1884.

Reports of Societies.

REPORT OF THE EIGHTH ANNUAL MEETING OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

HELD AT HIGHLAND FALLS, NEW YORK, ON THE 27TH, 28TH, AND 29TH OF AUGUST, 1884.

First Day. Morning Session.

After the report of the Council of the Association and the transaction of routine business, the President, **Dr. R. W. Taylor**, of New York, delivered a brief introductory address, and then declared the meeting open for business, calling upon **Dr. W. A. Hardaway** to read the first paper on

A CASE OF XANTHOMA MULTIPLEX.

The patient was a man thirty years old, who had had the disease four years. Previous to its appearance his health had been good. The right half of his body, when first seen by Dr. Hardaway, was of a bronzed hue, the left yellow. The liver was much enlarged, thickened, and nodular, and there was a trace of sugar in the urine, the specific gravity of which was 1016. The body, the condition of which was minutely described, was almost covered with xanthomatous lesions in the form of tubercles, some as large as a pigeon's egg. Some could be felt deep in the subcutaneous fat tissue and also in the tendons. There were bony growths over the head of each tibia, and all the maleoli were enlarged to twice their natural size.

The lesions gave the patient but little trouble, his principal sufferings being due to his pulmonary emphysema, and to an intense pruritus which was general, and had annoyed him for a long time.

The author of the paper called especial attention to the fact that the bronzing of the skin antedated the xanthoma by some years, that the eruption was symmetrical except on the trunk, where it had assumed the form of an herpes zoster, and that internal organs were also affected. The bones were also involved, and he claimed that the peculiar distribution of the tubercles on the chest showed that the nervous system was probably influential in causing the disease.

DISCUSSION.

Dr. S. Sherwell said that he had never been able to establish a connection between xanthoma and hepatic disease. In all the cases he had seen the patients were otherwise healthy.

Dr. J. C. White remarked that it was very rare to find xanthoma associated with jaundice, he himself having noticed the connection only once in many cases that he had seen. He did not believe that the affection was of a diathetic nature. He had, however, seen several cases in one family.

Dr. L. A. Duhring called attention to the fact that the pruritus began with the jaundice and not with the xanthoma. He was inclined to believe that there was some connection between the formation of the tumors met with in this disease, and in those formed in some cases of urticaria pigmentosa. Under the latter term two distinct varieties of disease were often described.

Dr. Taylor agreed with the other speakers in denying the existence of a connection between xanthoma and a diathesis. He believed that if involution of the lesions ever occurred, it would be on the body, as he had never seen the disappearance of any lesions from the face.

Dr. Hardaway said that he had only the patient's statement to the effect that involution of some of the lesions had taken place. He thought the bone lesions of his case were extremely interesting and very rare. The connection between the two was very obscure.

First Day. Evening Session.

Dr. J. Nevins Hyde read a paper entitled

A CLINICAL STUDY OF LUPUS ERYTHEMATOSUS AS IT AFFECTS THE HAND.

The author described in detail the symptoms of the disease as exhibited by four patients under his care, three females and one male. In each the discoid variety of the affection was shown upon one hand, and of the four cases only one had facial lesions, which came out some years after the disease was fully developed on the hand. In several of the cases the fingers were involved, and in one the palm was extensively affected.

The paper terminated by a presentation of other cases recorded in literature of the same form of the affection. The prominent features in each case were tabulated, and from this comparison it appeared that the average age of the patients was somewhat over twenty years, and that about two thirds of them were women, thus confirming the observations made by Kaposi in 1882. The cases in which the hands were affected were all recorded by either American or English authors.

DISCUSSION.

Dr. White had seen three or four cases of lupus erythematosus in which the hands alone were affected. He had also seen cases of the disseminated form of the disease in which the hands were free. In none of them had he been able to recognize any evidences of a depraved condition of the system. He thought that cases in which the palms were involved were not extremely rare, but that the affection was often regarded as eczema or some other disease.

Dr. Sherwell had never seen the disease on the palms, but had seen it on the backs of the hands.

Dr. Taylor had seen two cases of the affection as described in the paper, one in a man, the other in a woman. Both were in good health and seemed free from diathetic taint.

Dr. Hyde stated that his main object in writing the paper was to point out the ease with which the affection could be recognized, and also to enrich the literature of the subject.

The second paper was read by **Dr. S. Sherwell**, and was entitled

A SUGGESTION CONCERNING THE TREATMENT OF ACNE AND ACNE ROSACEA IN THE MALE SUBJECT.

He said that too little attention had been paid to disturbances of the genital tract as causes of the diseases which formed the subject of his paper, and gave credit to Piffard and Hyde for having recognized their importance in this regard. He then spoke of the occurrence of chronic congestion and hyperæsthesia of the male urethra in some cases, and recommended for its relief the use of cold steel sounds. He concluded by detailing two cases which were greatly benefited by this means.

DISCUSSION.

Dr. A. R. Robinson thought the suggestion a sensible one, and that if followed benefit would result in some cases.

Dr. G. H. Fox spoke of the liability of physicians to ascribe results to a certain line of treatment, when the improvement might have been due to a change in regimen on the part of the patient without the knowledge of the physician. He also thought well of Dr. Sherwell's suggestion.

Dr. J. C. White next read a paper on

A CASE OF UNILATERAL CHROMIDROSIS (?).

It contained the report of a case of a workman in a sugar refinery, whose shirt had been stained a bright yellow color for several months. After wearing it a few days the left side all the way down seemed stained by saffron. There was apparently no excessive perspiration of that side of the body, nor were the garments stained elsewhere. An analysis of the material absorbed by the shirt showed that it was of an oily character, readily extracted by ether, and yielding peculiar absorption bands by the spectroscope. Its nature was not more definitely determined. It was also uncertain whether it was secreted by the sweat or by the sebaceous glands. The color was not due to the presence of bacteria, which have been found in some of the few cases of yellow sweat reported. The affection was immediately controlled by local treatment, and had not recurred four months later.

DISCUSSION.

Dr. Duhring thought that the description read gave an accurate notion of the disease, and he saw no reason to doubt that it was a case of genuine chromidrosis. He had recently seen a case of red sweat in a young woman, where it occurred in spots over the body.

Dr. Fox had never seen a genuine case of chromidrosis. He spoke of one which he thought genuine, but which was found to have been produced by the rubbing off on the chin and neck of the patient of the red dye from a bed-covering during the night.

Drs. Hardaway and **Hyde** had seen almost identical cases.

Dr. White explained that the query after the title of his paper referred to the uncertainty as to the source of the coloring matter.

Dr. White then read a paper on

CASES OF ARSENICAL DERMATITIS.

He gave brief notes of cases of supposed arsenical dermatitis in connection with the report of a train of uncommon cutaneous manifestations in a mother and her new-born child, after confinement within a chamber the walls of which were covered with arsenical pigments. The object of the paper was to raise the question, how far was the apparent case of "pityriasis maculata et circinata" in the mother dependent upon the presence of arsenical compounds in the atmosphere of the lying-in chamber, an affection concerning the ætiological relations of which nothing is known? In the infant the symptoms were of an eczematous type, with unusual manifestations of intertrigo.

DISCUSSION.

Dr. Hyde remarked that the number of artificial dermatoses was increasing rapidly, and that the question should always be raised in doubtful cases.

Dr. Sherwell said that the recital of the cases had made him think that a certain obscure case which he now had under observation might be an instance of arsenical dermatitis. The eruption was one of tense bullæ.

Dr. White said that the case might be one of poisoning from the bites of mosquitoes, acting upon a skin not accustomed to them. He had seen many cases where such an eruption was produced in this way.

The Association then adjourned.

Second Day. Morning Session.

Dr. L. A. Duhring read a paper on

DERMATITIS HERPETIFORMIS AND ITS RELATIONS TO IMPETIGO HERPETIFORMIS.

The paper, which in its first portion was practically a synopsis of one read at the last meeting of the American Medical Association, in its second part aimed to establish the identity of the disease with cases described by Hebra under the name "impetigo herpetiformis," which usually occurred in pregnant or puerperal women, and generally resulted fatally.

DISCUSSION.

Dr. Fox expressed the great satisfaction with which he had listened to the paper. He thought that great credit was due its author for taking so comprehensive a view of so many different forms of disease, which had been described under the names "pemphigus pruriginosus," "herpes chronicus," "herpes gestationis," etc. He now felt confident that they were all cases of the disease Dr. Duhring had so well described. He then reported a case of his own, which he had called chronic erythema multiforme pigmentosum, but which he now regarded as identical with the affection described in the paper.

Dr. H. G. Piffard said that the disease which had been so ably described was rare, and its manifestations not clearly marked. He felt sure that the affection was not closely allied to herpes, as its lesions were too polymorphous. He described at length a case of the disease which he had recently seen.

Dr. White expressed the great difficulty of classifying cases such as had been described. He was inclined to think that the term "multiform dermatitis" would better define the disease than that suggested by the author of the paper. He was not yet prepared to admit the identity of the disease with that of Hebra's cases, as he had never seen an instance of the latter. He also saw no valid reason for accepting the conclusion of the author that the affection was of a neurotic origin. He called attention to the fact that the disease was likely to be regarded as eczema by practitioners.

Dr. Hardaway thought that a certain number of cases with papular, vesicular, and pustular lesions could properly be called "herpetiform." He believed there was a neurotic basis to many such diseases.

Dr. Robinson spoke of three cases he had seen, and gave a careful description of one, of which he exhibited a colored drawing. He had recognized a neurotic element in the case, and had ordered the patient, a boy ten years old, to take nine drops of Fowler's solution three times a day. Speedy improvement followed.

Dr. Sherwell said that he believed that Hebra's cases were of a septic origin, and that they were in nature identical with the cases which are so common in hospitals infected with hospital gangrene.

Dr. Duhring said that his paper was based upon the careful study of sixteen or seventeen cases of the affection which had been under his care, some for a long time. He defended the use of the adjective "herpetiform" in connection with the disease, since in many of the cases the disease was from the first of a distinctly herpetic character. He reaffirmed his opinion that the difference between his cases and those of Hebra was simply one of degree.

The evening session was devoted to the presentation of the report of the Committee on Nomenclature, and the revision of the latter.

Third Day. Morning Session.

In the absence of their author, Dr. Henry W. Stelwagon, the secretary read two papers, one entitled

A CASE OF LATE CUTANEOUS SYPHILIS (ACNE-FORM SYPHILODERM OF THE NOSE), ILLUSTRATING THE OCCASIONAL NECESSITY OF LARGE DOSES OF POTASSIUM IODIDE.

The evidences of syphilis in the case were obscure, and the diagnosis was for a time uncertain. Only after the patient had for some time taken drachm doses of iodide of potassium three times a day did the disease yield.

The second paper was on

A CASE OF VITILIGO INVOLVING THE WHOLE SURFACE.

It described accurately the progress of the disease and the appearance of the patient.

Dr. W. A. Hardaway next read a paper on

A CASE OF GENERAL IDIOPATHIC ATROPHY OF THE SKIN.

Photographs illustrating the case were exhibited.

The patient was a blind man, twenty-three years old. He had a sister also blind, and with the same skin disease, as he stated. The skin of his face was thickened and reddened, there were scars around his mouth, and he had the so-called "strumous lips." The integument of the trunk presented a checkered glistening aspect; patches of pigmented skin alternating with atrophic spots. The skin over the latter was tense and glistening, and could be picked up with difficulty. No dilated vessels were visible. The skin and muscles of the hand were atrophied, and the sides of the fingers had grown together over half their extent. There was necrosis of the conjunctivæ, corneal opacities and adhesion of the lids to the globes.

DISCUSSION.

Dr. Duhring said that the atrophy was the only essential feature of the disease under consideration. All grades are met with, from those having no tendency to degeneration to those developing carcinoma or sarcoma.

Dr. Taylor said that in his opinion the condition of the skin in the case described in the paper was not like that met with in the disease known as angioma pigmentosum et atrophicum, as this patient presented simply an ill-nourished senile-like condition of the integument.

Dr. White was unable to agree with Dr. Duhring as to the affinity which he believed to exist between the different varieties of atrophic processes in the skin, which, in his opinion, varied widely. In one class we met with loss of pigment and a deposition of epithelium, without changes in the corium. In another hypertrophy of the corium was a prominent feature. In a third variety new growths were developed. He did not think the case reported could be associated with the last class.

Dr. A. R. Robinson then read a paper on

MILIARIA AND SUDAMINA.

He first quoted the views held by different authors as to the true nature of a dew-drop-like eruption usually described under a variety of names, such as miliaria alba and rubra, sudamina, prickly heat, eczema solare, lichen tropicus, etc., and showed that they conflicted greatly. His object in preparing the paper was to attempt to accurately define the true nature of this eruption, and the conclusions he had reached were based upon original microscopical studies, drawings of some of which he exhibited.

He concluded that miliaria and rubra were simply forms of eczema, due to external irritation. He therefore thought that the term miliaria should be dropped.

The disease known as sudamina he had found to be not an inflammatory affection, but a disturbance of the sweat glands, the result of an hyperidrosis.

DISCUSSION.

Dr. Hardaway was opposed to the use of the term eczematous as applied to the affection under consideration, which was a dermatitis, while eczema was a distinct affection.

Dr. Hyde was inclined to fully accept the views of the author of the paper. He thought that miliaria and sudamina were solely due to accidents occurring in the course of eczema.

Dr. White agreed fully with the author of the paper, and recognized no such disease as miliaria alba and rubra. The question was after all one of definition only.

Dr. Duhring, while fully appreciating the value of the paper, thought that we should not lose sight of the clinical histories of the two affections. He was not yet prepared to look upon miliaria as simply a variety of eczema.

Dr. R. W. Taylor then read a paper

ON A PECULIAR RINGED AFFECTION OF THE GLANS AND PREPUCE.

He described three cases of the affection seen during the past ten years. The patients were all men of middle age, and the disease was in all preceded or attended with neurotic disturbances. It appeared in the form of rings on the mucous membrane, and proved exceedingly obstinate, yielding only to large doses of arsenic. It showed no tendency to spread, and was not attended with hyperæmia. He was loath to regard the disease as one *sui generis*, but had carefully eliminated syphilis, ring-worm, and psoriasis in making a diagnosis.

DISCUSSION.

Dr. Duhring thought he had seen several cases of the disease. One or two of them he described at length. He had called them lupus erythematosus, to the gross appearances of which disease they bore a marked resemblance, and he was inclined to regard Dr. Taylor's cases as instances of that affection.

Dr. White had had one case under observation for some time. He had made no positive diagnosis, and the patient had not improved.

Dr. Hardaway described a similar case occurring in a man who had had psoriasis. The lesion on the glans was, however, not psoriasis.

Dr. Alexander suggested that the disease might be analogous to leukoplakia buccalis.

Dr. Wigglesworth cited the case of a man under his care who had had leukoplakia, and who afterward developed a lesion on his penis resembling that described by Dr. Taylor. It ultimately disappeared under the use of pure carbolic acid.

Dr. Taylor was positive that his cases were not instances of lupus erythematosus, but were totally unlike that affection.

OFFICERS FOR 1884–85.

President, Dr. W. A. Hardaway, of St. Louis.

Vice-Presidents, Dr. J. C. Graham, of Toronto; Dr. A. Van Harlingen, of Philadelphia.

Treasurer, Dr. George H. Rohé, of Baltimore.

Secretary, Dr. W. T. Alexander, of New York.

Mr. Jonathan Hutchinson, of London, Eng., was elected to honorary membership.

The following gentlemen were chosen as active members: —

Dr. George H. Tilden, of Boston; Dr. A. R. Morison, of Baltimore; Dr. F. C. Curtis, of Albany; Dr. L. N. Denslow, of Minneapolis.

Medical and Surgical Journal.

THURSDAY, SEPTEMBER 4, 1884.

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THE DIAGNOSTIC USE OF QUESTIONS.

The judicious use of questioning as an aid to diagnosis is an accomplishment not always easy for the physician to acquire. In proportion as a man's habits of thought are orderly and logical, to that degree will it be his aim to secure precise and definite information regarding every symptom of disease in a given case that presents itself. Physical exploration by the many "scopes" that medical science has invented in the last few decades is taught with great care in our best schools. But the art of gaining knowledge of those phases of disease which have transpired before the patient comes under the professional eye, or of those symptoms which, being purely subjective, can be learned only by the patient's word, is often, perhaps, not given sufficient importance in courses of medical training. To be sure, a clinical lecture is, or should be, an exemplification of the best method of this most delicate of all species of exploration, but it can hardly take the place of personal practice therein by the student himself under the constant suggestion and comment of the instructor. Much judgment is needed as to how far to make use of leading questions. Undoubtedly under certain circumstances they are of use as suggesting to the patient points which he would otherwise have forgotten, or would have thought unworthy of mention, and which yet have an essential bearing upon the case. For it is often the "unconsidered trifles" which are of value to the diagnostician. But, on the other hand, the hysterically inclined will "take suggestion as a cat laps milk," and every new symptom learned of is promptly added to the catalogue of woes. Probably many a physician has now and then yielded to a sudden temptation when talking with such a patient to ask some such question as "Have n't you sometimes had a stinging sensation in your left ear?" sure of receiving at least a qualified affirmative.

One great obstacle stands in the way of reducing diagnostic questioning to a fine art, and that is in the patient himself. It cannot be denied that upon the average intelligence subtle distinctions in the phraseology of questions, discriminating endeavors after the logical order of subjective symptoms, are often largely wasted. Good workmanship will fail if the material used is poor, and, unfortunately, many minds are of such poor stuff as to make it almost a waste of time to attempt to extract from them carefully considered statements. We can get at facts only through the media of ignorant or confused intellects. The sources of error are numerous and glaring. The original sensation may not have been correctly transmitted to the patient's cerebrum; it may not have been correctly perceived; the original perception may have been forgotten; the power of reproducing, formulating, and describing the sensation may be impaired or absent. Occasionally there is aversion to talking at all or to telling the truth. Patients think they are being badgered. We remember hearing an eminent clinical teacher, now deceased, ask a patient, before a class, regarding the possible hereditary nature of his disease. The colloquy was somewhat as follows: —

"What did your father die of?"

"Don't know."

"Did he ever have shortness of breath?"

"Think he did."

"When?"

"Just before he died."

"Do you know whether he had consumption?"

"No, I don't."

Several more questions were asked with no success in elucidating the point of heredity. Finally, in despair, the professor said, —

"How old was your father when he died?"

"One hundred and two."

We know how badly even honest and competent witnesses often fare when under cross-examination. The physician cannot expect the average patient, however well disposed, always to tell a perfectly straight and coherent story. An intelligent and truthful man will vary his narrative of the same facts from time to time according to the shading of the questions or the order in which they are asked. It remains for the practitioner to frame his inquiries as simply and directly as possible, and, especially before those in weakness and suffering, to avoid anything suggesting the methods of the cross-examining criminal lawyer.

◆

PRESENT DOCTRINE AS TO MEMORY-LOCALIZATIONS.

ON a recent visit to a watering place we had the pleasure of listening to the performance of an aged vocalist — now in his ninety-first year — who has been totally deaf for thirty years. Despite the fact of deafness, the singing was in every way correct, the essentials as to *length*, *pitch*, and *power* being observed. The old gentleman was also able to play accurately on the violin many tunes with which he had in former years been very familiar.

Physiology is now able to give a sufficiently satisfactory explanation of phenomena of this kind which seem so mysterious to people in general. It is pretty generally agreed that the substrata of motor-memories — concerned in the movements of vocalization and musical expression — are situated in certain definite cortical areas in the anterior and parietal regions of the hemispheres. The principal centre is undoubtedly Broca's speech convolution in the left frontal lobe, but the centres of facial expression in both hemispheres have a part.

In instrumental performances the cineritious zones in the parietal lobes, known as Ferrier's Centres, are brought into exercise, while visual and auditory memories are located, the one set, according to Munk, whose experiments are very decisive, in the occipital region, the other in the upper temporo-sphenoidal lobe. (Ferrier, Munk, etc.) In the cerebrum of our aged musical friend, who did not appear to have lost his hearing from any cortical lesion, all the above-mentioned centres were presumably intact, and ready to respond to incitations; and all that was needed was the proper stimulus to set in motion a quasi-automatic machinery in whose direction the exercise of audition, though a helpful is by no means an indispensable factor.

Munk, who assigns to the memory of sight-perceptions an indefinite region, inclusive of Ferrier's visual centre, in the occipital and the posterior parietal lobes, has made a number of very interesting experiments in dogs, which throw a wonderful light on the functions of this part of the cerebrum. These experiments have been very graphically described by a recent writer in the *Popular Science Monthly*:[1] "In the first dog the entire posterior part of the brain was removed, and the dog was made permanently blind. In the second dog a portion of this part of the brain was cut out and the dog was deprived of his sight-memory. He was, however, able to recover. Successive operations repeated on the same dog showed that recovery was always possible until the entire posterior part of the brain was removed, when, like the first dog, he became permanently blind. The recovery then was possible because around the area cut out there was left a ring of gray matter which was in connection with the eye, and in this ring of gray matter, which formerly contained no memory-pictures, the new memory-pictures were stored. All the posterior part of the brain in the dog is therefore a *potential* area for sight-memories. The *actual* area for sight-memories occupies only a part of this potential area. If the actual area be cut out, a part of the potential area still remains; the dog is temporarily deprived of sight-memory, but can recover it. If the potential area is entirely extirpated, the dog remains blind and can never regain its memories. This distinction between actual and potential memory is borne out by similar phenomena in man."

These observations are in striking correspondence with the discovery of Huguenin, establishing direct anatomical relationship between the optic nerves and the occipital lobes. In one case of unilateral blindness of several years' standing, he found atrophy of both occipital lobes, much more marked, however, in the side opposite to the affected eye (the right side). This was accompanied by pronounced atrophy of the left optic nerve.

In another case, blindness of both eyes, existing from infancy, was found to coexist with atrophy of both occipital lobes.[2] Monakow always succeeded in "obtaining atrophy of the primary visual centres in rabbits after removal of a very limited portion in the occipital region, a part corresponding to the area in the dog which Munk has termed the visual area."[3] Other observations by Monakow, Gudden, and Ganser[4] render such anatomical relationship well-nigh proven.

With regard to the auditory centre, — centre of hearing, perceptions, and memories, — Ferrier, Munk, and Luciani agree in locating this centre in the superior temporo-sphenoidal convolution, destruction of this area, on both sides, in dogs, being attended with complete failure to respond to ordinary auditory stimuli, — in other words, being accompanied with deafness. Munk's experiments go to show that there is an *actual* and a *potential* area in this centre, just as in the case of the visual zone. If the actual area be extirpated, "the animal loses all memory of words and commands formerly recognized, attaches no meaning to the cry of its puppies, to the snap of the whip, or to its master's whistle." This *word-deafness* may, however, be recovered from in the dog, a gradual process of education developing new auditory residua in the potential area. If, however, the latter be extirpated, the animal becomes totally and permanently deaf.

An interesting case of *word-deafness* (with aphasia) confirmatory of the now generally admitted auditory localizations has been lately communicated to the Biological Society of Paris by M. Magnan.[5] The subject of the report died of cerebral *ramollissement*, had long been aphasic, and deaf to all comprehension of words, though understanding perfectly the language of signs.

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[1] Popular Science Monthly, September, 1884.

[2] Huguenin, Correspond. f. Schweizer. Aerzte, 1878, No 22.

[3] Zenner in Medical Record, vol. xxvi., No. 6.

[4] Quoted in Zenner's article.

[5] Journal de Thérapeutique, June 10, 1884, p. 435.

He even took pleasure in the reading of journals, and retained his ability to write. In other words, he had lost the faculty of perceiving *sound* images, while still keeping in its integrity the notion of written images. The autopsy of this patient disclosed diffuse sclerosis of the third left frontal convolution, with extensive softening of the temporo-sphenoidal lobe, "the maximum of intensity corresponding exactly with the region which has been pointed out as the perceptive seat of hearing." M. Magnan relates the history of another case very similar, except that here it was the angular gyrus which, along with the third frontal, was the focus of *ramollissement.* The patient, besides being aphasic, had lost all perception and memory of visual or written images, while recognizing and responding to sound images. These observations, which were made with great care, lend powerful support to the localization doctrines now so generally held. M. Magnan observes that we have here "a new proof of the existence of distinct perceptive centres for the different sensorial organs." It is also a striking fact, he remarks, that certain aphasics affected with *word* blindness learn to read raised letters like ordinary blind persons. This fact demonstrates that the encephalic perceptive centre where the retinal impression is recorded differs from that of touch and of the muscular sense; but where the one avenue of sensation is obstructed, the impression may be conveyed by some other more pervious channel to the centre of ideation." Ferrier concludes from numerous experiments that the seat of tactile memories is in the hippocampus, and he asserts that he has destroyed almost the whole outer surface of the hemispheres without causing loss of the sense of touch.[1] Later experimenters have, with strong probability, assigned almost the whole of the parietal motor region to tactile perception, the small cells of the deeper strata being concerned in this function.

It is evident that we are still on the threshold of this interesting inquiry. Certain facts are looming up with tolerable clearness: that the old phrenology is utterly erroneous; that important regions on the surface of the hemispheres, formerly assigned to psychical functions, are devoted to motor and sensory residua, — the memory of impressions and motor combinations, — and that *character* is dependent on other conditions than prominences of gray matter; that every centre of perception or muscular movement is also the centre of the particular memories connected with such movements or perceptions; and that our memories of speech, our visual memories, our auditory memories, our memories of motion may each be lost while other memories remain intact. All this has been as good as demonstrated within the past fifteen years.

MEDICAL NOTES.

— The use of undiluted cows' milk for infant-feeding received further advocacy in a lecture recently delivered at the Health Exhibition by Mr. Edmund Owen, F. R. C. S., on the rearing of hand-fed infants, the chair having been taken on the occasion by Dr. Charles West. Mr. Owen contended in favor of pure fresh milk as the best staple food of young infants during the first six months of life; and speaking of condensed milk, he declared himself unable to comprehend how any superiority could be claimed for condensed milk, this having been evaporated almost to dryness, mixed with sugar to prevent its going bad, soldered down in tin pots, and stored for an indefinite time in an oil and color shop. Insistence was also placed on the employment of the old-fashioned feeding-bottle, by using which all tubing was dispensed with, and regularity in feeding insured, since the bottle must be held by the nurse during the whole time the child sucked from it. The lecture is an interesting contribution to the literature of the subject it discusses; its facts and advice stated plainly and in a way to be understood by those chiefly concerned; and its delivery in connection with the great exhibition at South Kensington will no doubt be productive of good results.

— The Signal Service of the United States has taken measures to notify of the approach of marked changes in temperature by a system of signals. The "cold-wave flag," white with black centre, will be displayed at the central station, and it is suggested by the chief signal officer that smaller flags (to be procured by individual contributions, as the department has no money available for such uses) be shown at all places to which the *Farmer's Bulletin* is now supplied. The advantage of a general warning of approaching thermometric changes to many industries and interests is obvious.

— Noble Smith enters a protest, in an article on Postures in School, their Influence upon Physical Development (*Medical Times and Gazette*, August 9, 1884), against checking the natural activity of childhood. He considers that "the formation of the skeleton favors the production of deformity when constrained postures are maintained for long periods," and instances the effect of posture upon adults in the different trades: the waiter in restaurants becomes flat-footed and knock-kneed; the seamstress, the clerk, and the engraver show by their rounded backs the effect of long-continued posture. He writes that "it is a false system to attempt to refine young girls by restraining their natural freedom of movement. It is this false process which does so much to encourage the production of deformity. Long walks in precise and stately file produce a harmful strain upon the spine and legs, whereas free movement in such games as cricket and lawn tennis affords a healthful exercise." Touching upon the cause of the greater frequency of lateral curvature in girls, he thinks that all the factors in the formation of curvatures of the spine occur to a greater extent in girls than boys, in that "from infancy upward girls are discouraged from playing and romping."

— A remarkable case of hasty diagnosis and, it is to be hoped, an equally remarkable one of mulish obstinacy on the part of the mistaken practitioner, was brought to trial, early in August, at the Hants Assizes, in

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[1] Functions of the Brain, p. 177.

England, before the lord chief justice. It appears that the plaintiff. Mr. Yarndley, whilst on yeomanry duty, in June last, became saddle-sore, a circumstance by no means uncommon to persons not in the habit of riding much. In order to protect the abraded skin he applied a handkerchief to the part. On his return home his wife, not being satisfied in her mind as to the origin of the blood stains, took the kerchief to a local practitioner (Dr. Pike), who pronounced in favor of the husband's misconduct. Nor did he retract his expressed opinion after he had personally examined the plaintiff at the invitation of the latter. Horrified at the charge made against him, Mr. Yarndley sought the advice of several doctors in the neighborhood, who unanimously declared that the diagnosis made by Dr. Pike was incorrect, and, with true professional courtesy, advised him to withdraw it. For some reason or other Dr. Pike failed to do this. Hence the action brought by the plaintiff to clear his character from the aspersions cast upon it. Apart from the fact that no manner of stain upon clothing could in itself be taken as proof of venereal disease, the circumstances were strongly suggestive of what was, no doubt, the real explanation, for the wound on the thigh exactly corresponded with the blood-marks on the trousers.

— Dr. M. G. Biggs reports this case in the *British Medical Journal*, May 10, 1884: "E. S., aged sixteen, a servant, had never menstruated, although she was a well-formed girl. She had, however, suffered from pain at distinct intervals, and, when she sent for me, her mother said she had been in severe pain all the previous night, and was then so bad that she was rolling on the bed, and that the womb had come down externally. On examination there was a distinct bluish projecting membrane, with marked fluctuation; the only opening to be found was that of the urethra. A triangular piece was removed from the centre of the membrane, and there was an immediate rush of a considerable quantity of dark-colored discharge, with instant relief from the pain, which did not recur. When the discharge had ceased the parts were covered with a piece of linen rag soaked in carbolic-acid lotion (one in forty), and this was ordered to be continued; but, as often happens in this class, the mother was somewhat careless, the rag was allowed to dry or to fall off, so that we may fairly say that there was a free access of non-carbolized air. She was kept in bed during the remainder of that day and the next, but there was no rise of temperature, and then she was allowed to get up and resume her work, which she did without any bad effects."

— A case is reported in the *Medical Times and Gazette* (April, 1884) of a primipara who was delivered on May 20, 1873, of an unusually fine male child, but having a large spina bifida of all the lumbar and one or two of the lower dorsal vertebræ, the integuments of which were so thin and transparent that the vertebral canal was distinctly visible with its contents. The child was dressed with the usual abdominal bandage, the pressure of which caused suppurative inflammation and thickening of the surface of the tumor, so that by August of the same year nothing remained but a fleshy mass, pressure on which caused no discomfort. About this time, however, the head was noticed to be becoming larger. By Christmas it was very large and cumbrous, and on the evening of January 24, 1874, it burst, and seven and three-quarter pints of slightly bloody serous fluid were collected in a pail. The child seemed relieved by the discharge, and slept better than usual, but died seventeen hours afterward.

— A case of poisoning resulting in one death is reported from Philadelphia. The accident seems to have been due to a misapprehension that certain small pills were homœopathic, whereas they actually contained one twentieth grain each of strychnia. A party of five were seated at the supper table, when, just previous to eating, one of the party produced a box containing about fifty granules, the directions written upon the box being to take one before each meal. The others at the table passed the box around, each taking some. One took nine, the others emptied the box, each taking probably at least five. One female swallowed a quantity not exactly known, but probably amounting to at least half a grain. She died in about three hours, after protracted tetanic convulsions. All the others were also affected in the same manner, with cramps and painful contractions of muscles; but, under medical treatment, they recovered after several hours' suffering.

Correspondence.

ANTHROPOPHAGY.

MR. EDITOR, — In an article on Anthropophagy, in connection with the Greely party, which appears in your issue of the 21st inst., I am glad to see expressions of pity for the unfortunate men who were reduced to such a direful extremity, and indignation against those who are to blame for leaving them to suffer and to die on the inhospitable shores of the Arctic Ocean.

We, as physicians, have nothing to do with the moral question involved; but as you discuss the subject of human flesh as food, I would call your attention to the case of the wreck of the schooner Almon Bird, published in full in the *Boston Sunday Globe*, January 8, 1882. Briefly stated the facts are as follows: She foundered in a gale January 2, 1882, and the crew, or the survivors of them, were picked up some forty miles north of this (Cape Ann) and brought in here by one of our fishing vessels. The men were exposed for three days and nights in an open boat. All were wet through but the mate, and he was the only one who escaped frost-bite. Three men died in the boat, and one a few days after being rescued, his feet and legs frozen stiff almost to the knees, all his fingers and both thumbs also. The captain's feet were badly frozen and he lost portions of both of them.

On the morning of the third day, says the captain, "famished with hunger and actually dying with thirst, we were compelled to do that which made our hearts revolt with horror. Driven to the last resort, and in an untold agony of desperation, I opened the jugular vein of the second mate, who had been dead about two hours, and we wet our parched lips and throats with his blood, still warm. . . . The draught of blood revived us wonderfully, and it is my earnest belief that it was that alone which saved our lives."

I happened to be one of the physicians who had charge of these men after they were landed, and they all assured us that it did "*revive them wonderfully.*" "It put new life in me," was the way each one expressed himself. Of course we felt delicate about questioning them much, and consequently did not make very particular inquiry, but every one here knew it, and no one thought for one moment of blaming the poor fellows, as each heart was filled with pity for the unfortunate men. These men had some food (pilot bread) but no water.

Thinking these facts might be at least interesting, if not valuable, has induced me to send them to you to do as you please with them. Yours very truly,

Aug. M. Tupper, M. D.

Rockport, *August* 25, 1884.

OBITUARY: THE LATE SURGEON JOSEPH JANVIER WOODWARD.

War Department, Surgeon-General's Office,
Washington, D. C., *August* 20, 1884.

In announcing to the officers of the Medical Department the death of Joseph Janvier Woodward, Surgeon and Brevet Lieutenant-Colonel, United States Army, which occurred near Philadelphia, Penn., August 17, 1884, the Surgeon-General wishes to offer his tribute of respect to the memory of the deceased, whose distinguished career and valuable services, for a period of twenty-three years, have shed lustre on the corps, and for whose untimely loss feelings of profound regret will be shared alike by his comrades in arms and by the profession at large.

Dr. Woodward was born in Philadelphia, Penn., October 30, 1833, and was educated at the Central High School of that city, graduating with honor as Bachelor of Arts in 1850, and receiving the degree of Master of Arts from the same institution in 1855.

He graduated in medicine at the University of Pennsylvania, April, 1853; entered the army as assistant surgeon August 5, 1861; became captain and assistant surgeon, July 28, 1866; major and surgeon, June 26, 1876. "For faithful and meritorious services during the war" he received the brevets of captain, major, and lieutenant-colonel, United States Army.

He was assigned to duty in this office May 19, 1862, and from that date until the beginning of the illness which terminated in his death was intimately identified with its professional and scientific work.

While the valuable results of his life's labor are comprehended in a long list of miscellaneous publications, both professional and scientific, too familiar to the corps to require individual mention, his greatest triumphs were won in the field of microscopical investigation, in normal and pathological histology, and in his happy application of photo-micrography to the purposes of science. In these pursuits he attained remarkable success, and achieved an enviable, world-wide reputation, leaving to science and medicine lessons of undoubted value and usefulness. Of his strictly professional work the medical portion of the Medical and Surgical History of the War of the Rebellion was the crowning achievement. In the second part of this work he developed the results of his careful investigations into the nature and pathology of the intestinal diseases which had proved so fatal in the late war. Here also he displayed his wonderful capacity for that minute and exhaustive research which forms so striking a feature of his writings.

As in the case of his co-laborer, Otis, he yields to other hands the honor of completing his labors.

In addition to his engrossing professional duties, his restless activity of mind led him to seek recreation in his favorite studies, physics, art, and philosophy.

Endowed with a retentive memory and of untiring industry, he acquired a vast store of information which he held available for use at will; fluent of speech, he took delight in the expression of his views and opinions both in social converse and in the arena of scientific debate.

His fund of knowledge, his strong convictions, his tenacity of opinion, and his quick perception, made him a controversialist of no low order.

With such a record it is needless to speak of his zeal, his ambition, or his devotion to his profession, and especially to the reputation of the corps of which he was so bright an ornament.

Of a sensitive, highly-strung, nervous organization, the confinement, anxiety, and labor to which he was subjected in his attendance upon the late President Garfield during his long illness proved too much for a mind and body already overstrained by incessant labor, and precipitated the illness which finally terminated his life.

At the time of his death Dr. Woodward was a member and ex-president of the American Medical Association, a member and ex-president of the Washington Philosophical Society, a member of the National Academy of Science, of the Association for the Advancement of Science, of the Academy of Natural Sciences of Philadelphia, and of the College of Physicians and Surgeons of Philadelphia. He was an honorary member of several American and foreign scientific, medical, and microscopical societies, and the recipient of many distinguished honors from learned bodies in this country and abroad. R. Murray,

Surgeon-General United States Army.

Miscellany.

INTERNATIONAL COLLECTIVE INVESTIGATION.

The address of Sir William Gull before the International Medical Congress at Copenhagen, in which he strongly urges the adoption by the universal medical world of that system of collective investigation of disease which the British Medical Association has been employing with such satisfactory results both in present attainment and in anticipation, has been published in full in our English contemporaries, and is a strong plea. The *Medical Times*, commenting upon it, points out that this method of investigation is not a modern project, but that it suggested itself to Lord Bacon three centuries ago as the *novum organon*, — the "new machine" whereby the facts of nature might be observed, arranged, and treated in such a way as to come within the mastery of man.

As medicine is to be the first science to which this new modification of the Baconian method is to be applied, remarks the *Times*, so, it may be pointed out, it is almost the only one in which it would be practicable.

In no other branch of natural science are there so many observers more or less efficiently trained, and enjoying, from the very nature of their daily work, so many hourly opportunities of registering important facts. Even as it is, medicine, like botany and zoölogy, has been in great measure built up of facts observed by, so to speak, amateur observers, that is, observers with whom observation has been the secondary and not the primary business of their lives. The only matter for surprise and regret is that the valuable work of these observers has not already long ago been systematized, directed, and stimulated by some central organization. Hereafter, let us hope, the present generation and the present year will be looked back upon as forming as important an era in the progress of medicine as the publication of Bacon's great work formed in the history of scientific inquiry in general. After the forcible and closely reasoned address of Sir William Gull, we do not think that there will be many who will have the courage to augh down the new movement. Difficulties of course there will be. The average man is not to be turned into a trustworthy observer, because his observations are collected and published. The "idola" of which Bacon warned us will still distract and disturb the search after truth; but, as Sir William Gull has shown, the very magnitude of the operations of the Collective Investigation Committee will tend to neutralize and eliminate these sources of error. The "idola tribûs," the errors to which minds are liable from their national constitution, will be naturally reduced when many nations share in the work; while the "idola specûs," the errors arising from egoism and individual bias, will be eliminated when the observer is only an impersonal unit in a vast multitude of fellow-workers. It may be calculated that those who only work for personal renown will not enter enthusiastically into the movement, but that it will be left to such as are actuated mainly by love of truth and an ardent desire for human welfare, — the motives which the author of the "Novum Organon" put forward as the main incentives to scientific research.

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THE HYPODERMIC INJECTION OF AMYL AND EPILEPTIFORM CONVULSIONS.

Dr. Sydney Ringer, according to the *London Medical Record* (August 15th), has noticed the occasional action of the nitrite of amyl upon the heart, and the strange effect sometimes produced upon the nervous centres. He says: "I have seen one case where a woman immediately after a drop dose turned deadly pale, felt very giddy, and then became partially unconscious, remaining so for ten minutes." And again: "A delicate woman, after one-thirtieth of a drop, passed in a few moments into a trance-like state." In a case described by Dr. Strahan,[1] a chronic maniac, aged fifty-three, had suffered for several days from severe lumbago; a ten-minim dose of a ten per cent. solution of nitrite of amyl in rectified spirits was injected hypodermically. "Immediately af er the injection the pain disappeared. He got up from the bed, and at my request stooped and touched the floor with his fingers. In, as nearly as could be guessed, about a minute and a half, he suddenly became deadly pale, and sank back upon the bed." Then his face, head (bald), and neck became congested, and he was strongly convulsed for about half a minute. The convulsion affected the face and arms strongly, the legs slightly. The teeth were ground, and the breathing was suspended. In a few minutes, after coming out of this fit, he was attacked by a second one, during which the heart's action became very faint. He was made to inhale some chloroform, and the fits did not return. The lumbago entirely disappeared. This observation is interesting, as inhalations of nitrite of amyl have been recommended, both in England and in Italy, to check the recurrence of epileptic convulsions.

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THE DEATH CERTIFICATE IN A CASE OF SUICIDE, WITH REFERENCE TO INSURANCE.

The president of the Medico-Chirurgical Society of Edinburgh recently exhibited before the Society[1] the parts from a case of cut-throat, with remarks bearing on the liability of life insurance companies. The cut happened in the person of a constable who had been troubled for about six months with insomnia. One morning he got up about four, after a restless night. His wife, who was sleeping in another apartment, heard a heavy fall and a deep moan, and going in found her husband lying on the floor, and blood flowing from the neck. Strange to say he was able to articulate, and said he had cut his throat. His larynx was opened into, the epiglottis cut across. No important vessel was wounded, but there must have been considerable hæmorrhage. He was taken to the infirmary, but died on the way. The body was taken home after two days, when the widow consented to have a post mortem performed, the reason for this being that the man was insured, and he (Dr. Littlejohn) was of opinion that if an autopsy revealed cerebral disease the medical attendant was entitled to give such a certificate of death as would cause even those insurance companies who forfeited the policies of suicides to pay the policy. In this instance he was glad to say he found traces of chronic cerebral disease, great adhesions of dura mater to bone, adhesions in arachnoid cavity, a large amount of sub-arachnoid fluid, and roughness of the internal surface of the cranium, justifying him in giving a certificate of chronic cerebral disease, with a wound in the neck, which was available in procuring the insurance money.

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THE PATHOLOGY OF OBESITY.

Professor Kisch, of Prague, has recently contributed to the *Deutsche Medizinal Zeitung* an article on the above subject, in which he considers the derangements, functional and organic, to which the corpulent are specially predisposed. The *Medical Record* (August 16th) in its editorial columns thus enumerates some of these conditions: —

"First, as regards the heart, an organ which is inclined early to show signs of disturbed action. The fatty heart, as distinguished from the fattily degenerated heart, is affected, according to Leyden, in three degrees of severity. In the first there is simply a thick layer of adipose about the organ; in the second, with the fatty deposit there is a softening or relaxation of the muscles, dilatation of the cavities, and enfeeblement of action. In the third form there is combined with the fatty heart an arterial sclerosis. The symptoms in the higher grades of fatty heart resemble considerably those of fatty degeneration, and need not be here enumerated. Kisch has made sphygmographic tracings in four hundred cases of fatty heart with the following result: In thirty-six per cent. of cases there was a *pulsus tardus;* in thirty-two per cent. of cases the pulse varied from one of a slightly to one of a completely dicrotic character; in twenty-four per cent. of cases an increase of tension from arterial sclerosis was shown; in four per cent. of cases there was simple arythmia. The value of these examinations is, of course, slight of themselves. It is to be assumed, though it is not stated, that the patients had no valvular disease of the heart and no kidney lesions.

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[1] Journal of Mental Science, July.

[2] Edinburgh Medical Journal, August, 1884.

"As regards the respiratory organs, Kisch found in many cases bronchial catarrhs. Naturally such symptoms as dyspnœa, and even pseudo-angina, were frequent.

"The digestive organs of the obese are very likely to be deranged. Gastro-intestinal catarrh, dyspepsia, constipation, hemorrhoids are present, and are due partly to dietetic errors, partly to the weakness of the heart and the incapacity or disinclination on the part of the patient to take sufficient exercise. An enlarged and fatty liver is of frequent occurrence, but its existence is not easy to make out by physical examination.

"Urates, uric acid, and oxalate of lime are found in the urine. It is well known also that the obese are liable to glycosuria, and Kisch found sugar in the urine of many of his patients at periodic or irregular intervals.

"Owing to the increased activity both of the sweat and the sebaceous glands, fat persons are subject to 'catching cold' and to attacks of rheumatism. Such skin diseases as boils and carbuncles are relatively frequent.

"The bodily temperature shows an inclination to mount up, and in fevers the corpulent burn actively. Their feebler resistance to fevers was first pointed out by Hippocrates. Liebermeister states that they are less amenable to antipyretic measures.

"Parallel with increase of fat is a decrease of sexual appetite and sexual power. Kisch found in several cases absolute azoospermia. Women are inclined to amenorrhœa and sterility. Among two hundred and fifteen obese women Kisch found forty-nine cases of amenorrhœa, one hundred and nineteen of scanty menstruation, and forty-nine of sterility.

"The blood of the obese is poor in red blood-corpuscles. Obesity is, in fact, a disease of diminished and perverted oxidation. There are not only too few red corpuscles, but there is too much water and an excess of fat."

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 23, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	756	376	34.84	11.96	24.96	1.95	1.82
Philadelphia	927,995	383	169	16.20	10.80	4.32	4.32	1.60
Brooklyn	644,526	308	164	37.76	12.16	29.12	—	3.52
Chicago	632,100	—	—	—	—	—	—	—
Boston	423,800	218	100	38.64	14.72	23.92	2.30	2.76
Baltimore	408,520	163	79	32.94	12.20	17.08	3.66	5.49
St. Louis	400,000	173	78	33.06	7.54	18.56	2.90	3.48
Cincinnati	272,400	113	48	26.70	9.79	16.91	5.34	.89
New Orleans	234,000	121	35	17.35	1.65	5.78	—	.83
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	104	51	25.92	16.32	18.24	3.84	—
Pittsburg	180,000	76	48	52.80	3.96	34.32	3.96	7.92
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	44	25	53.21	6.81	36.32	2.27	—
New Haven	62,882	30	13	43.33	10.00	29.99	10.00	—
Nashville	54,400	36	11	44.32	11.00	15.39	5.44	8.11
Charleston	52,286	28	9	25.00	17.85	14.28	3.57	3 57
Lowell	71,447	—	—	—	—	—	—	—
Worcester	69,442	32	15	46.95	9.39	40.69	—	—
Fall River	62,674	40	22	40.00	5.00	32.50	—	—
Cambridge	60,995	—	—	—	—	—	—	—
Lawrence	45,516	13	6	23.07	23.07	23.07	—	—
Lynn	44,895	17	6	35 28	5.88	23.52	5.88	—
Springfield	38,090	13	8	23.07	23.07	23.07	—	—
Somerville	31,350	8	3	50,00	25.00	25 00	12.50	—
Holyoke	30,515	6	2	16.66	50.00	16.66	—	—
New Bedford	30,144	16	8	50.00	6.25	37.50	6 25	6.25
Salem	29,503	18	14	44.44	16.66	44.44	—	—
Chelsea	24,347	12	5	50.00	—	41.66	—	—
Taunton	22,693	12	7	41.66	16.66	25.00	8.33	—
Gloucester	21,400	7	3	14.28	14.28	—	14.28	—
Haverhill	20,905	11	5	54.54	—	27.27	9.09	9.09
Newton	19,421	5	3	40.00	40.00	40.00	—	—
Brockton	18,323	8	2	25.00	25.00	25.00	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	3	1	—	—	—	—	—
Fitchburg	13,433	[illegible]	3	80.00	—	60.00	—	—
Eighty-seven Massachusetts towns	339,789	73	30	53.43	17.81	49.33	—	1.37

Deaths reported 2852 (no reports from Buffalo and Milwaukee): under five years of age, 1349; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 951, diarrhœal diseases 636, consumption 334, lung diseases 142, diphtheria and croup 72, typhoid fever 73, whooping-cough 53, malarial fevers 48, scarlet fever 29, cerebro-spinal meningitis 13, measles 11, erysipelas 11, puerperal fever four, small-pox one. From *whooping-cough*, Boston 10, New York nine, Philadelphia seven, Brooklyn and Baltimore five each, Milwaukee four, District of Columbia and Pittsburg three each, Cincinnati, New Haven, Worcester, Lynn, Springfield, Haverhill, and Fitchburg one each. From *malarial fevers*, New York 16, New Orleans 11, St. Louis 10, Brooklyn and Baltimore four each, Nashville two, Charleston one. From *scarlet fever*, Philadelphia six, New York five, Brooklyn four, Boston three, Baltimore, Cincinnati, Pittsburg, and Lawrence two each, St. Louis, New Orleans, and Providence one each. From *cerebro-spinal meningitis*, New York three, Fall River and Woburn two each, St. Louis, Cincinnati, Worcester, Providence, Chelsea, and Taunton one each. From *measles*, New York seven, Philadelphia, Brooklyn, St. Louis, and Fall River one each. From *erysipelas*, New York six, Brooklyn two, Boston, St Louis, and District of Columbia one each. From *puerperal fever*, Nashville two, New York and Philadelphia one each. From *small-pox*, New Orleans one.

Cases reported in Boston: scarlet fever 41, typhoid fever 30, diphtheria 21, and measles two.

In 106 cities and towns of Massachusetts, with an estimated population of 1,264,429 (estimated population of the State 1,955,104), the total death-rate for the week was 20.93 against 22.4 and 20.44 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending August 9th, the death-rate was 21.9. Deaths reported 3670: acute diseases of the respiratory organs (London) 187, diarrhœa 585, measles 92, whooping-cough 75, scarlet fever 70, fever 45, diphtheria 22, small-pox (London 16, Liverpool and Sunderland two each, Hull and Cardiff one each) 22. The death-rates ranged from 14.8 in Bristol to 30.2 in Bolton; Birmingham 22.5; Bradford 16.7; Huddersfield 17.6; Leeds 23.1; Leicester 27.5; Liverpool 25.9; London 21.1; Manchester 22.1; Nottingham 22.6; Sheffield 21.9. In Edinburgh 16.5; Glasgow 24.4; Dublin 22.4.

For the week ending August 2d, in the Swiss towns, there were 52 deaths from diarrhœal diseases, consumption 30, typhoid fever 11, lung diseases eight, diphtheria and croup three, small-pox one, measles one, whooping-cough one. The death-rates were, in Geneva 18.3; Zurich 15.8; Basle 26.3; Berne 21.1.

For the week ending August 9th, in the Swiss towns there were 48 deaths from diarrhœal diseases, consumption 30, typhoid fever 19, lung diseases 11, puerperal fever three, diphtheria and croup two, whooping-cough one, erysipelas one. The death-rates were, in Geneva 18.3; Zurich 25.6; Basle 17.8; Berne 22.2.

The meteorological record for the week ending August 23d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
August, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 17	30.080	74	62	59	92	64	92	83	SW	SW	SW	1	9	13	F	C	C	—	—
Mon., 18	30.056	79	94	68	88	63	94	82	W	S	SW	6	8	6	C	C	C	—	—
Tues., 19	30.097	67	74	62	97	99	100	99	NE	SE	SE	6	6	4	O	F	G	—	—
Wed., 20	30 018	70	77	64	100	84	97	94	SE	SE	SW	2	7	3	F	C	C	—	—
Thurs., 21	29.992	78	85	70	83	73	82	79	SW	SW	SW	15	11	9	F	F	F	—	—
Fri., 22	29.954	74	86	67	94	76	99	90	SW	S	W	10	11	3	O	C	O	—	—
Sat., 23	29.895	72	81	66	88	65	93	82	W	W	SW	5	11	8	O	F	C	—	—
Mean, the Week.	30.013	73.4	80	66				87.0										—	—

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY FROM AUGUST 22, 1884, TO AUGUST 28, 1884.

HEAD, JNO. F., colonel and surgeon. Granted leave of absence for four months. S. O. 201, A. G. O., August 27, 1884.

WOODHULL, A. A., major and surgeon. Detailed as member of Medical Examining Board at U. S. Military Academy, West Point, N. Y., vice Captain R. H. White, relieved. Upon adjournment of the Board to return to his proper station. S. O. 201, C. S., A. G. O.

LIPPINCOTT, HENRY. Promoted major and surgeon. To rank from August 17, 1884, vice Woodward, deceased.

BARTHOLF, J. H., captain and assistant surgeon. Relieved from duty in Department of the Columbia, and to report in person to commanding general, Department of Texas, for assignment to duty. S. O. 199, A. G. O., August 25, 1884.

FINLEY, J. A., captain and assistant surgeon. The leave of absence granted him in S. O. 91, C. S., Department of Texas, extended two months. S. O. 198, A. G. O., August 23, 1884.

CRAMPTON, LOUIS W., captain and assistant surgeon. To report at Creedmoor, L. I., N. Y., not later than August 30th, as competitor, and, in addition thereto, as medical officer of the detachment of competitors. S. O. 41, Division of the Atlantic, August 20, 1884.

TAYLOR, M. E., captain and assistant surgeon. Granted leave of absence for four months, to take effect on arrival of a medical officer at Davids' Island, N. Y., to replace him. S. O. 200, A. G. O., August 26, 1884.

COCHRAN, J. J., first lieutenant and assistant surgeon. Assigned to duty at the Presidio of San Francisco, Cal. S. O. 81, Division of the Pacific, August 16, 1884.

FISHER, W. W. R., first lieutenant and assistant surgeon. When relieved by Assistant Surgeon Cochran to report in person to commanding general, Department of Arizona, for assignment to duty in that department. S. O. 81, C. S., Division of the Pacific.

MCCAW, WALTER D. Appointed assistant surgeon, with rank of first lieutenant, to date from August 20, 1884.

GYNECOLOGICAL SOCIETY OF BOSTON. — The next regular meeting — and the first after the summer recess — will be held at the Medical Library Rooms, 19 Boylston Place, on the second Thursday of September, at four o'clock, P. M. The profession are cordially invited.

HENRY M. FIELD, M. D., *Secretary.*

DIED. — August 25, 1884, John Homer Dix, M. D., M. M. S. S., of Boston.

BOOKS AND PAMPHLETS RECEIVED. — Text Book of Medical Jurisprudence and Toxicology. By John J. Reese, M. D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania. Philadelphia: P. Blakiston, Son & Co. 1884.

Lectures.

SOME OF THE EFFECTS OF ALCOHOLISM.[1]

A CLINICAL LECTURE DELIVERED AT THE PHILADELPHIA HOSPITAL.

BY EDWARD T. BRUEN, M. D.,

Physician to the Hospital and Demonstrator of Clinical Medicine in the University of Pennsylvania.

Gentlemen, — I shall this morning ask your attention to a couple of cases which illustrate a form of disease of which we see a great deal in this hospital, namely, some of the phases of alcoholism.

In order to thoroughly understand what I am about to say, it will be necessary to preface my remarks by briefly alluding to the physiological action of alcohol. Alcohol, as far as its effect on the nervous system is concerned, is a stimulant in ordinary doses, but in very large amounts it has a paralyzing effect on the nervous centres. When alcohol is suddenly withdrawn from a person who has used it habitually, the same instability of the nerve centres is produced as when other stimulants are withdrawn. The local effect of alcohol upon the tissues is twofold: it produces sclerosis of the connective tissues of the body; the coats of the arteries and the connective tissue of the liver and kidneys are most involved; the connective tissue of the liver is markedly affected, because the alcohol being absorbed from the digestive tract is carried directly to the liver. Next to this effect upon the connective tissues alcohol establishes a universal fatty degeneration, which primarily affects the liver, perhaps for the reason mentioned above. Next to the liver the heart suffers most profoundly. The fatty deposits in the connective tissues are increased, and finally the cells lining the tubules of the kidneys become involved. Along with this, and as a part of the cause of the fatty change, we have the change in the crasis of the blood. The corpuscular elements of the blood are affected partly by the prejudicial local influence of alcohol upon the digestive tract and also by the effect which alcohol exerts on the heart. Alcohol used habitually as a beverage, and especially if taken on an empty stomach, is capaale of producing an irritating effect on the mucous membrane of the gastro-intestinal canal, which may be so extreme as to amount to an actual inflammation, and there is produced a chronic intestinal catarrh, with its secretion of mucus and cells, and with an imperfect elaboration of the gastric and intestinal juices and consequent dyspepsia. The malassimilation of the food which is engendered by this chronic catarrh of the intestinal canal interferes with hæmatosis, and the corpuscular elements are poorly elaborated. These corpuscular elements also suffer from the effect upon the heart, since if the heart is weak and unable to propel the blood thoroughly throughou the system the circulation in the chylopoetic viscera is impaired, and as a result the elaboration of the blood is defective.

Alcohol has a special tendency to produce certain symptoms referable to the nervous system which are frequently incorrectly attributed to inflammation of the membranes of the brain. Alcohol has no particular tendency to produce active inflammation of the membranes of the brain, although it is liable to produce chronic nutritive changes in these membranes. What are these changes? They consist rather in thickening of the connective tissues in the membranes, and should be classed with the effects of alcohol on the connective tissues in general to which I referred a moment ago. The evidences of habitual alcoholism are found in thickening of the dura mater, in its adhesion to the skull, and often in an increase of the Pacchionian bodies. Next to this is found thickening of the pia mater, often associated with congestion of the brain. The arachnoid membrane also often presents a milky-white appearance because it is lifted up by the serous exudation beneath it. The brain undergoes hardening from the increase of its connective tissue which is associated with atrophy of the brain substance. Hæmorrhage into and softening of the brain consequent on the diseased state of its blood-vessels is possible. We are now, I think, in a position to proceed to the study of these cases.

This man, D. C., has been drinking ever since he was a boy, and will illustrate one of the effects of both acute and chronic alcoholism, namely, delirium tremens. He was admitted on the 18th of this month (five days ago) in the condition known as alcoholic delirium. In addition he had epileptiform convulsions, and he did not sleep from the time of admission until the night of the 21st. During this period of insomnia he was subject to the peculiar delirium of this affection, seeing spectres, shapes, animals, etc., and was exceedingly violent and anxious to get out of bed. If he had been allowed to do so he probably would have injured himself or others in his efforts to get away from the horrors which surrounded him.

As far as the diagnosis is concerned it is usually based on a good history. Insanity is characterized by delusions, not mere terrors or hallucinations. Acute alcoholic coma often precedes an attack of delirium tremens. A good history is perhaps about the best guide, unless some of the contents of the stomach is obtained and analyzed. The uræmic condition is the one which usually has to be eliminated. Uræmia, as a rule, is not attended with the fanciful delirium of delirium tremens, but more often with stupor and coma. The next thing to be done after obtaining the history is to examine the urine and the condition of the heart. Usually, in chronic renal disease the heart is hypertrophied and the examination of the urine will give important data. In reference to the diagnosis between delirium tremens with stupor and apoplexy the only point which is of special value is the recognition of some local paralysis. A patient suffering from alcoholic coma suffers from a general paralysis, or rather a paresis, but in a patient suffering from hæmorrhage into the brain there is usually paralysis of the arm, leg, face, tongue, or some other part.

What is the next most important point clinically? It is to determine whether the attack in which the patient is seen is the first or whether there have been many attacks. This has an important bearing on the treatment. Usually this information can be obtained without much difficulty. We shall suppose a case of a man on a drinking bout; he has not eaten food, and during this "spree" he has suddenly stopped drinking, or while drinking he has been subjected to some unusual excitement or acute disease, and delirium tremens has supervened. It is the first or second attack. In such a case, as also in the one before us, it is reasonable to infer that the extreme effects of alcohol upon the tissues are not present. The heart is probably sound, and the connective tissues not especially involved.

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[1] Reported by William H. Morrison, M. D.

What shall be done? The most important thing to remember is that delirium tremens is a disease which is usually self-limited. I have seen people killed by remedies because the physician forgot that this was a self-limited disease. The patient should in the first place be put in a room by himself, under conditions of perfect quiet. He should have an attendant to sit by him during the entire time that he is under treatment. The duty of this attendant should be to administer to the patient nourishing food at short intervals, combined with such stomachic stimulants as will increase the ability of the patient to assimilate it. This food should be of the most nourishing and assimilable character, and should consist of such articles as strong beef broths strongly impregnated with pepper, and eggs beaten up with milk.

If the patient cannot sleep there are two or three measures which can be adopted. One of these is to use bromide of potassium and chloral. Feed the patient during the day, and when night comes give five grains of chloral every five minutes until twenty grains have been taken, and the cumulative effect of these successive doses will often induce sleep when a single dose of twenty grains would have no effect. With the divided doses of chloral one drachm or more of bromide of potassium may sometimes be combined. If this treatment produce a couple of hours or more of sleep, then the same amount of chloral may be repeated. I do not recommend the large doses of twenty grains repeated every two hours until a drachm is taken, for the heart may be weak from paralysis of innervation although not from degeneration, and it may be arrested by too large a dose of chloral.

Suppose, however, that the patient does not sleep under the use of chloral and bromide of potassium, what shall be done? In an acute case in a reasonably strong person in whom the pulse is not over 100 per minute the following plan may be adopted: Give three doses of the following mixture at intervals of two hours: —

℞ Pot. et antimonii tart. . . . . . . gr. ⅛th.
Tinct. opii . . . . . . gtt. v. ad. viij.
Aq. camphoræ . . . . ℥i.

This will often be successful not only in the alcoholic delirium, but also in forms of delirium in the sthenic forms of fever. The depressing effect of the tartar emetic if excessive can be counteracted by a little alcohol. It is much safer to employ this treatment than to give morphia hypodermically, or two or three large doses of laudanum, as is frequently recommended. I deprecate the free use of opium in cases of acute delirium tremens.

There is another thing which may be done. Often the patient, instead of being in a state of delirium, will have "the shakes," and be on the verge of delirium tremens. I am still speaking of acute cases. Such a patient will come to you and state that he has been on a spree; that he cannot sleep; that he hears sounds and sees sights; that he is nervous, and has no appetite. Here, again, I should deprecate the use of opium. Such a case should be treated on the same principles which I have already given. The excitement of the nervous system must be allayed, and sleep must be induced. To increase the appetite I often use a prescription like the following: —

℞ Morphiæ sulph. . . . . . . gr. i. vel ij.
Tinct. quassia,
Tinct. calumbæ,
Tinct. cinchonæ comp.,
Tinct. gentianæ comp., } . . . . . āā ʒ i.
Sig. One tea-spoonful three or four times a day, one hour before meals.

The effect of the combination of two or three bitters is often better than that of either one alone. The use of morphia, in small amounts, allays the irritability of the stomach, does not interfere with digestion as much as opium, and in the above dose it acts as a species of stimulant to the nervous system.

Let us now turn to the next patient, P. B., who was admitted six days ago. He has also been drinking, more or less, ever since he was a boy, but in his case the attack of delirium tremens supervened nearly a week after he had ceased to use the alcohol. I shall, therefore, take this opportunity to allude to the chronic form of delirium tremens. What should be done? The patient should, as before, be put in a room where he will have perfect quiet, and alimentation should be, as before, of primary importance. In these cases the weakness of the heart is to be feared, and it is, therefore, not proper to use chloral or the bromides so freely as in acute cases. The patient should be fed during the day, and at night be given a single good dose of morphia hypodermically. If the pulse should be very weak, and above 100 or 120, it will be necessary to administer small amounts of alcohol and also digitalis, because you wish to avoid all tendency of the stupor to pass into coma. Sometimes small stimulant doses of opium every three hours are useful. Coma frequently supervenes because the weak heart fails to propel the blood thoroughly throughout the body, and especially through the brain, and there is thus produced a tendency to venous congestion of the brain. Digitalis prevents this by bettering the circulation; alcohol also assists this end, and is to be used with judgment.

Leaving this matter of delirium tremens, let us consider another aspect of this second case. Mark the flabby features of the patient, the patches of acne rosacea about the nose and mouth. Since the subsidence of the delirium tremens he has been suffering with cramps in the stomach, slight jaundice, and congestion of the lungs, and the tongue has been thickly covered with fur; some vomiting in the morning, slight vertigo, and dull headache. His pulse has been 140 per minute, almost too weak to be counted, and the first and second sounds of the heart have been almost inaudible. The explanation of these symptoms is connected with the lesions of chronic alcoholism to which I alluded at the beginning of the hour, namely, the degeneration of the heart and paresis of the nervous system. The congestion of the lungs was due to the weak heart failing to propel the blood through them, and it was recognized by the harsh breathing, the presence of a few râles, and the impairment of resonance on percussion. The jaundice and the furred tongue was attributable to the imperfect circulation of the blood through the liver and digestive tract. In some of these cases albumen is found in the urine, although in this particular instance it was absent. These patients sometimes have convulsions, but the explanation of their origin is entirely different from that of the convulsion which the first patient had.

Patients suffering with delirium tremens may have convulsions which are epileptiform in character, and due simply to the effect of alcohol on the nervous system. In our first patient the convulsions were probably of this character. They may also have convulsions which are uræmic, due to suppression of the renal function.

How is the diagnosis between these two forms of convulsions to be made? It is very simple. The uræmic convulsion is preceded by a reduction in the amount of or suppression of the urinary secretion and the presence of albumen in the urine. In the epileptiform convulsion there may also be albumen in the urine, but the amount of secretion is nearly normal; the skin is moist; the pupils are usually not contracted; and the breathing is not very deep or stertorous, for if the patient is suffering from uræmia there is a tendency to take deep breaths in order to aerate the blood. I know of no more constant single sign of approaching uræmia than this deep breathing. With the epileptoid convulsions the patient may breathe naturally or, if in a state of coma, he may breathe slowly, but there will not be this deep stertorous form of breathing.

What is the proper treatment of a case subject to the effects of alcohol with congestion of all the internal organs and degeneration of the tissues? The treatment of this case is somewhat typical. The first thing to be done is to administer stimulants to act upon the organ whose function is most important, namely, the heart. This patient was given alcohol and digitalis. A saline purge was also administered. As soon as the circulation was somewhat reëstablished he was given a small dose of calomel combined with the benzoate of ammonium. This drug is a very valuable agent in congestion of the liver, with slow digestion. The effect of the ammonium is anti-plastic and resolvent in cases of slight catarrh of the duct, and at the same time it favors the elimination of the products of retrograde metamorphosis of the tissues, which are carried off by the urine. The proper plan of using this drug is to give ten or fifteen grains in the evening, to be followed in the morning with a purge. In some cases it is necessary to repeat this treatment every other day for a week. Although it is designed to substitute this drug for calomel it may be associated with calomel if desired.

The bitter tonics are useful according to the prescription already given, omitting the morphia.

Under what circumstances do these alcoholic affections become dangerous and the prognosis unfavorable? Broadly speaking it is when the tissues are found to be in a state of degeneration. A careful study should be made of the kidneys, the heart, the arteries, the liver, and digestive tract. There is also grave risk of acute pulmonary complications, such as pneumonia. Even in acute alcoholism the patient may never rally from the primary insensibility.

There is one more matter to which I desire to allude, and this takes me back to a point to which I referred at the beginning of the hour. Patients are often supposed to suffer from meningitis because the cerebral *tâche* can be produced. You see the red line which appears when I draw my finger across the abdomen. Sometimes this line will follow the passage of the finger across the forehead. These *tâches* appear in typhoid fever, in typhus fever, or in conditions analogous to the typhoid state. The point which I wish to impress is that the *tâche* does not always indicate cerebral inflammation. It can be produced by weakness of the heart and venous congestion, so that when the blood is pressed from the capillaries by the passage of the finger across the skin the capillaries are slow in again filling up. The *tâche* is, therefore, not always an indication of cerebral inflammation, and the cerebral symptoms present in cases of alcoholism are not, as a rule, attributable to acute inflammatory conditions.

Original Articles.

A CASE OF SUPPOSED EXTRA-UTERINE PREGNANCY TREATED BY ELECTRICITY.

BY FANNY BERLIN, M. D.

Although cases of extra-uterine gestation are by no means a rare occurrence, and reports of such not at all scanty, the fact always remains that the anomaly is of so interesting and grave a nature that a detailed report of another case may not be without interest to the profession. I here wish to state that I am greatly indebted to Dr. J. R. Chadwick for his courteous advice to publish the case, as well as for his kind suggestions with regard to the literature of this subject.

Mrs. Caroline H., aged forty, has given birth to eight children, five at full term and three prematurely; miscarried once. Always menstruated very profusely, and since the birth of her last child, in 1881, very irregularly, about once in two or three weeks. In May, 1882, she passed two pieces of membrane from the uterus, after much pain. Her attending physician at that time told her it was a miscarriage. In December of the same year she passed a cast of the uterus, which was accompanied by a great deal of bearing-down pain and considerable flowing. This membrane she brought to the New England Dispensary for Women and Children during one of the days of my attendance there. She complained of feeling miserable generally, but on internal examination nothing abnormal could be ascertained, except a slightly retroverted, apparently normal-sized uterus. The membrane presented a perfect cast of the body of the uterus from the commencement of the Fallopian tubes to the os internum.

In January, 1883, she menstruated for four days. The last of February she passed another cast of the uterus, similar to the first one, which she again brought to the Dispensary, but as she was flowing quite a little then she was sent home without any internal examination, and as she lived at a very great distance from the Dispensary she was advised in case of need to call a physician who lived near her residence. From that time until she came again under our observation she remained under the care of Dr. E. G. West, and I will present here in a condensed form the report of the case while under his charge, with which he has kindly furnished me: —

On the 6th of March, 1883, Dr. West was called to see the patient, who was in bed, suffering from severe colicky pains in the abdomen, particularly in the left iliac region. She was flowing, which continued for the next few days. Her temperature was 101° F.; pulse between 100 and 110 per minute. An internal examination caused so much pain that it could not be made thoroughly. No distinct mass was felt, but "local peritonitis" was evident. She was suffering greatly from severe ischuria and pain during defecation. The treatment consisted of morphia administered internally and subcutaneously when there was an exacerbation of pain, hot vaginal douches, and flaxseed poultices to the abdomen. Under this treatment the symptoms abated gradually until the 21st of March, when she was again taken suddenly with an exacerbation of all the symptoms which were present on March 6th. This time she suffered more from the difficulty in urination and during a movement of the bowels, as this latter process was sorely complicated by the presence of hæmorrhoids.

On the 5th of April there was another very severe exacerbation of all the symptoms, although the remission during the last two weeks was not as great as that during the first two attacks. On the 15th of April Dr. West made an internal examination, and then *for the first time* discovered a tumor the size of the body of the uterus in the posterior cul de sac, which seemed fixed and attended by considerable pain when manipulated. The doctor watched the symptoms for two weeks longer, and as there was no change in the condition of the patient, and it was about time for another periodical exacerbation, he called Dr. J. R. Chadwick in consultation on April 28th, and called me on the 29th. We all met on the 1st of May, and found the following condition of affairs: —

The patient looked quite anæmic; pulse good, normal. No rise in the temperature of the body. The abdominal walls were very relaxed and easily permitted us to feel through them a tumor the size of a uterus in the fourteenth week of pregnancy. It was located more towards the left hypogastrium, and was of roundish shape, of elastic consistency, with a nodular projection on its left side, which seemed especially sensitive to pressure. On internal examination the posterior cul de sac, especially its left half, was found to be occupied by a mass, which crowded the uterus forward and towards the right side. Combined internal and external examination allowed the uterus to be distinctly felt in front of the mass and pushed by it to the right side. The cervix uteri was almost obliterated, and tightly pressed against the symphysis pubis. The uterus seemed larger than normal, although the sound for measuring the cavity was not used at that time. The surface of the mass felt somewhat uneven; there was no decided fluctuation to be felt, except that one spot posteriorly, about the size of half a dollar, with rough and nodular edges, gave the feeling of being very much thinner than the rest of the mass, and through it distinct fluctuation could be felt. In several places on the surface of the tumor pulsations were noticeable. The same condition was ascertained through examination made by the rectum. The patient complained of nausea and faint feelings at every attempt to rise. She thought herself pregnant, as many of the symptoms reminded her of her previous pregnancies.

Taking into account the whole course of the woman's illness, the irregular hæmorrhages, the discharges of the deciduæ, the violent, colicky pains, the presence of the elastic tumor, the enlarged and separately defined uterus, the symptoms of local peritonitis, and last, but not least, the woman's own belief that she was pregnant, the diagnosis of extra-uterine pregnancy, probably graviditas tubaria, in the fourth month, was suggested by Dr. Chadwick, and electricity as a means for the destruction of the fœtal life before another exacerbation of the symptoms set in agreed upon. For this purpose the patient was transported to the New England Hospital for Women and Children, and the following day the application of electricity was begun. The first application was given with the constant current on the 2d of May. One pole was applied to the mass through the vagina and the other externally through the abdominal walls. The strength of the current varied from two to eighteen cells, and the interruptions were quite rapid. The time during which the galvanism was applied lasted twelve minutes. She complained bitterly of its hurting her, especially every time the number of cells was increased. The application was repeated the following day, but the patient commenced to flow soon after it quite profusely, and it was considered best to wait until the flow had subsided. The 13th of May the flow ceased and galvanism was again resumed, and the applications repeated the 15th, 17th, 19th, and 22d. Neither during nor after these applications could any change be noticed in the shape or size of the mass, or in the pulsations of the vessels. It was decided then to cease with the applications of galvanism and await further developments in the case.

The 1st of June menstruation set in again. She was at that time feeling quite comfortable, her general health had improved greatly, the pains had almost entirely disappeared, but the tumor still remained unchanged. At about that time the uterine sound was carefully introduced and the uterine cavity found to measure four inches. The attending physician at the hospital at that time, Dr. Helen Morton, into whose charge she had passed, ordered her 0.5 of iodide of potassium, to be repeated three times daily, which she continued to take until the middle of September.

The 9th of July she was dismissed from the hospital to be under outside observation. I saw and examined her at her home the 11th of August, and found the mass decreased to about half its former size. A second examination, on the 25th of August, showed it still decreasing in size. On the 19th of October nothing but a small portion of the former mass could be felt in the posterior cul de sac, towards its left half, in the shape of a soft, flat, glandular-like body, rather sensitive to the touch. The uterus was anteverted and still somewhat larger than normal. Extending from its left and upper end was to be felt a sausage-shaped body, the thickness of a finger, of a distinctly fluctuating character, whose end lay closely over the flat, glandular body above mentioned. It gave the impression of being the left Fallopian tube, probably dropsical. The 9th of February, 1884, Dr. Chadwick kindly examined the woman with me and corroborated the above-described condition of the pelvic organs.

The case is of interest principally for two reasons: (1.) With regard to the diagnosis: Was it justifiable to suppose extra-uterine gestation as the existing condition in this case? The diagnosis of extra-uterine fœtation in the first three or four months is under any circumstances difficult to make with absolute certainty. It is interesting to follow the different authorities with regard to this question. Thus, for instance, Parry, in his excellent work on Extra-Uterine Pregnancy, expresses himself: "If with the woman's conviction that she has conceived are associated colicky pains, located in the hypogastrium, or one iliac fossa, of the most severe character, producing collapse more or less profound, with or without syncope; if these pains come on in paroxysms or have violent exacerbations at more or less regular intervals, with a bloody discharge from the uterus, the existence of extra-uterine pregnancy should always be suspected. If symptoms of abortion supervene with the discharge of a decidua, or if the phenomena of rupture of the cyst follow the symptoms just enumerated, it is the duty of the woman's medical adviser to treat her as if she were carrying an extra-uterine child."[1]

According to Hennig[2] the diagnosis of graviditas tubaria is composed of two parts: (1) the recognition of existing pregnancy, and (2) of the "seat" of the impregnated ovum. In most cases pregnancy can be recognized only through probable symptoms, as it rarely reaches that time when all the pathognomonic symptoms are present, namely, fœtal movements, pulsations of the heart, recognition of fœtal parts. Even the discharge of a decidua is not an entirely sure sign, as membranes are discharged during different diseases of the uterus and general disturbances.

Wyder[3] describes a case of extra-uterine gestation, and gives a detailed account of the macro- and microscopical appearance of the discharged decidua. He asserts that the mucous membrane of the uterus, when pregnancy, intra- or extra-uterine, exists, has a specific structure, which is manifestly different from the structure of dysmenorrhœic membranes, or membranes discharged when endometritis exists. It consists mainly in the different form of the elements composing the interglandular tissue; this latter under normal and other pathological conditions consists of small, round cells, with scanty protoplasm, whereas it presents even in the commencement of pregnancy a very characteristic, large, variously shaped cell, surrounded by an abundance of protoplasm. Wyder thinks that by means of the examination of such a membrane alone the diagnosis of pregnancy can be accepted or excluded. The thick, fleshy membranes which our patient discharged from the uterus presented at least macroscopically the same appearance as the membrane described in Wyder's case. Unfortunately no satisfactory microscopical examination was made, and it therefore cannot be utilized as a positive symptom. However, Ernst Fränkel[4] goes so far as to deny the existence of any pathognomonic symptom in extra-uterine gestation, as all the symptoms belonging to that condition are very variable, except, of course, in cases of advanced pregnancy, when together with an empty uterus the presence of a fœtus can be ascertained. Ruge[5] and Möricke[6] have both demonstrated the existence of the specific looking interglandular cell in membranes discharged during other conditions besides extra-uterine pregnancy, — in endometritis, especially of the chronic form; in endometritis complicating myoma; also in membranous dysmenorrhœa. Thus we see that this one symptom alone of extra-uterine gestation is only of importance in confirming the diagnosis when the anamnesis, course, and present clinical condition of the case present the other rational symptoms of this anomaly, and also when other affections with which it may be confounded can be excluded. These are: hæmatocele, rapidly developed ovarian cyst, and retroverted, pregnant uterus. This latter condition could with certainty be excluded in our case, as the uterus could distinctly be felt in front of the mass, and subsequently, by introduction of the sound, was found to be empty. The very short time within which the tumor appeared, as there was nothing abnormal to be felt in December, and the attending physician noticed a "swelling" for the first time the middle of April, would speak against its being an ovarian cyst. Then, again, the uterus was enlarged, a condition not common in ovarian cysts, but a valuable symptom for extra-uterine pregnancy. Further, the general symptoms of the case — the hæmorrhages and exacerbations of pains, the symptoms of the bladder and rectum — all these speak distinctly and decidedly in favor of extra-uterine gestation.

The differential diagnosis between extra-uterine pregnancy and hæmatocele is not so easy to make, and the two have frequently been confounded by very experienced gynæcologists. Scanzoni[7] says there are no general signs of recognition between those two affections on account of the great variability of the symptoms of extra-uterine pregnancy. But here also we can take recourse to the difference between the separate signs. The uterus is enlarged and separated from the tumor in extra-uterine gestation, but is almost always blended with the tumor and not enlarged in hæmatocele. Of great importance is the character of the pains, intense, colicky, and in pretty regular paroxysms, — signs not prominent in hæmatocele. If in addition to these differential points we add the woman's own belief that she was pregnant, — and this is certainly not to be overlooked in a woman who has given birth to so many children, — we may, with a great deal of certainty, exclude hæmatocele from our diagnosis.

The second point of interest in the case is with regard to the treatment pursued, and the satisfactory result which ought, in all probability, to be attributed to it. It is a singular fact that this mode of treatment, although first used by Dr. T. G. Allen fifteen years ago for this purpose,[8] has had, until quite recently, so few followers who were willing to try its efficacy. Hardly any mention of it is made in the literature on this subject published in Europe. Thus in a report of twelve cases of extra-uterine pregnancy by W. A. Freund[9] the author advises for treatment in the first three months puncture of the sac and injection of morphia. If the sac rupture spontaneously in consequence *no* operation is advised, and as such cases, in the author's experience, only rarely die, even when the symptoms are very alarming, he does not advise operative interference, and simply treats the threatening symptoms of anæmia and peritonitis. Mention is made in Case IX. of a weak current of electricity being applied to the tumor by the house physician, after which the patient perceived no more movements, the tumor decreased markedly in size, and the woman recovered. In this country, however, within the last few years, considerable attention has been given by prominent men in the profession to the use of electricity in extra-uterine pregnancy. Dr. Henry J. Garrigues, in a paper published in the Transactions of the American Gynæcological Society for 1882, gives an account of a case of his own, and a synopsis of other cases scattered through literature, where electricity has been used. His conclusions are that it is a very efficient and safe agent for the arrest of the development of the fœtus in the early months, and that it seems likely that the same treatment might be used at any period of fœtal life. Dr. T. Gaillard Thomas, in the history of twenty-one cases of extra-uterine pregnancy,[1] gives the account of six cases in which electricity was used. All of these cases recovered. And, finally, Dr. A. D. Rockwell has published seven cases of the same anomaly, all successfully treated by galvanism.[2] In his cases, as well as in most of Garrigues' and Thomas's cases, the change of the size and shape of the sac could be noticed either immediately or in a short time after the application of electricity. We could not perceive any change either in size or shape of the mass until nearly three months later. But the mass ceased to increase in size from the day the current was applied; the subjective feelings of the patient commenced to improve very soon after, and menstruation has appeared regularly every four weeks since.

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[1] Parry, Extra-Uterine Pregnancy.

[2] Krankheiten der Eileiter und die Tubenschwangerschaft.

[3] Archiv für Gynäcologie, vol. xiii.

[4] Sammlung klinischer Vorträge, N. 217.

[5] Centralbl. für Gynakol., 1881, p. 287.

[6] Zeitschrift f. Gbthlk., vii., 136.

[7] Frauenkrankheiten.

[8] See T. G. Thomas, Transactions American Gynæcological Society, 1882, p. 228.

[9] Translated from the German, Transactions of the Edinburgh Gynæcological Society, 1883, vol. viii.

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ON THE USE OF IODOFORM INSUFFLATION WITHIN THE UTERUS IN PUERPERAL SEPTICÆMIA.[3]

BY W. E. BOARDMAN, M. D.

MUCH has been said, volumes have been written, since the middle of the eighteenth century, upon the affection known, until late years, only as puerperal fever. Indeed, it may be said that no subject connected with the process of parturition has given rise to greater diversity of opinion as to its origin, nature, and treatment. Even at this day our medical journals are overflowing with the diverse views of eminent practitioners, the individual opinions of many of whom ordinarily are accepted as law in matters appertaining to the theory and practice of obstetrics. This fact, perhaps, of late years, has never been more succinctly emphasized, to our minds, than during the recent discussion of the subject by the very distinguished members of the New York Academy of Medicine. Yet I think I do not err when I state that, in the matter of the origin of the disease, the position taken by Dr. Thomas is sustained by most authorities.

At all events I am satisfied to range myself upon the side of those who believe that there is no essential puerperal fever; that the affection is a septicæmia; that the septic germs are micro-organisms which do not exist normally in the lochia or within the genital tract, but are developed in the organic substances of putrefaction under varying conditions; that these germs find an entrance into the system so as to induce two types of the same disease essentially, which may develop either separately or in common, according to the fact whether the initial lesion is one of the lymphatics, or of the veins, or of both together. Acting upon this theory it has been my practice, in the way of treatment, to attack first the original seat of the septic process, with the view of arresting the germ development within the uterus or vagina, and then to endeavor to correct the evils already induced in the system. In my previous terms of service at the Lying-In Hospital it was my custom to rely upon carbolic acid for the former purpose; but continued experience appeared to demonstrate that this agent did not always accomplish the work which most obstetricians claimed for it, and, during my service in the summer of 1883, I determined to make use of some other remedy, should the occasion seem to arise. In July such a case presented itself, and I beg leave to offer the following record of an undoubted case of puerperal septicæmia in which the septic poisoning was arrested by the insufflation of iodoform within the uterus and throughout the vagina, after ordinary methods, including intra-uterine injections of carbolic acid, had failed to stop the progress of the disease, as indicated by the gradual increase in the intensity of the unfavorable symptoms.

M. H., single, primipara, entered the Boston Lying-In Hospital, and was confined early in the morning of July 11, 1883. The labor was normal, vertex presentation, O. R. A., the child weighing six pounds. The perinæum was intact, and before her discharge the uterus was found to be slightly anteflexed, three inches in depth, with the cervix lacerated bilaterally.

Referring to the accompanying clinical chart it will be observed that, from the first record, taken on the morning following the completion of the labor, the temperature showed an unfavorable condition of things. During the first two days this was reduced temporarily under the use of sponge baths. On the third day it was noticed that the lochia were scanty and rather foul. Milk appeared in abundance, necessitating an efficient supporting of the breasts. On the sixth day, at eight P. M., an intra-uterine injection of a two per cent. hot carbolic solution was given on account of the offensive lochia and gradually increasing temperature, which then marked 103.2° F. A few shreds only came away, but the temperature fell to 102° F. On the seventh day the intra-uterine injection was repeated at evening, when the washings were reported to have been rather muddy and containing a few shreds. A chill followed this procedure, and it was ascertained that she had previously had "chills and fever," though the history in this respect was obscure. On the eighth day the same course was followed, except that the chill was prevented by the use of a subcutaneous injection of morphine. Still the pulse and temperature continued to rise, and on the next, the ninth, day, intra-uterines were given both morning and evening, and each furnished muddy washings with a few shreds. Yet at evening on this day the temperature reached 105.4° F. and pulse 114.

On the morning of the tenth day the temperature had fallen somewhat, to 103.6° F.; but the injection gave the same washings as before. The injection was supplemented by insufflation within the uterus and vagina of iodoform, and at evening the temperature was 103.5° F., and the insufflation of iodoform was repeated, the uterus having been thoroughly washed out with the hot carbolic solution. On the following morning, it will be observed, the temperature had fallen to 100.2° F., and the pulse had dropped from 102 to 89. On account of the patient's favorable condition and the character of the lochial discharge, the intra-uterine treatment was omitted, but repeated at evening. It will be noticed that on this evening visit the temperature had again risen to 104.6° F., and at 7.30 P. M. a temperature of 106.8° F. was recorded. At the same time the pulse began to increase in frequency, and the respirations were 30 in the minute. But the record affords good reasons, apart from the intra-uterine disease, to account for the sudden unfavorable turn of affairs. Early in the morning a small erysipelatous blush was observed over the lower sacral region. In the afternoon she complained of pain in right chest, with slight cough and viscid and reddish sputa. Examination ot the chest detected sibilant râles in the right mammary region and at the right base, and an explosion of fine râles after coughing; no dullness on percussion. At evening of this, the twelfth, day, the ninth and final intra-uterine injection of carbolic solution was given, the fluid coming away clear, and therefore the insufflation was omitted. The temperature was 106° F., and on the following day at the same hour 105.8° F., with a pulse of 30. From this time the lochia were no longer offensive, and ceased to appear on the fourteenth day; but the condition of the patient became and continued to be alarming for several days: in fact, it was believed that she could not possibly survive, not from active sepsis, however, for this process evidently had been arrested promptly by the iodoform. Her serious illness during these days was obviously due to the affection of the lungs and a succeeding peritonitis and diarrhœa, all of which finally induced such an extreme condition of collapse that she must have died had she not been favored by the indefatigable attention, both night and day, of Dr. Worcester, the senior house officer.

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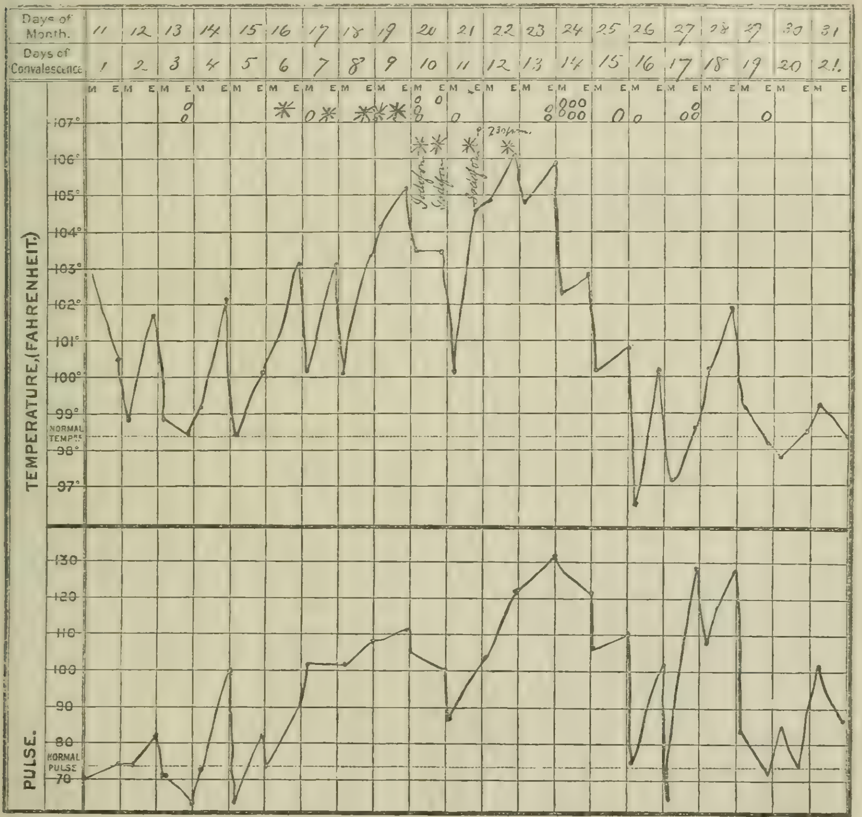
[1] Transactions American Gynecological Society, 1882.
[2] New York Medical Record, February 1, 1882.
[3] Read before the Obstetrical Society of Boston, April 12, 1884.



Note. The sign *o* indicates an injection. * indicates an intra-uterine injection of a two per cent. solution of carbolic acid. In the succeeding charts * indicates an injection of a solution of corrosive sublimate, one to two thousand.

While the history of this case in all its details of symptoms and treatment forms a most interesting record, I have not thought it best to detain the Society by its recital at length, but have endeavored to present briefly the salient points which serve to illustrate to my mind the very marked beneficial effects which were obtained by the employment of iodoform within the uterus where carbolic acid had failed to arrest the septic process, a procedure, I may add, which to my knowledge had not then been employed by others.

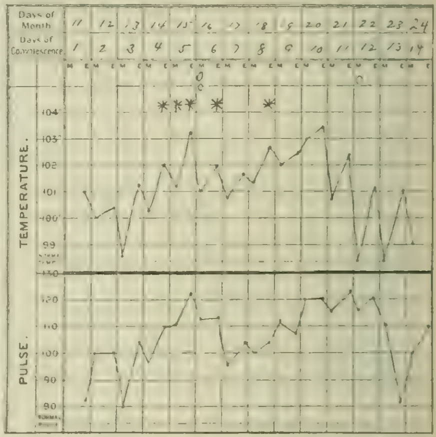
Reviewing the record we find that for nine days the patient gradually became worse, and evidently from septicæmia; that the intra-uterine injections of carbolic acid and accompanying internal treatment appeared to have no effect in arresting the process within the uterus, as evidenced by the character of the washings and the symptoms; that on the morning of the tenth day the insufflation of iodoform was done, with the result of an evening temperature 0.1° F. less than in the morning. At evening the iodoform was employed again, and on the following morning the temperature was 100.2° F. and pulse 89. On the evening of this day the washings had improved and iodoform was employed for the last time, though another intra-uterine injection was given on the next day, on account of the unfavorable change in the patient's condition, and with the fear that sloughing within the uterus had recommenced; but the results showed that the change was due to other and new processes of disease unconnected with the uterus, for the lochia now rapidly diminished and disappeared altogether on the fourteenth day, while the new affections ran their course with alarming symptoms, which, however, she survived and was discharged well August 9, 1883, thirty days after entrance.

Remarks. As to the best method to be employed in order to do the insufflation, *cito, tuto, et jucunde*, I would recommend the use of a large-sized bottle, a modification of the one which has been devised by our associate Dr. Forster; but in place of the flexible efferent tube it is better to use a more rigid one with a terminal opening. With this one will be sure to reach the fundus and to cover the entire interior of the uterus with the powder. With the proper arrangement of the tubes within the bottle, and avoiding undue force in the compression of the bulb, there can be little or no danger of forcing air into the uterus. As to the danger from the use of iodoform in these cases, I think a review of the reported cases of poisoning by this agent will not deter us from the future employment of a promising method of dealing with this very dangerous malady to the lying-in woman.

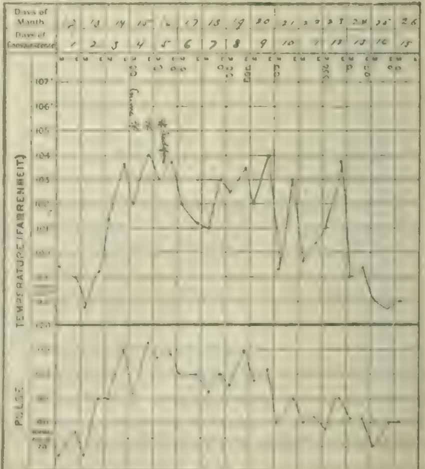
During a recent term of service at the hospital for the first quarter of this year I abolished the use of carbolic acid altogether and substituted a solution of corrosive sublimate 1 to 2000. For obvious reasons this season of the year has usually been more prolific in septicæmic cases, many of which have been fatal. This year, however, the hospital has been comparatively free from the disease, and I am persuaded that the immunity has been due to the lavish employment of the sublimate solution which was required to be used for the toilet of the physicians, nurses, and patients upon all and every occasion, and for douches. In spite, however, of the utmost care, some few cases gave evidences of septicæmia which the sublimate solution did not arrest, and in these I resorted to the use of iodoform by insufflation, with what appears to me to have been very happy results. In a few others the iodoform was employed at once with the apparent effect of arresting the septic process in its incipiency. Possibly in these latter cases the sublimate solution or, may be, a carbolic acid injection might have produced equally good effects. The brief records of some of these cases are presented herewith, together with charts of the temperature and pulse in each. All appeared to me to be undoubted cases of septicæmia, and it is an interesting and instructive fact to be observed from a study of them that the septic poisoning evidently was arrested either at once or in a very brief time. The charts of Driscoll and Crowley apparently seem to contradict this view, but the clinical records show that with the former the second rise of the temperature and pulse was due to the development of a very serious, indeed, usually fatal, skin affection, which Professor White kindly inspected and diagnosticated as impetigo herpetiformis or herpes impetiginiformis, while in Crowley's case the subsequent elevation was due to the development of a cellulitis or peritonitis, or both, for which she still remains in the hospital.

In none of these cases were any symptoms of iodoform poisoning presented, unless the skin affection be classed under this head, and I understood Dr. White to state that this could not be due to anything of the kind. While I do not claim that these cases prove the point which is the basis of the paper, yet it seems to me that we may receive a suggestion from the recital which perhaps will aid us in dealing with this protean malady incident to the parturient period.

Maggie Driscoll. Labor normal. Lochia became offensive on the fourth day: uterine and ovarian tenderness quite marked, severe headache, loss of appetite, considerable nausea, and great prostration. Washings from intra-uterines were muddy. Treatment: Intra-uterines of corrosive sublimate 1 to 2000 and iodoform into uterus, peptonized milk, koumyss and beef tea, brandy, enemata of milk, brandy, and laudanum: Recovery. Skin affection, — impetigo herpetiformis.

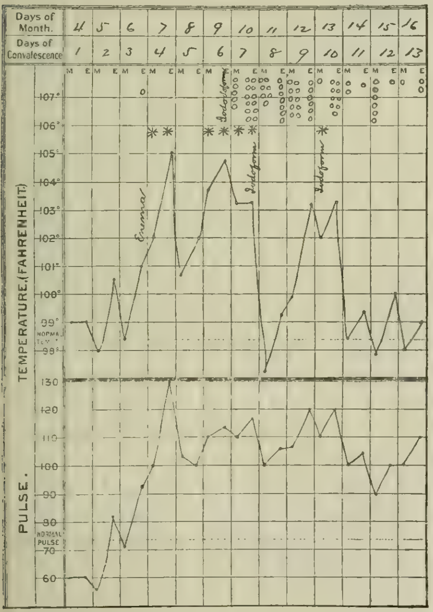


Katie Crowley. Labor normal. On second day developed abdominal tenderness, which increased in



severity, also tenderness over uterus. Rigidity of abdominal muscles, much headache; lochia remained normal. Nausea, tympanites, considerable perspiration. Treatment: Intra-uterines of corrosive sublimate 1 to 2000, iodoform into uterus; stimulation, liquid diet ad libitum; morphia (one quarter grain) suppositories. Cellulitis or peritonitis on right side.

Elizabeth Page. Labor normal. On fourth day developed uterine tenderness, which continued during the following ten days. Lochia were normal and remained so throughout sickness. Diarrhœa began on seventh day and continued for a week in spite of treatment. On eighth day she vomited once, but not after that. Uterus was large and boggy. Washings from intra-uterines contained a few shreds. These, with great prostration, were the principal symptoms. Treatment: Intra-uterines of corrosive sublimate 1 to 2000, and iodoform blown into uterus; peptonized milk, beef tea or brandy every hour; same per enema. Diarrhœa mixture of tr. opii and astringents. Chloral and morphia at night. Poultices and turpentine stupes to abdomen. Recovered.



Nina Clare. Labor normal. On the second day developed tenderness in left ovarian region and headache: lochia became scanty and offensive. On seventh day had a chill: appetite poor: considerable thirst. On the ninth day diarrhœa began, but was soon controlled. Considerable prostration. Vomited on eighth and ninth days. Washings from intra-uterines contained few shreds. Treatment: Intra-uterines of corrosive sublimate, 1 to 2000, and iodoform blown into uterus. Stimulation. Liquid diet ad libitum. Opium and astringent mixture for diarrhœa. Recovery.

		Temp.	Pulse.	
1	M.	99° F.	100	
	E.	100.6	100	
2	M.	102	110	
	E.	102.2	115	
3	M.	100.8	114	
	E.	103.2	112	
4	M.	100.2	100	Two dejections.
	E.	101.8	92	
5	M.	103.1	115	Intra-uterine sublimate injection.
	E.	102.1	100	
6	M.	100.7	104	Two dejections.
	E.	101.7	112	
7	M.	104.8	146	Chill: sublimate intra-uterine and iodoform.
	E.	104.6	120	
8	M.	101.7	108	
	E.	104.6	112	
9	M.	102.5	114	Ten diarrhœal dejections.
	E.	101.8	120	Nine diarrhœal dejections.
10	M.	99	100	
	E.	99	104	Four diarrhœal dejections.
11	M.	99.7	90	One diarrhœal dejection.
	E.	99	90	One diarrhœal dejection.
12	M.	99	82	

Mary Smith. Labor normal. Lochia remained normal. Some uterine tenderness discovered on fourth day, but not marked; headache; impaired appetite. Treatment: Intra-uterines of corrosive sublimate, 1 to 2000, and iodoform. Liquid diet ad libitum. Recovery.

		Temp.	Pulse.	
1	E	99.4° F.	80	
2	M.	98.1	58	
	E.	98.4	58	
3	M.	98.2	64	
	E.	100.1	64	
4	M.	99.6	100	
	E.	103	118	Sublimate intra-uterine and iodoform.
5	M.	99.6	115	Two dejections by enema.
	E.	101.7	106	
6	M.	100.7	102	
	E.	102	118	
7	M.	99.3	96	
	E.	100.2	102	
8	M.	98.4	80	
	E.	99.7	94	Two dejections.
9	M.	98.4	86	One dejection.
	E.	99.4	98	
10	M.	98.4	80	

Martha Korngiebel. Labor normal. Lochia stopped on the second day; tenderness in both ovarian regions, especially in left; considerable headache. On fourth day a piece of membrane, size of a silver dollar, came away with the usual evening douche: its odor was quite offensive. Treatment: Frequent feeding on liquid diet; stimulation; intra-uterines (corrosive sublimate solution, 1 to 2000): temperature 115° F.: iodoform blown into uterus. Recovery.

		Temp.	Pulse.	
1	M.	98.6° F.	100	
	E.	99.5	104	
2	M.	99.1	88	
	E.	101.7	106	Enema: one dejection.
3	M.	103	130	Sublimate intra-uterine injection.
	E.	104.3	134	Sublimate intra-uterine and iodoform.
4	M.	101.4	132	Sublimate intra-uterine.
	E.	102.3	122	Sublimate intra-uterine and iodoform.
5	M.	99.1	84	
	E.	99.2	86	
6	M.	99.1	94	
	E.	100.8	100	
7	M.	103	120	Sublimate intra-uterine and iodoform.
	E.	102	110	
8	M.	101.2	110	
	E.	102.7	120	
9	M.	100.6	98	One dejection.
	E.	100.7	102	Two dejections.
10	M.	100.7	110	
	E.	100.2	116	Four dejections.
11	M.	98	90	
	E.	99.2	96	
12	M.	98.4	90	

Beatrice Mayberry. Labor normal. Had a chill on morning of third day, followed by tenderness in both ovarian regions. Lochia normal and remained so. A second chill on fourth day. Between third and sixth days had chilly sensations quite frequently. Diarrhœa began on fourth day and lasted two days. Dejections very offensive. Considerable headache, nausea, and vomiting. Full bladder occasioned much distress. Had to be catheterized. Induration in right ovarian region, where tenderness was extreme. Washings from intra-uterines muddy. Treatment: Intra-uterines of corrosive sublimate, 1 to 2000, and iodoform, quin. sulph. gr. iii. t. i. d., liquid diet ad libitum, stimulation. Recovery.

		Temp.	Pulse.	
1	E.	98.7 F.	55	
2	M.	98.1	52	
	E.	98 4	52	
3	M.	100.2	85	Chill at 3 A. M. Temp. 102 2 F.; P. 88.
	E.	103.5	105	Intra-uterine sublimate injection.
4	M.	103.2	110	Sublimate intra-uterine and iodoform.
	11 A.M.	107.4	140	Chill.
	E.	101	104	Six offensive diarrhœal dejections.
5	M.	101.3	98	Six offensive diarrhœal dejections.
	E.	103.4	104	Seven offensive diarrhœal dejections.
6	M.	99.7	88	
	E.	101.2	80	
7	M.	100	82	
	E.	102	88	
8	M.	100.8	100	
	E.	101.8	88	
9	M.	100.6	86	
	E.	101.5	87	
10	M.	99	78	
	E.	101.6	82	
11	M.	98.4	75	

Hospital Practice and Clinical Memoranda.

TWO CASES OF HÆMORRHAGE INTO THE PONS VAROLII.

BY R. B. BONTECOU, M. D., TROY, N. Y.

In a former number of the *Boston Medical and Surgical Journal* is an article by Dr. Hurd on Apoplexy of the Cerebellum. It brought to my mind two cases, occurring in my practice, of apoplexy of the pons Varolii in brothers of about the same age. From the rather uncommon locality of the lesion it may be well to place them on record for the benefit of statistics.

The first case, E. R., was a man aged forty-seven years, six feet high, weight about two hundred pounds, married, and keeper of a saloon and restaurant, and of previous good health and history, except occasional slight attacks of gout. Without any known premonitory symptoms he was suddenly seized, on March 3, 1853, with coma and complete abolition of sensation and motion; respiration was difficult and irregular, and deglutition impossible, and he expired in about an hour and a half after the attack.

Autopsy, twenty-four hours after, revealed nothing pathological in the cerebrum, cerebellum, medulla, or membranes, but upon section of the pons a clot was discovered, about the size of a cherry, pressing on the floor of the fourth ventricle.

Second case, W. R., brother of the first, aged fifty-six years, of medium stature and development, married and by occupation a saloon keeper, personal and family history good, was seized suddenly, without any known premonitory symptoms, March 25, 1870, with coma and complete loss of sensation and motion, and expired in an hour and a half from the seizure.

Autopsy, twelve hours after, revealed a clot in the centre of the pons, the size of two cherries, tearing and disorganizing its structure to a considerable extent. No other pathological changes were discovered within the cranium.

In a long practice, with rather extensive opportunities for post-mortem observations, I have found only these two cases of apoplexy of the pons, and, occurring as they did in brothers, think it may be of interest to some. These persons were not considered as intemperate, although the nature of their occupation undoubtedly led them to the habitual use of stimulants.

Reports of Societies.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. M. GREEN, M. D., SECRETARY.

April 12, 1884. The President, Dr. C. Ellery Stedman, in the chair.

Dr. Ingalls read a paper on Some Cases in Pædiatrics, which was briefly discussed by Drs. Abbot, Rotch, and C. E. Stedman.

EXTRA-UTERINE PREGNANCY.

Dr. Chadwick read a paper, written by Dr. Fanny Berlin, on a Case of Supposed Extra-Uterine Pregnancy.[1]

Dr. W. F. Whitney, present by invitation, said that he had examined the specimen given to him by Dr. Chadwick. In connection with this he had looked at the decidua in the cases of extra-uterine pregnancies, which were preserved in the Warren Anatomical Museum, thirteen in number. The cells in this case were as large as those found in the latter cases, and of the same irregular shape. They presented none of the distinctions to which attention has been called by Wyder[2] as existing between the menstrual and puerperal decidua. The orifices of the glands were well marked. As far as this specimen went it would certainly point to the case as one of extra-uterine pregnancy.

Dr. F. G. Morrill, present by invitation, was not sure of the diagnosis in this case between extra-uterine pregnancy and pelvic hæmatocele: he had seen a case of hæmatocele which greatly resembled the one reported, in which the uterus lay in the left inguinal region, displaced there by an effusion: the uterine cavity measured four inches. There were pain, fainting attacks, and hæmorrhage. The mass was aspirated, found to contain blood, and was laid open and the cavity washed out: the patient made a good recovery. Dr. Morrill believed this case might have passed for one of extra-uterine pregnancy, had it not been proved to be otherwise.

Dr. Boardman asked for the limit of time when galvanism can be safely applied: he believed it was unsafe in the later months.

Dr. James R. Chadwick, when called in consultation to this case by Dr. West on April 28, 1883, ventured to make the diagnosis of extra-uterine fœtation on the following grounds: The patient, who had menstruated irregularly every two to three weeks prior to January, had not menstruated from early in January until February 26th, an interval of six to seven weeks, when she had passed decidual membranes; on March 6th she had had an attack of colic and fever simulating localized peritonitis; after a remission of symptoms she had had relapses on March 21st and April 5th; she thought herself pregnant. He found obliquely to the left and behind the uterus a round, elastic, fluctuating body, corresponding in size to the fourth month of pregnancy, crowding the uterus forward and upwards against the pubes and abdominal wall: the tumor was not surrounded by the dense, inelastic induration indicative of a peritoneal effusion. The uterus, both body and cervix, was plainly definable from the tumor, differing in this respect from the condition found with pelvic hæmatocele. He now recognized that he attached too much diagnostic importance to the discharge of decidua, for he had since learned that the patient had passed casts of the uterus several times in the past year; he saw no reason, however, to change his opinion, although he was ready to admit that hæmatocele is not an impossible explanation of the symptoms and condition: this last disease, however, will not explain the great enlargement of the uterus recognized from the beginning and confirmed by a measurement of the cavity in June, when the tumor was subsiding, which still gave a length of four inches. The thin-walled, sausage-shaped cyst felt to the left of the uterus by Dr. Berlin and himself in February, 1884, certainly coincides with the theory of a tubal pregnancy rather than that of hæmatocele.

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[1] See page 244 of this number of the JOURNAL.

[2] Archiv fur Gynakologie, Band xiii., S. 1.

ON THE USE OF IODOFORM INSUFFLATION WITHIN THE UTERUS IN PUERPERAL SEPTICÆMIA.

DR. BOARDMAN read the paper.[1]

DR. ABBOT asked how much iodoform was used, and how it was applied.

DR. BOARDMAN replied that the powder was applied with an insufflator, which consisted of a small bottle with a metal cap which screwed on, and with suitable rubber tubes for attaching the uterine tube and the insufflating bulb. About two drachms of iodoform were used.

DR. CHADWICK asked if iodoform poisoned.

DR. BOARDMAN replied that there were many reported cases of poisoning; but he believed that a careful analysis of them would show that the symptoms ascribed to iodoform might with equal propriety have been ascribed to the disease for which the iodoform was used. Still there are undoubted cases of poisoning. In a recent French review iodoform was believed to poison by its action on the heart, the poisoning being most likely to occur when the drug was used in large, undrained cavities.

DR. CHADWICK inquired if the results in these cases had been compared with those in which the intra-uterine douche alone had been used.

DR. BOARDMAN said he had observed that when the intra-uterine douche alone was used there were no immediate results; but when the douche was followed with insufflation of iodoform, there was a rapid amelioration of symptoms.

DR. HOMANS said that when iodoform first came into use, it was employed in large amounts and he thought poisoning had resulted therefrom: he did not advise against its use, but thought it should be used with care.

DR. FIFIELD believed that iodoform was a very active poison, affecting the brain and nervous system. In the case of a young lady with syphilitic ulcerations on the wrists and scalp he had used iodoform on the wrists and found it too irritating, hence on the scalp he used it with care, applying not more than one scruple in all: the next day the features, neck, and scalp were much swollen. He believed the use of iodoform was abandoned in New York.

DR. RICHARDSON did not agree with Dr. Boardman in the use of iodoform, and thought the results claimed for that drug were to be ascribed to the preceding intra-uterine injection: he had used iodoform in one case and the patient was poisoned, but recovered when the drug was given up; he then used the insufflation again in the same case and the same symptoms of poisoning recurred.

DR. BOARDMAN wished to differ from Dr. Richardson and did not believe that the symptoms in his case were attributable to the iodoform, but to the chloral which she was taking.

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CHICAGO MEDICAL SOCIETY.

D. A. K. STEELE, M. D., PRESIDENT.

STATED meeting of August 18, 1884. The meeting opened with a paper by DR. P. C. JENSEN on

CUTANEOUS THERAPEUTICS,

which created some little discussion.

DR. C. W. EARLE followed with a paper on

INFANT FEEDING AND SUMMER DISEASES OF CHILDREN,

which, being an adjunct to a discussion on cholera of two weeks before, was found interesting. The subject of proprietary or prepared foods, a score or more of which were commented upon as to their merits or demerits for these little people, was thoroughly treated by the writer. We are obliged to abridge the abstract of the paper, as originally prepared by the secretary, but instead give a very brief summary of it, along with the discussion, as found below: —

The conclusions, as summed up, were as follows: —

(1.) The most frequent infantile disease in the city during the summer months is entero-colitis.

(2.) Excluding causes of infant mortality largely beyond our control, improper feeding is one of the chief causes of the great number of deaths among this class.

(3.) Mothers should nurse their children. In lieu of this a wet-nurse should be procured. If this is impossible a mixed diet is preferable, and, lastly, an artificial diet must be resorted to.

(4.) Artificial foods containing considerable caseine are found to be a cause of indigestion and summer diseases.

(5.) In many cases cow's milk diluted with water does not seem to agree with children. Barley water, or rice water, as the diluent, seems to make a more physiological food.

(6.) Condensed milk seems to agree with a considerable number of children, but in many cases a sufficient quantity is not used to nourish a child. Used in proper quantities, and diluted with rice or barley water, it is without doubt one of the best artificial foods.

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[1] See page 243 of this number of the JOURNAL.

(7.) Cream, mutton broth, and white of egg are valuable adjuncts to the dietary of infants.

(8.) Whatever the artificial food a child is having, the physician should examine frequently for evidences that it is a proper food as regards quality and quantity. The normal elevation of the fontanelles and increasing weight are among the conditions denoting a satisfactory and favorable nutrition.

DR. J. S. KNOX stated that he judged from the paper that its author had been a bottle-fed baby, as he himself had been, and inquired if this were true? He was answered affirmatively. The speaker, however, differed from the writer somewhat as to the causes of entero-colitis and the other allied summer bowel affections of children. Improper diet is in part a cause, yet the principal causes that produce it arise or are peculiar to the hot weather of summer, heat producing nervous exhaustion in children; they become restless. The anterior fontanelle is a little depressed, and the trouble at first is the child's nervous system is depressed or exhausted. Urgent thirst comes on. Then, too, the child is too heavily clothed; the bottle-fed baby is especially wrapped in flannels, and as a result he becomes more thirsty. The milk and farinaceous foods that are used become sour, and frequently produce fermentation, indigestion, and diarrhœa. A baby from three months old to a child ten years of age may require diffusible stimulants in the morning to stimulate the nerve centres and otherwise during hot weather, such as a little spirits of camphor, aromatic spirit, or valerianate of ammonia, or even whisky toddy. He has occasionally in the summer given his children a toddy before breakfast, and none of them have ever had entero-colitis. For intense thirst give them small amounts of good, pure cold water; feed them at regular intervals (not too frequently). Farinaceous foods must be prepared fresh only at the time of administering them. Do not give oat meal. If Ridge's food is given it should be prepared with cream. Then try to do without milk. We can give almost any farinaceous gruel or food, and it may be well to substitute a little lime water. Test the excretions, if necessary, and the foods with litmus paper to see if there is an acid reaction. Excessive heat will be likely to produce a heat diarrhœa. When a child is hot give him a cold-water bath; repeat this three or four times a day, on the same principle as for the heat of a typhoid-fever patient. He has frequently seen a baby drop asleep while it was in a cool bath. Entero-colitis in children most likely arises from the heat, such as we have in Chicago during August, which produces exhaustion, fermentation, irritation, interference with nutrition, and catarrhal diarrhœa supervenes.

DR. F. E. WAXHAM differed from both the writer and the gentleman who preceded him as to the causes. The greatest cause is a combination of improper feeding, heat, and impure air. If it were due to improper feeding they would as readily die in the country. If it were due to excessive heat they would die as quickly in the better districts of the city or in the country as in the poor localities. Impure air is mostly prevalent in the poorer localities in houses that are small, containing badly ventilated rooms that are stifling with heat, where, perhaps, there are present several in a bed, when as likely as not an old pair of boots and filth are seen under the bed, etc. Sudden fluctuation in temperature, combined with other causes, will produce the disease. This is greater in Chicago, New York, Boston, and Omaha, than in New Orleans and San Francisco; the temperature is more uniform in the two latter cities.

In reference to cerebral symptoms (as alluded to in the paper) as a complication, What is the cause, significance, and treatment of such? If a convulsion comes on in a case of entero-colitis, is it due to cerebral disturbance? No, it is a result of pain, and opium and the bromides should be given. Danger of hydrocephalus or meningitis may impend. A blood stasis may form under the finger nails. A serous exudation may have formed in the ventricles of the brain from want of tonicity in the blood-vessels. If so, then we must give quinine and stimulants. It may be a gradual softening of the brain that is coming on. The speaker then cited a typical case of "cholera infantum" that had passed through, as he supposed, these stages of disturbance in the cerebrum corresponding to the appearance described under the finger nails. For two weeks the child's life was despaired of, but it ultimately recovered.

DR. D. M. TUCKER thought children do not require whisky toddy in the morning, before they had been taken ill, as one gentleman had stated. In obstetrics, too, a nurse generally wants to give "toddy" to a baby almost the very first thing she does; this is also equally wrong. We are not usually called to see a baby until it has become pretty sick, very sick. The very first thing we should do is to regulate the diet if necessary, and if the baby has been "filled" with toddy we should order it discontinued.

DR. E. F. GASTON was of the opinion that babies often died of inanition, that the mixed diet and dilution of milk was in many instances overdone, and the little ones often did not get sufficient to sustain them, particularly at a time when their powers of endurance are apt to ebb away: and this is especially true of bottle-fed infants that are a few weeks old.

DR. JOHN BARTLETT thought the field had been well covered by the paper and in the discussion. He would not, therefore, attempt to say much. He thought the sweetness of condensed milk is against using it; that this feature is destructive to its digestion. The causes are several, whether heat, sudden atmospheric changes, irregularity of diet, constitution of a child, fermented foods, etc. All of these combined no one will deny act as causes. He had had good success in these cases from using peptonized food as prepared by J. L. Smith, with the Pancreatic Extract of Fairchild, yet he did not wish to recommend them as being superior to many of the other food preparations.

DR. J. J. M. ANGEAR. According to physiologists children cannot digest starch until there is a saliva, and yet we give starch in the treatment of these cases. His observation as to the causes of these summer troubles gives "over feeding;" and, again, some cow's milk does not agree with children. We wonder why this is so. This was very clearly explained by a number of illustrations, one or two of which may be cited. A baby may be fed on "swill milk," or its equivalent, as that which is obtained from cows fed on slops from distilleries. Where 150 or 200 cows are confined to an acre of ground the mud would become one or two feet deep (he has seen such a place in this city), where the stench arising from these cow-pens *could be "felt* with a stick." The milk such animals gave would present the different colors of a rainbow if allowed to stand for a short time only before using, and when given to a baby it sickened it. In London cans of milk designed for children were sealed by an official placing his official stamp on the cans as being pure milk, or a superior grade of the article. The idea is a valuable one, and should be carried out here; by so doing our little ones would get better milk. Heat also produces the disease by depressing the nerve centres. The heat not only affects the cerebral centres, but the cells of every portion of the body. Heat acts first by stimulating these cells; then they die and contaminate the blood, and this material enters the bowels, and right here the cold-water bath comes in, which we should give the first thing to save the vitality of these cells.

Dr. H. J. Reynolds regarded the etiology of the disease as heat, imperfect feeding, filth, impure atmosphere, placing a child in a heated room, etc.; besides all these, a peculiar atmospheric condition may produce it where none of the other causes are present. The speaker alluded to electricity as a cause having much to do with producing the disease.

Dr. C. E. Webster thought it interesting to note that recent experiments have demonstrated that the saliva of infants is capable of converting starch into sugar as early as the sixth day after birth. The practical value of this discovery is limited, however, by the fact that the saliva is a very small factor in the digestion of starch; the intestinal and pancreatic juices must aid; its ferment is only capable of acting in an alcoholic solution; it is inoperative or wholly destroyed in the stomach, and the digestion of the starch takes place after the passage of the food into the small intestine. These being the facts, it is evident that the matter of the infantile digestion of starch requires further investigation.

Dr. G. C. Paoli thought opium is a very frequent cause of death of little children having enterocolitis or other bowel difficulties; that they should have better diet and fresh air, and, lastly, that more hospitals for them should be erected. With these means we could save them and their lives from the slums and alleys, where the poor live often on old bread, and where garbage and decaying vegetables are to be found.

Dr. F. H. Martin spoke of the "Sanitarium" recently established at the foot of Twenty-fifth Street on the Lake shore, under the supervision of some Jewish ladies. A few healthy cows are kept there, with clean surroundings, and fed on grass, clean bran, etc. Here twenty five to fifty children are cared for daily and supplied with an abundance of fresh sweet milk and crackers.

This discussion was followed by a paper read by **Dr. John Bartlett** on

A THEORY OF CHOLERA, OR TWO THEORIES AS TO THE MODE OF ADVANCE OF CHOLERA,

which was very long. The following abstract of it will be read with more satisfaction and greater interest if it be known that the illustrations made use of — the "army worm" and "marsh fungus" — have been carefully studied in the field by the author. Some twenty-four years ago he wrote a long article (the first one ever written on the Army Worm), as may be seen by a perusal of State Entomologist Dr. Smith's New York Report for the year 1861–1862. The author has also had ample experience with the cholera, having passed through two or three epidemics.

While it must be admitted that the knowledge of cholera is very imperfect, it may yet be of interest and profit to frame some theory of the disease which shall conform to every known fact regarding it, and which may offer explanations of the phenomena of the disorder, as satisfactorily as the limited knowledge of such subjects will in the present state of science admit of. Such a theory is of value, if simply as a frame-work which may hold together in an apparently perfect order and relation a large number of fragmentary facts, which might be lost to the mind if allowed to lie detached and disconnected. The writer accordingly presumed to set forth what he conceived to be such a theory of the disease, taking occasion to follow the method of induction, and erecting the theory upon a trestlework of facts, assumed to be analagous, drawn from other departments of observation. Events are occurring about us similar in many particulars to the rise and spread of epidemic diseases. One of the most striking of these, perhaps, is the prevalence of that plague to vegetation, the army worm. The laws of this pest have something in common with those of cholera. Thus the cause of the army worm is always present in, and indigenous to, certain localities favorable to its development, life, and methods of propagation. Appearing yearly in these habitats, it spreads occasionally, and with some show of periodicity, over extents of territory far beyond its normal limits, and these periodic irruptions frequently cover vast areas of territory, carrying devastation over continents. In this march outward from the nidus of development, pushing onward by some regular yet occasionally interrupted stages, the army worm resembles an epidemic of disease in its mode of approach to a place, its gradual attainment of an acme of destructiveness, and final abatement. Thus the army worm millers, indigenous to certain marshy lands of the South, in the year 1861 sallied from their haunts in illimitable swarms and deposited their eggs in suitable places, and at a suitable period of the growth of early vegetation, in every county from the Gulf to the lakes. These eggs lay dormant until stimulated by the warm weather. Then, apparently, starting from its habitat at the southward, began the northward march of the army worm which overran the country. It was because of the fact of the apparent onward march of the countless hosts of these invaders that they received the suggestive name of "Army Worm." And yet their march was only apparent. They moved only from field to field, as other insects, for the purpose of forage. They advanced northward only as the peach blossom advances northward; their march kept pace with the increment of heat, of the advancing season necessary for the development of the long-deposited egg. The line of their march was an isothermal one. Thus, the worms keeping pace with vegetation, appearing when the winter wheat was "in the milk," advanced toward the north slowly, so that they appeared in Maine two months after they were first seen in Missouri. They had not moved on to other conquests, as people supposed, but the worm, disappearing under the sod, had become a chrysalis, which in a few weeks emitted the miller, which deposited its eggs, and thus completed the cycle of the insect's life. In the above reference to the army worm invasion, it was assumed by some that the whole field devastated had been run with the germ of the plague the previous season.

Observation of the insect indicated, however, that it passed through its phases within a few weeks, and it is probable that the visitation was not thus sown broadcast and at one time, but that the invasion was by the gradual encroachment of successive "crops" of the worm, so that the insects marching northward into Michigan were not "contemporaries," but the descendants, by several removes, of those which, weeks before, invaded Southern Illinois. Thus a brood of worms, disappearing in the northern counties of Mississippi as chrysalides, were represented, in a few weeks, in Middle Tennessee by millers attracted northward in search of early vegetation suitable as nidi for their eggs. The crop of moths from these eggs would in turn deposit their ova in Kentucky, and so the advance northward would be effected not by the worms, but by that element of the insect floating in the air, and endowed with power of swift flight, and with selective instinct. In regard to the continuance of the recurrence of these insects, it is essential that the several elements find suitable resting surfaces and conditions (of temperature, moisture, etc.), and in the lack of these the element may perish or may remain inactive for an indefinite period, till conditions occur requisite to arouse it to development. Thus in the latitude of St. Louis, with favorable conditions, two or three broods of the worm were hatched in one season, while in Maine a second brood did not appear. Injury to crops wrought by secondary broods in one locality was comparatively limited. The new worms were preyed upon largely by enemies now invading the field, and material suitable for their sustenance was scarce, in good measure exhausted by the depredations of their predecessors. Finally, the miller of the army worm "winters over," and deposits its egg at the appearance of vegetation in the spring. By accident or design the insect, in any of its phases, could be transported to any distance, and as a miller it might be readily carried by the wind. Dr. Koch, the noted microscopical investigator of the causes of disease, believes that he has discovered the actual entity producing the cholera in the "comma bacillus." As yet no more is known of this bacillus than its bare existence. It has a natural history, but the laws of its development and changing growth are yet to be learned. In the absence of such knowledge we may assume that it has certain phases of development, as the army worm has, and that in each one of these it presents different potentialities. In relation to certain fungoid cells, the fact of such phases of existence are ascertained, and from analogy it may be inferred that the "comma bacillus," after a period of active growth, develops into an apparently lifeless-formed material, a crystalline substance, bearing, for illustration, as the writer stated, the same relation to the cell as coral does to the insect which forms it. This crystalline substance is not dead, but living matter, and after a period of passivity, under favoring circumstances, it puts forth buds, which presently burst and emit into surrounding media a protoplasmic fluid, in which, in time, are developed the cells, thus completing the cyclic changes in the life of the plant. The peculiarities of the several elements may be thus stated: The crystalline substance, we may suppose, is in the form of dust, granules, or threads, not an impalpable something, but a material which may be seen by the naked eye, and handled by the fingers. Under the microscope it may be seen to form from an aggregation and concretion of the cells. From it buds, sprouting, emit what may be compared to the contents of an egg, a protoplasm, an apparently homogeneous, aqueous fluid, in which presently begin to appear dim outlines of cells that gradually grow in size and increase indefinitely, not from cell division, but from development of a cell from every atom of the protoplasm. The power of this fluid is only exhausted when its ultimate atom has become a cell. The characters of the protoplasm prior to the development of cells would probably elude all efforts at recognition, so that fluids and tissues of a body containing it might be examined with the highest powers of the microscope without the detection of any organic particles. All parts of the cholera fungus, then, are portable, all are tangible, visible entities, except the infinitely minute atoms of cells in the protoplasm.

The entrance of this fluid into the economy impregnates the system with the ultimate germ of the cells, which under favoring circumstances develops at the expense of the blood, and produces the symptoms known as cholera. The seeds of the disease are brought in the course of travel, to a locality, as crystalline substance, — cholera dust, — or of protoplasm diffused in moisture of the air or water, or in fluids of the human body in the form of cells. Under favoring conditions these elements proceed to perform each its part in nature, so that sooner or later after finding a resting place in a community, they develop protoplasmic fluid, which disseminated by the law of diffusion of fluids in the air and water, or resting as dew upon articles of food, finds its way into the body. The atoms of the poison, infinite in number, and pervading large areas of space, are received into the system of all, as is the pernicious miasm of the marshes. The blood, acting as other fluids have been observed to when impregnated with fungi, resists the changes which it is the destiny of the foreign agents to effect, until the number of the invaders, or some changes in the vitality or chemistry of the impregnated fluid makes longer resistance impossible, and an explosion of the disease like a paroxysm of pernicious fever results. The ejecta from the first cases, filled as they are with cholera cells, find their way generally to a favoring soil, and develop within a few hours succeeding phases of the fungus. Thus crop after crop of cholera atoms are begotten in a prodigiously increasing progression, to extend the area of infection and increase the malignancy of the disease. It may happen that the germs of cholera introduced in a locality find circumstances unfavorable for their development at the time; and although seeds of the disease may be pretty generally sown, they lie dormant for a season. There are certain known facts regarding the cholera, which at least lend plausibility to the theory that the germ may be implanted in a district long in advance of the actual appearance of the disease. Such, certainly, is the case when cholera "winters over," as it is said, lies inactive, it may be, through the fall, winter, and spring, to arise into activity the following summer. It has long been noticed that an epidemic of cholera is often preceded for weeks by the influenza, and a marked and general tendency to diarrhœa. The reasonable assumption, that both the forerunning ailments and succeeding disease were effects of a common cause, would imply the presence of the germ of cholera in a locality long before the actual outbreak of the epidemic.

The march of the pestilence, though generally in the track of travel, is sometimes singularly abnormal as to this law. The cholera sometimes springs up in places far out of the line of apparent exposure. These variations and exceptions to the general law of portability of the disease, suggest a possibility of the truth of the theory, that it may be primarily sown as a temporarily inactive dust as well as implanted as a speedily developing protoplasm. It may be, that in attempting to trace the origin of the disease, by noting in any locality the first case, we err in this, that we compare the course of the epidemic with the line of travel in the presence of the attack, when possibly it is the course of the traveler from the infected district of last year to which attention should be given. The irregularity as to the time and place of appearance may be further referred to the varying soil and temperature of the respective localities considered as developing agents of the deposited germ.

It will be noted that there have been here set forth two theories as to the mode of advance of cholera. The one, that it advances in successive crops from a first, or isolated case; the other, that the seed is sown broadcast over the countries elected for visitation, and that these are developed when and as favorable conditions arise. The number of cycles which the cholera germ may undergo in a season may vary with the locality, temperature, etc., conditions which determine the severity of the epidemic and the length of its stay in a place. Thus, at St. Louis, the number of its cycles might be threefold greater than at Bangor. And a variation in the time of the cycle, also, might influence the rate of advance of the disease.

Changes in the blood, effected by protoplasmic atoms in their act of development into cells, alone produce the cholera. The presence of cells which have already completed their growth, or the material formed from them, cholera dust, does not directly induce disease. Thus, rice-water discharge abounding with comma bacillus may be drunk without injury. The subsequent deposit of these cells in the ejecta of the experimenter may, however, lead to an outbreak of the disease, of which he may prove the first victim. One of the most singular laws of cholera is this, that with rare exceptions it marches *onward*. It remains active in a place a number of weeks and subsides, and the places next attacked are beyond, relatively, the starting point of the district last devastated. In reference to the army worm this is also a fact; and in regard to the march of the insect we can plainly discern the laws. And that, whether it be held that the eggs have been all deposited by the same army of moths or by successive broods of them. In the one case we may suppose the millers, finding the fields of favorable deposit preëmpted, pass onward to unoccupied territory. In the other, because of the devastation made by the preceding generation, the millers of the present must instinctively move onward in search of proper resting places for their eggs.

Means by which man might stamp out or keep out the myriads of army worms which sometimes in a few hours fill to the brim the cordon of ditches plowed about the grain fields, and change in an equally short time flourishing acres of wheat into a "marble ground," can hardly be devised. Plans by which he might unearth and devitalize chrysalides planted under every sod from Georgia to Maine, are difficult to imagine. Methods by which he might successfully contend against the innumerable moths filling the air, might discover and destroy the numberless eggs deposited in every meadow on the continent, are inconceivable.

How infinitely more difficult to avoid or to antagonize are minute cells, the every way and everywhere portable dust, and the invisible, intangible, miasmatic atoms of cholera.

And yet the farmers actually did antagonize their protean plague in all of its phases, and with a fair measure of success. They quarantined against the ever-coming and ever-increasing countless millions of worms. They energetically and persistently worked to keep off from the yet uninvaded fields, by means of a cordon, mechanical and chemical, all possible insects; they plowed under and deeply buried, in order to destroy the chrysalides known to have formed; they attempted to entrap and destroy the millers by cordons of lights, and they burned the grass where the eggs were deposited.

The principles of quarantine against the cholera, suggested by the theory of the disease here presented, may be summed up in the following propositions: —

Elements of the disease known to exist may be isolated or destroyed. Places suitable for the development of the elements may be rendered unsuitable. Ingesta possibly contaminated by the cholera poison may be avoided. Badly infected districts may be evacuated.

According to this theory, during an epidemic the poison lurks in every individual. In the blood of an exposed person are two contending forces, the one the resistance of the vital fluids to the changes attempted to be made by the invading atoms, the other the efforts of the latter to appropriate from the blood materials for their own growth.

One of the first evidences of the yielding of the forces contending for integrity of the blood is loss of serum. The one important event in the chemical change in the blood necessary to give the victory to the ferment (invading atoms) is loss of its serum. Speaking figuratively serum is the essential ally of the blood in its resistance to the invaders. Ejection of ever so little of this tends to render the ejection of other portions easier, and to give the final victory to the poison. Now, while no prophylactic measures are known, it is most fortunate for mankind that remedies are at hand which, if applied in season, may, unless the assault of the ferment be overwhelming, arrest the flow of serum and reënforce the blood in its resistance to the infection. Even when the cholera has held full sway, when it has run its course without interference, it is not necessarily fatal, either because the dose of poison has been insufficient to destroy, or because in some life may continue after the virus has done its worst.

The secondary, reactionary conditions following the collapse known as the typhoid state are complicated phenomena. They are expressions of the efforts of the system in its struggles with the resultants of the cholera paroxysm, rather than a proper stage of the disease. They bear a relation to cholera which may be compared to that which surgical fever bears to injuries which cause it.

This theory of the presence of the germ of disease in the system of all involves the recognition of the principle of acclimatization in this disorder. One may become by gradual inurement habituated to the presence of the virus, and perhaps the majority so inured are able completely to resist it. As in the yellow fever, however, the acclimation may be speedily lost. Persons whose systems have not thus become acclimated to the poison may be, upon sudden exposure, stricken down with violence.

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ACTINOMYCOSIS IN MAN AND IN ANIMALS.

A PAPER of considerable length and interest upon actinomycosis was contributed to the April number of the *Revue de Médecine* by Dr. Firket, of Liège, under the above title, in which especial attention is given to the bibliography of the subject, and it is pointed out that this disease in man is not of such recent observation as has been generally supposed. Less than two years since many pages of *Virchow's Archiv* were occupied by a bitter controversy between Israel and Ponfick as to which of them rightfully belonged priority of observation and description of actinomycosis in man. Firket insists, apparently with some little justice, that such priority really belongs to Lebert, who, as long ago as 1857, published the first account of human actinomycosis. This may be found in his treatise on Pathological Anatomy,[1] and the radiating fungus which gives its character and name to the affection may be seen figured in Lebert's Atlas.[2] These specimens were found in the "thick, almost gelatinous" contents of an abscess of the thoracic walls of a man aged fifty years, a patient of the famous Louis, who sent the specimen to Lebert for examination in 1848, the man having shown symptoms for four or five months of an affection of the lungs which Louis suspected to be of a cancerous nature. Robin, in his Traité du Microscope, in 1871, recalls Lebert's observations, and gives additional figures of similar radiating masses which he had several times found in the pus of "old, deep abscesses."

Israel first called attention to the subject in 1878 in a memoir read before the Berlin Medical Society, and published in September of that year in *Virchow's Archiv* under the title of "Neue Beobachtungen auf dem Gebiete der Mykosen des Menschen." In this was included, by permission, a case observed by Von Langenbeck in 1845 in connection with a prevertebral abscess, but never before reported. Ponfick's first observations were communicated to the Surgical Congress at Berlin in April, 1879, and published later in the same year in the *Berlin. klin. Wochr.* as a paper under the title of "Eine warscheinlich mykotische Form von Wirbelcaries."

Von Langenbeck certainly, and Lebert apparently, recognized the parasitic character of the maladies presented to them; Israel, whilst regarding his cases as "a special form of pyæmia," realized distinctly the fungoid character of the accompanying growths, and their special parasitic relation to the disorder as a cause, but he neither attempted their precise determination nor recognized the identity of the disease with that previously described by Bollinger in cattle as resulting from this same fungus, named by Harz, a botanist to whom Bollinger referred his specimens, *actinomyces bovis.* This identity was appreciated and established by Ponfick the following year in the memoir previously mentioned, and this seems to be the only real basis to any claim which Ponfick can fairly make to the discovery of human actinomycosis.

Bollinger, who was followed by Ponfick, who has generally been regarded as the first to describe the disease in cattle, and who made his first publication, entitled *Eine neue Piltzrankheit beim Rinde*, in Germany, in 1877, was, moreover, preceded by Rivolta and Perroncito in Italy, where the malady is by no means very rare in cattle, in 1868 and 1875. In Italy the disease is popularly known under the names of *lupia* and *mal del rospo.* In Germany the peasants have various names for it, as Ladendruck, Ladengeschwulst, dicker backen, Krebsbacken, etc., etc. It has been observed, though rarely, in swine and in horses as well as in cattle. For a long time all attempts to inoculate rabbits were unsuccessful, but Israel reports his last efforts with this animal as attended by positive results.

In the United States a few scattered cases of *actinomycosis bovis* have been reported from the West, and one of Eastern origin in the JOURNAL,[3] but the disease as affecting cattle is evidently but little known or not recognized, in this country, and has never been observed in man. Firket puts the number of cases of human actinomycosis reported in Europe up to the date of his publication at twenty-eight, but as no reference is made in his bibliography to five cases occurring in the peritonæum and abdominal organs, reported by Lemann, assistant at the Vienna Pathological Institute, mention of which may be found in the JOURNAL,[4] we are inclined to think he under-states the number. Ponfick collected sixteen cases of his own and others, which were, apparently, all he was acquainted with, and these were incorporated in his monograph entitled *Actinomycose des Menschen, eine neue Infectionskrankheit*, etc., etc., a brochure which appeared in 1882, and summed up the contents of his two previous papers.

The fungous nature of the actinomyces has been well established, but a careful study of the conditions favorable or necessary to their growth, of their development, of their affinities still remains to be made. In the same way their presence in various tissues and organs of the human system has been perfectly well established, and the various symptoms and effects of their presence upon the organism quite fully described, but little is yet known of their mode of transfer from one victim to another, or of their ways of entering the economy which they attack. Were they found only in superficial situations or in such as communicate readily with the external air the explanation would seem simple, but their discovery in deep tissues and organs, and in places where no communication with the outside exists, makes it much less easy to arrive at a satisfactory solution of this question.

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[1] T. i., p. 54.
[2] T. i., pl. ii., Fig. 16.
[3] Vol. cx., p. [illegible]
[4] Vol. cx., p. [illegible]

The majority of the cases reported have proved fatal, but there is no doubt that where the affected parts are so situated that the whole of the parasite can be thoroughly removed a cure may be effected. Some observers are disposed to dwell upon the analogies between the processes exhibited by actinomycosis and tuberculosis.

◆

ANTISEPTIC THERAPEUTICS.

At the recent meeting of the Medical Congress at Copenhagen the subject of antiseptic medication was discussed by Ewald, Jaccoud, Bouchard, Grancher, Liebermeister, and others. Ewald was inclined to accord a great value to the discovery by Koch of the bacillus tuberculosis; it had certainly been of great diagnostic importance, and was likely to have an influential bearing on therapeutics. Jaccoud did not understand that Koch's discovery had added anything to the therapeutics of phthisis. If we take account of the fact that the transmissibility of the disease had been established by Villemin, and that the profession was in possession of all the hygienic and medical means of precaution before Koch announced the results of his labors, it will be seen that the discovery of the bacillus has been barren of any useful therapeutical fruits.

Guttman thought this a very narrow and *unmedical* view of the subject. Always when we have had clearer notions of the causation of diseases improvement in therapeutics has followed. We are still, unfortunately, in the experimental period, as far as the treatment of phthisis is concerned, and the discovery of the bacillus is too recent an event to warrant us in denying that it is to have an important influence in the therapeutics of tuberculosis.

Subsequently at this session Bouchard gave an interesting address on Antisepsis in Medicine. The only kind of therapeutics, he said, that is really curative is pathogenic therapeutics, for this aims at the cause. Today we possess, for a considerable number of infectious diseases, a pathogeny which is positive. A new tentative, then, in the direction of pathogenic therapeutics is warranted, this shall be antiseptic therapeutics.

The value of surgical antisepsis is practically undisputed, but the notion of medical antisepsis has not been so readily entertained. We are told that the infectious element being in the intimate recesses of the organism, it is necessary, in order to reach it, to impregnate the entire organism with the antiseptic substance, which must equally modify the human cells and those of the ferment, and which will kill the patient before killing the microbe.

Bouchard thus states the fallacy of this argument: —

(1.) There are substances innocuous to man which are destructive, if not to microbes in general, to certain microbes. Oxygen, indispensable to man, prevents life in the case of a host of ferments; salts of silver in doses which are without effect in animal organisms arrest the development of an aspergillus.

(2.) There are medical diseases such as dysentery, cholera, and diphtheria, where the infectious agent is, at least for a limited time, on the mucous surfaces and can be reached topically without impregnation of the entire economy by the antiseptic substance.

(3.) Medical antiseptic therapeutics does not propose to kill the microbe (as has been falsely represented), but only to stay its pullulation. In fact, when in infectious diseases the victory is decided in favor of the ferments it is because the latter are incessantly renewed, because new combatants, always more numerous, succeed those that perish in the struggle for existence against the animal cells. In the higher organisms, animal or vegetable, a simple change of environment, of climate, suffices to make them lose their fecundity without compromising their existence. The example of sheep belonging to the department of Beance, which become refractory to charbon when they have been transported for a certain time to Algiers, gives us reason to hope that even slight modifications in the human infected organism may prevent the indefinite multiplication of certain microbes which have invaded it.

Certain clinical facts go to confirm these views. All antithermal medicines are also antiseptic. Quinine, which in typhoid fever may reduce the temperature three degrees and more, does not lower the temperature in a healthy individual. It is even without action in certain fevers, such as attend pneumonia and erysipelas. Quinine would appear to act, then, not so much by its physiological effect on the organism as by being noxious to certain pathogenic microbes. Phenic acid, which is assuredly antithermal, is at the same time a poison to the infectious agent of typhoid fever.

According to Bouchard's statistics, out of one hundred patients cured by the phenic-acid treatment there were ten in whom the disease lasted less than a fortnight. In one case he saw accidental poisoning by the carbolic acid cut short the disease; the temperature fell from 40° C. to 35.7° C., and did not thereafter gain a higher point than 37° C.

All the medicaments whose good effects have been vaunted in typhoid fever are antiseptics.

Clinicians show a certain obstinacy in coming back to the employment of mercury in typhoid. Serres has given the black sulphuret, Becquerel uses the blue ointment by frictions, while Salet administers calomel even to salivation.

The method of Salet has given, as reported, in Bouchard's practice, a mortality of six per cent., and a medium duration of twenty days. All the patients that have been salivated have recovered, and in these cases the duration of the disease was briefest of all.

The antiseptic treatment of typhoid fever by calomel is realized by giving this mercurial in doses of from one to two centigrammes every hour till the mouth becomes sore. Against the advisability of this method it should be said that convalescence is thereby rendered longer and more painful. Bouchard would not be understood as actually proposing an antiseptic treatment of typhoid fever, at the same time believing that medical antisepsis is theoretically admissible, and in certain cases practically realizable.

It seems highly probable that persevering researches undertaken in this direction will be attended with fruitful results. They ought to be first pursued in the laboratory. A double direction may be given to these researches. In the case of diseases of which the infectious agent has been isolated and cultivated it would be well to test in the culture liquids the sensibility of the microphyte to divers substances called antiseptic. The same medicaments should then be tried on animals which have been inoculated with the microbes of contagious diseases to which they are susceptible. It is by the blood that the medicament must be made to reach the microbes. Intra-venous injections, which, in the present state of science, ought to be interdicted in the human subject, seem to be the preferable means for the introduction of medicaments in animals under experimentation.

Bouchard, as the result of careful experiments undertaken to ascertain the quantities of antiseptic substances which by kilogramme of the weight of the animal will produce death, and the quantity which may be given with safety, has, in respect to many of these substances, arrived at what he calls the therapeutic equivalent of the medicament, that is, the quantity reckoned by kilogramme of the animal, which, when injected into the blood, does not determine toxic phenomena, but beyond which poisoning takes place. He has made this estimate in the case of seventeen antiseptic substances, and has shown that if you associate the proper therapeutic equivalents of several of these medicaments, the antiseptic action of the mixture is augmented more than its toxic action, hence there is an advantage in giving several antiseptic remedies together. In speaking of cases where the infectious element primarily occupies the surface of organs, Bouchard thinks that medical antisepsis has accomplished sufficient to warrant the expectation of greater success in the future.

It has not yet done in diphtheria all that has been expected of it, through lack of processes which enable us to act with sufficient energy on the air passages; it has been applied blindly to cholera, but it has shown itself sovereign in certain arthrites, in certain pleurisies, and in dysentery.

For nine years Bouchard has employed antiseptic medication in the treatment of the complications which arise in the progress of typhoid fever in consequence of intestinal putrefactions. It is relatively easy to introduce into the digestive tube an antiseptic substance, insoluble or but little soluble, so that not being absorbed it may reach the extremity of the intestinal canal; moreover, the medicament not being absorbable cannot produce, even in large doses, a toxic effect in the economy. In having to choose between salicylate of bismuth and iodoform, he has preferred iodoform, which, associated with charcoal, has a wide range of action, and by reason of its extreme division permeates every portion of the mucous membrane, becoming thoroughly mingled with the contents of the intestines.

Sixty centigrammes of iodoform dissolved in one hundred cubic centimetres of sulphuric ether is mixed with one hundred grammes of wood charcoal powder. After evaporation of the ether the iodoform charcoal preparation is suspended in one hundred and eighty grammes of glycerine, and a tablespoonful of this mixture in a half tumblerful of some kind of drink is given every two hours.

For nine years M. Bouchard has been in the habit of giving in typhoid fever wood-charcoal powder internally in quantities of one hundred grammes a day (or a little over three ounces), in ten doses. His object has been not to act upon the typhogenous agent in the blood, nor even to oppose the intestinal putrefactions, so much as to prevent the absorption of the products of these putrefactions by fixing them to the charcoal, the daily dose of which represents a surface of at least sixty square metres. The fecal matters not only lose their fetor, but are absolutely inodorous, and give by filtration a colorless liquid. It is not only the odorous and coloring matters which are fixed by the charcoal, it is also those alkaloids analogous to the ptomaines whose existence in normal fecal matters he has demonstrated since 1882, and which abound in proportion to the activity of the intestinal putrefactions. These alkaloids add their toxic power to that of the other putrid products, and cause even normal fecal matters (and for a stronger reason those of typhoid fever) to become a permanent source of danger, which is only kept in check by the action of the renal emunctory. It is necessary to watch the evacuations to see that the charcoal does not accumulate in the intestines, and to give a purgative when you have left off the treatment.

"In typhoid fever," says Bouchard, "I have noted an extreme rarity of sacral eschars, and remarked that the tongue remains almost always moist. After the employment of simple charcoal I have seen the hospital mortality fall from fifteen to twenty per cent., and after the employment of the iodoform charcoal it has fallen to ten per cent. The same method of intestinal antisepsis I have applied to other diseases which are accompanied with exaggerated fermentation of the digestive tube; in dilatation of the stomach, for example. I have employed it also in cases where the intestinal fermentations were normal, but where oliguria or renal impermeability led me to fear the supervention of those uræmic intoxications which might, I think, be more properly called stercoræmic.

"In conclusion, I will say, that if medical antisepsis has not thus far accomplished all that it promises, it has already realized some therapeutic progress."

MEDICAL NOTES.

— The *New York Medical Journal* of September 6th devotes an editorial to the Boston City Hospital, of which it speaks in an exceedingly complimentary manner. It regrets that the first volume of medical reports has not been followed by others. When one is reminded that its fourth medical report was issued four years ago the *Journal's* regret seems a little ambiguous.

— We learn from our foreign exchanges that Professor Dr. Braun, of Heidelberg, has received a call to Jena as Professor of Surgery, and the Chair of Physiology at Königsberg, rendered vacant by the resignation of Professor v. Wittich, is to be filled up by Professor Hermann, of Zurich. Professor Dr. L. Mauthner is mentioned as the most likely successor to the Chair of Ophthalmology at Vienna, vacant by the death of Professor E. von Jaeger.

— The munificent bequest of $900,000 by the late Sir Erasmus Wilson to the Royal College of Surgeons of England as residuary legatee is by far the largest legacy the college ever received. The next largest was one of $20,000 from the same benefactor. The *Medical Times*, after suggesting various answers to the natural inquiry, "What will they do with it?" adds: "Now is the opportunity to establish a pathological institute on a scale worthy of the scientific reputation of the English school, an institute duly supplied with professors and assistants, and all the appliances required to carry out the complicated procedures of modern pathological research. No institution in the country is better qualified to initiate and direct this advance than the College of Surgeons, with its traditional connection with John Hunter, and its great pathological museum."

— An unusually large number of houses have been ordered vacated by the Board of Health of this city within the past week. In each case the order has been given after persistent refusal on the part of the owner to remedy existing nuisances, consisting in most cases of defective water-closets or offensive privy vaults.

NEW YORK.

— During the last week of August a sailor was found dying in the streets and removed by the police to a station-house under the idea that he was suffering from alcoholic intoxication. On account of the gravity of his condition he was then taken in an ambulance to the Chambers Street Hospital, where the diagnosis of typhoid fever was made. Finally he was transferred to the New York Hospital, where the true nature of the disease from which the man was suffering, yellow fever, was recognized; the diagnosis afterwards being confirmed by an autopsy made by Dr. Peabody, pathologist to the hospital. The following is a partial description of the post-mortem appearances found: The body well nourished but deeply jaundiced. The heart normal in size, but of a bright yellow color, with the valves, endocardium, and aorta deeply jaundiced. The muscular tissue of the heart contained an abundance of fat, all yellow, soft, and pliable. In the lungs were innumerable hæmorrhages, varying in size from a small pea to a chestnut. The spleen was about four times the normal size, dark in color, and somewhat soft. In the stomach the mucous membrane was congested, but not ulcerated, and the organ contained nearly a pint of fluid, largely composed of dark blood. The intestines, which were somewhat congested in the upper portions, contained throughout a large amount of blood; some of which was thick, dark, and tarry in appearance. The liver was normal in size, but the surface was considerably mottled, and presented areas of a brilliant red color, with yellow centres of acini deeply jaundiced. The kidneys were normal in size, but very yellow, with non-adherent capsules, the surface smooth, and the markings distinct. The man is believed to have been taken sick in some sailor's lodging-house, where his associates knew that he was from a yellow-fever port, and to have been put into the streets when well-marked symptoms of the disease presented themselves. His condition was such when he was found that he was unable to give any account of himself.

— The State Board of Pharmacy, created by the last Legislature, was organized at Albany on September 2d, with Dr. A. B. Heusted, of Albany, as president, and E. S. Dawson, of Syracuse, as secretary.

Correspondence.

THE MODERN VIA AD ASTRA.

A MEDICAL FABLE.

Once upon a time a poor but humane physician was riding along a road which led by a dark forest, when he saw by the wayside a sick and miserable dog which had lain down to die. Moved with pity he got down from his carriage, picked up the poor animal tenderly, and gave it some food and drink. Suddenly the dog vanished, and he saw standing before him a beautiful fairy.

"You have saved me from a miserable doom by your compassion," she said. "Command now anything you wish and it shall be yours."

The astonished physician replied, "I am a poor man. I should like to be rich."

The fairy waved her wand, and extended to him a piece of paper and a bottle filled with a dark-colored fluid. "Here," she said, "is a prescription for an Infallible Compound Hair-Restorer. It will never fail, and it has been indorsed by all the leading clergymen on both continents. The world is yours! Do you wish more?"

"I am a quiet man," replied the doctor, "and little known. I should like to be famous."

"You shall be more; you shall be immortal." Waving her wand again, she presented to him a small, dark, and curiously shaped instrument. "See," she exclaimed, "it is a new and 'Unquestionably Perfect Pessary.' It radically restores every malposition. Your name is blown into the side. Generations of suffering women and successful doctors will read, and bless you. I have tried it myself," she added, blushing a little, and vanished. M. S.

Miscellany.

"ROSE COLD."

DR. MORELL MACKENZIE writes[1] qualifying a remark in one of his lectures that hay fever was unknown in the "good old times," and admitting that though, both in letter and spirit, this statement is perfectly correct, it too much ignores the fact that an individual idiosyncrasy rendering people sensitive to the influence of rose pollen was not very uncommon two hundred or three hundred years ago. As the term "rose cold" has survived in America, says the author, while it is quite unknown here, I think it probable that the complaint may be much more common on the other side of the Atlantic than it is in England; and it is with the view of eliciting some "modern instances" that I venture to bring under the notice of my fellow-workers in the New World some remarkable examples of rose catarrh as related by writers of the sixteenth and seventeenth centuries.

As early as the year 1565 Botallus[2] (known to fame as the discoverer of the *foramen ovale* in the heart) affirmed that he knew persons who held the smell of roses in deadly hatred, because it gave rise to headache, sneezing, and troublesome itching of the nose. Somewhat later Van Helmont[3] (1577–1644) mentions the odor of sweet-smelling substances as causing headache, and in some cases difficulty of breathing. He also gives[4] the case of a canon who was *totâ æstate propemodum asthmaticus, totâque hyeme liber.* It must be allowed, however, that this passage, though suggestive, is not quite conclusive as to the nature of the malady. In 1673 I. N. Binningerus[5] says that he has often heard from James à Brun, a professor of the medical faculty in the University of Basle, that his wife, Ursula Falcisin (a lady, as he is careful to inform us, whose charms were of the "too, too solid" kind, *ampli corporis et carnosi*), suffered from coryza for several weeks every year during the rose season.

A few years later we find Ledelius[6] recounting the case of a merchant of Grünberg who could not smell a rose without immediately suffering from itching, followed by inflammation of the eyes, with profuse lachrymation and headache lasting some days. We come next to a case of especial interest, which was published in 1691 by I. Constant de Rebecque.[7] This passage is important, as conveying the result of an experienced physician's observation of his own symptoms. He tells us that for thirteen years he had been afflicted with coryza during the rose season, which *per totum tempus quo rosæ se mihi olfaciendas præbent durat eoque elapso sponte desinet.*

At first he attributed his sufferings to heat, but in the year 1685, when the summer was exceptionally hot, and there were hardly any roses, on account of caterpillars, he was struck by the fact that his annual disorder did not trouble him. The symptoms came on at once, however, after inadvertently plucking a rose toward the end of the season. He concludes that something flows from roses (*e rosis aliquid effluere*) which stings the nose (in his case exceptionally sensitive) and *aculeis quibusdam solutionem continui et si non sensibus obviam excitet.* This observer, therefore, came very near the mark as to the real cause of the disease, to which he applied the term ***coryza a rosarum odore.***

An extraordinary case is related by Herlinus[8] (on the authority of Adrian Spigelius, whose name still survives in one of the lobes of the liver) of a Roman cardinal, Oliver Caraffa, who could not bear the smell of roses. This is confirmed from personal knowledge by another writer,[9] who adds that Caraffa was obliged, every year, to shut himself up during the rose season, guards being stationed at all the gates of the palace to stop any visitor who might be wearing or carrying the dreaded flower. It is, of course, possible that in this case the roses may have produced some other affection than rose fever, but as it is distinctly stated that it was the *smell* to which the cardinal objected, we may, I think, fairly conclude that the "sting of the flesh" which tormented him was, in fact, rose pollen.

About the end of the seventeenth century Riedlin[10] relates the case of a merchant with whom he was acquainted, who was afflicted with sneezing and catarrh every year when the roses were in bloom. Riedlin advised his patient to avoid the *cause* of his complaint, a point beyond which we have not even yet advanced.

Heberden's[11] observations make a kind of connecting link between the rose catarrh of the seventeenth century and the hay fever of the nineteenth, for though this physician does not seem to have been at all aware that the complaint had any connection with flowering plants, he mentions casually that five of his patients suffered from catarrh for a month every summer, while another was similarly affected during *the whole of that season.*

In conclusion Dr. Mackenzie says that he will feel greatly indebted to any American physician who may be able to bring under his notice any well-authenticated case of rose cold.

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THE MODE OF ORIGIN OF GENERAL MILIARY TUBERCULOSIS.

THE *Medical News* (July 5, 1884,) remarks editorially that although it has been for some time recognized that a very large number of cases of general miliary tuberculosis are secondary to primary foci, it cannot be said that we have had, until quite recently at least, any accurate information as to the *modus operandi* of such foci.

Buhl early asserted that the general process originated in absorption from a softening mass of cheesy matter, but how this took place, and why in the majority of instances the cheesy focus fails to give origin to secondary miliary tuberculosis, he did not explain. Ponfick's discovery of tuberculosis of the thoracic duct, and Weigert's of tuberculosis of the veins, brought us a step nearer to the solution of the problem. The latter published, in 1879, three cases of acute general miliary tuberculosis in which he had discovered a large thrombus-shaped tubercular focus in a pulmonary vein, which he regarded as the starting-point of the tuberculosis. In 1882 he reported nine cases of acute general miliary tuberculosis, in seven of which he found tuberculosis of veins, and in two tuberculosis of the thoracic duct. The former appeared as true tubercular infiltrations of the vessel walls, projecting into the interior of the vessel in a thrombus-like or polypoid manner, smooth, except at a single point of ulceration, and centrally cheesy. Upon these observations Weigert based the assertion that *acute general miliary tuberculosis*, in adults at least, *depends upon a tubercular focus either in a vein or the thoracic duct* — ascribing the acute tuberculosis to the sudden introduction of a large quantity of tubercular poison, either from a large focus, or numerous small foci, while that form of general miliary tuberculosis in which only a few nodules are found in separate organs, is ascribed to the disintegration of a small vein-tubercle. So, too, the nodules of varying size and limited number found in the spleen, liver, or other organs, along with pulmonary tuberculosis, he ascribed to the introduction of a small amount of tubercular matter into the blood.

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[1] Medical Record, August 30th.

[2] Commentarioli Duo alter de Medici, alter de Ægroti Munere. Lugduni, 1565, p. 23.

[3] Asthma et Tussis, cap. x., Opera Omnia, Hafniæ, 1707, p. 344.

[4] Ibid., cap. xxiv. (Opera Omnia, p. [illegible]).

[5] Obs. et Curat. Medicinal. Centuriæ Quinque Centur. Secunda, obs. [illegible] Montbelgardi, 1673, p. 22.

[6] Miscell. Nat. Curios. Lipsiæ, Dec. ii, Ann. 2, obs. 140, p. 309 (probably 1682).

[7] Acta Medicorum Helveticorum, Obs. rar. et curat. insign., obs. 62, Geneva, 1691, p. 150 et seq.

[8] Henricus Herlinus, De Remediis Sudoriferis et Analepticis, p. 32. Lipsiæ, 1664.

[9] Jo. Pierius, Hieroglyphica, lib. 8, cap. 25, p. 96. Francofurti, 1678.

[10] Linea Medica, Augustæ Vindelicorum, 1695, p. 177.

[11] Commentarii de Morborum historia et curatione, London, 1802, cap. xxiv., De Destillatione, p. 118 et seq.

Quite recently, Weichselbaum, in the *Wiener med. Wochenschrift*, No. 12, March 22, has apparently supplied the missing link in the proof of this proposition, by the publication of three cases of acute general miliary tuberculosis in which, associated with tuberculosis of the veins, he found tubercle bacilli in the blood of the patients after death. The first case was that of a young woman of twenty-five, who died of phthisis six days after aborting of a four months fœtus. She had suffered with cough, shortness of breath, and fever for some weeks previous. The autopsy revealed tuberculosis of the uterine veins at the insertion of the placenta, both Fallopian tubes distended with cheesy matter, and their mucous membrane injected, thickened, and infiltrated with small nodules. Some of the cheesy and softened tubercular nodules, as large as a pea and containing nests of closely packed bacilli, protruded into the lumen of the veins and fused with the thrombi found in their interior. Out of twelve slides of blood from a heart-clot — clotted blood was used because of its containing a large proportion of bacilli — four contained the bacilli.

The second case was a man of forty-three, in whom a branch of the pulmonary artery in the right upper lobe contained a polypoid tubercle larger than a bean, ulcerated at one point, cheesy at its centre, and continuous with a large cheesy focus in the same lobe. Preparations from a white thrombus from the left ventricle contained relatively numerous bacilli in groups of from two to six, as did also fresh coagula, and even fluid blood from the femoral vein, although in smaller numbers.

The third case exhibited, besides general miliary tuberculosis, cheesy foci and bronchiectasis, a cheesy abscess about the tendon of the right supinator longus muscle, and chronic tuberculosis of the seminal vesicles, the left vas deferens, the epididymis, and prostate. A cheesy mass surrounded a large vein of the pudendo-vesical plexus, and in one place had perforated the vein. Out of nine preparations made from heart coagula, two contained bacilli.

Weichselbaum believes it a necessary inference from these facts, that in chronic general miliary tuberculosis, that is, the form in which along with pulmonary tuberculosis single nodules of different size and age are found in the liver, spleen, or kidneys, these secondary deposits arise in the same way, even though the bacilli are not found in the blood, since they may easily escape detection when few in number. In support of this view, Weigert has found in two cases of this kind small tubercles in the walls of veins.

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COMBINED VERSION IN PLACENTA PRÆVIA.

C. BEHM[1] has used combined version in forty cases of placenta prævia, without a single death. This must be regarded as an extraordinarily good result for a condition which ordinarily gives a mortality of forty per cent. Hofmeier has already obtained similar results in the treatment of placenta prævia.

The operation is performed as follows: When dangerous hæmorrhage comes on the vagina should be tamponed until the cervix is closed. This being done, and the woman anæsthetized, the whole hand is introduced into the vagina, and two fingers into the cervix. If the membranes present, the operator endeavors to rupture them with the finger, then draws the presenting part (unless it be the buttocks) to one side, at the same time making pressure from without so as to carry the buttocks down, until he can grasp a foot. This is drawn through the cervix, so that the breech acts as a tampon on the lower segment of the uterus, and the placenta is pressed against the sides of the uterus. In central implantation of the placenta, the finger should be pushed through the centre.

After this version the operator waits for the spontaneous expulsion of the child, or at least complete spontaneous dilatation of the cervix, in order to complete delivery. The duration of labor after version is between one half an hour and eleven hours, the average being one or two hours.

The mortality for the children by this procedure is very great, but the chances for the mother are better. The mortality for the children is, however, no greater than by the old operation.

The causes of the great mortality of the mother under the use of the continuous tamponade is the infection through the blood and other matters adhering to the tampon.

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ON THE PROPHYLAXIS AND TREATMENT OF TUBERCULOSIS AND SCROFULOSIS IN CHILDREN.

TUBERCULOSIS is exceedingly common in children, and evidences of it are found in more than half the children dying within the first six months whose bodies are examined. The two objects of prophylaxis are, firstly, to combat the disposition to disease; and, secondly, to ward off infection. The first indication is fulfilled by providing good food, warm clothing, fresh air, a country life, and sea bathing. Infection, that is to say, the bacillus, for the whole paper is written from this stand-point, finds its way either by inhalation, by food, by some mechanical inoculation, or by general diffusion from some previously isolated patch. The commonest path is by inhalation, and accordingly we find the primary disease most frequently in the thoracic cavity, the disease commencing in the bronchial glands, in the bronchi, or in the lung itself. To save the child from the introduction of the germ in this way we should instill into those who have charge of it the danger that may arise from sleeping with, kissing, living in a small, confined room with parents or relatives already diseased, and insist upon the necessity of efficient ventilation. Infection by food is not so frequent, but it may be caused by the milk of a diseased cow; boiling the milk removes this danger; and tubercular mothers should not be allowed to nurse their children. Mechanical inoculation may take place from lupus, ulcerating scrofulous glands, or other open scrofulous sores, and possibly, though it has never been proved, from vaccination. Should future investigation prove that the infection of tubercle is spread from these sources, then far greater care than is now taken must be exercised in allowing children suffering from these disorders to associate with the healthy. Swollen scrofulous glands should be removed. The treatment of tubercle and scrofula, as there is no specific remedy known, is comprised in careful management of the symptoms, such as catarrh and diseases of the glands and bones, as they arise, in attention to general hygiene, and in the choice of a suitable climate. — Dr. Förster, *Jahrbuch für Kinderheilkunde*, Band xxi., Heft 3.[1]

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[1] Centralbl. f. d. gesammte. Therap., July, 1884, and Med. News, August 16, 1884.

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IS INTROMISSION NECESSARY TO CONCEPTION?

THIS question has been pretty conclusively answered in the negative, but well-authenticated cases in proof of it are not yet superfluous. Two such are cited in the *Medical Press* (July 16), one reported by Dr. Cass, of Dresden, and a second by Dr. Longshore, in the *Philadelphia Medical and Surgical Reporter* of June 1st. Dr. Cass was called to attend a lady in her third confinement. An examination being made, he found the vaginal canal almost entirely closed, at a point two and one half inches from the orifice, by a firm, unyielding band or curtain. On the pubic side of this curtain there was an opening barely sufficient to permit of the introduction of the top of his little finger. This obstruction was the result of some inflammatory mischief after the birth of her second child, and when she discovered it first she was greatly pleased, as she thought it would prove a sufficient bar to conception. Direct intromission of semen into the womb was evidently impossible; nevertheless, conception had taken place, and the patient's hopes of safety from child-bearing blighted. The membrane was ruptured with the exercise of some force during labor, and delivery safely effected.

Dr. Longshore reports of his case that he was consulted by Mrs. A., a recently married woman, aged nineteen. She had always menstruated regularly and comfortably until after her marriage, which had taken place some three months before coming under his care. Coition was impossible, as the os externum was closed by the hymen, which was very firm and inelastic. It was only after a long and diligent search that a foramen large enough to admit, with difficulty, a No. 11 catheter was found close under the urethra. This condition was undoubtedly congenital in its origin. All her symptoms indicated pregnancy. Dilatation failing, the hymen was divided by means of scalpel and director. Six months afterwards the lady had a normal confinement, from which she made a good recovery. This case proves the possibility of conception under circumstances where it was absolutely necessary for the spermatozoa to travel a long way before impregnation could take place.

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THE USE AND ABUSE OF THE FORCEPS.

PROFESSOR GOODELL made the following observations in a recent clinical lecture (*Philadelphia Medical Reporter*, June 14th): "Tears of the perinæum will occur whether the physician uses the forceps or not, but in the majority of cases they come from the use of the forceps, or rather from the abuse of the forceps. Let me give a piece of advice to you as young men. When the proper time comes put on the forceps and boldly bring down the head, but when it begins to bulge the perinæum, take off the forceps. I do not think that any of you are competent to deliver the head over the perinæum with forceps. The temptation is to turn the head out too quickly. If you take off the forceps you will rarely have a bad tear, and if it does occur you will not get the blame for it. It is a very rare thing for me to end a labor with the forceps on. When the perinæum begins to bulge, I support the handles to see whether the pains are strong enough to end the labor. If so, I remove the forceps. There is such an abuse of this instrument that I sometimes think that Baudelocque was right when he said that the forceps had done more harm than good. It requires great skill and judgment to end a labor with the forceps. A physician from inexperience, or being demoralized by a long and tedious labor, is liable to use undue violence and deliver the head too quickly, or to make traction in the wrong direction. I have myself torn the perinæum and seen many good physicians do the same. From this experience I should recommend that, unless there be an excellent reason for contrary action, the forceps be taken off when the head reaches the perinæum. Occasionally one blade will catch over an ear and you cannot get it off; but in the majority of cases it can be removed, and that is the proper thing to do."

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THE SUPRARENAL CAPSULES.

PROFESSOR TIZZONI has recently[2] performed a number of experiments on rabbits, with the view of clearing up several points in regard to the office of the suprarenal capsules. The usual course was to evacuate the contents of the fibrous capsule of one or both sides. The parenchyma, in the form of a yellowish white pultaceous mass, either escaped into the peritoneal cavity or was altogether removed. Apart from a few exceptional instances of meningeal exudation and softening of the spinal cord, the animals did not appear to suffer in general health by the operation. There was as a rule little traumatic fever and suppuration. Nutrition was rarely impaired; and, in fact, an increase of weight was generally noticed within eight days. The result did not appear to be at all influenced by allowing the parenchyma to remain in the cavity of the peritonæum, where it became absorbed. The interesting point is now to come. After the lapse of some time (length of time not precisely stated) a brown discoloration of the muzzle was observed. Later it extended to the cavity of the mouth and of the nose. It began in the form of small spots, which gradually increased and became blended. This discoloration, it should be noted, never occurred in white rabbits. When only one suprarenal capsule was removed, the pigmentation was exclusively or chiefly on the side operated upon. The altered distribution of pigment was the only effect of the operation, and the group of symptoms that constitute Addison's disease could not be produced experimentally. Touching the histological changes, regeneration was observed in two instances, in each of which the organ had in great part been destroyed. In one of these cases, one hundred and forty-four days after the operation, a suprarenal capsule was found in all respects identical with a normal capsule. In the other case, twenty-six days after the operation, a small nodule of newly formed tissue, consisting of both cortical and medullary substance in process of active development was found. In the connective tissue that surrounded the nodule was a network of the sympathetic, with very fine meshes and large filaments provided with numerous large ganglion cells. The enlargement of the remaining capsule, when only one was removed, was at the expense of the cortical rather than of the medullary substance.

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[1] Edinburgh Medical Journal, August, 1884.

[2] Gazz. degli Ospitali, June 22d, and London Medical Record, August 15th.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 30, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	692	373	32.24	14.70	20.44	1.54	4.20
Philadelphia	927,995	—	—	—	—	—	—	—
Brooklyn	644,526	—	—	—	—	—	—	—
Chicago	632,100	270	155	41.58	5.94	25.08	5.61	3.63
Boston	423,800	204	90	39.20	9.33	23.52	8.33	5.39
Baltimore	408,520	152	62	29.04	12.54	10.56	2.64	9.90
St. Louis	400,000	136	35	23.68	11.84	13.32	2 96	74
Cincinnati	272,400	109	46	20.24	9.20	12.88	.92	2.76
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	52	30	42.24	11.52	34.56	—	3.84
New Haven	62,882	39	18	38.40	10.24	25.64	7.68	—
Nashville	54,400	27	10	33.30	29.60	18.50	—	11.10
Charleston	52,286	—	—	—	—	—	—	—
Lowell	71,447	31	21	41.60	12.80	28.80	—	—
Worcester	69,442	24	13	48.92	4 16	45.76	—	4 16
Fall River	62,674	28	20	39.60	3.57	28.56	—	3.57
Cambridge	60,995	26	11	38.46	19.23	22.10	3.85	7.70
Lawrence	45,516	19	7	11.55	15.43	3.85	—	—
Lynn	44,895	16	10	18 75	12.50	18.75	—	—
Springfield	38,090	22	11	45.45	18.18	36.36	—	—
Somerville	31,350	10	5	40.00	10.00	40.00	—	—
Holyoke	30,515	9	6	55.55	—	33.33	—	—
New Bedford	30,144	20	12	55.00	10.00	50.00	5.00	—
Salem	29,503	8	6	37.50	—	12.50	—	—
Chelsea	24,347	15	8	33.33	6.66	33.33	—	—
Taunton	22,693	6	0	—	—	—	—	—
Gloucester	21,400	—	—	—	—	—	—	—
Haverhill	20,905	6	2	—	33.33	—	—	—
Newton	19,421	2	1	—	—	—	—	—
Brockton	18,323	3	1	66.66	—	66.66	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	2	1	—	—	—	—	—
Fitchburg	13,433	8	4	50.00	12.50	50.00	—	—
Ninety- three Massachusetts towns	375,734	84	27	—	—	—	—	—

Deaths reported 2093: under five years of age, 1044; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 715, diarrhœal diseases 456, consumption 242, lung diseases 121, diphtheria and croup 77, typhoid fever 53, scarlet fever 36, whooping-cough 35, measles 24, malarial fevers 14, cerebro-spinal meningitis 12, puerperal fever five, erysipelas two, typhus fever one. From *scarlet fever*, Boston eight, New York six, St. Louis five, Chicago four, Baltimore, Cincinnati, and New Haven two each, Milwaukee, Providence, Lowell, Lawrence, Springfield, Holyoke, and Salem one each. From *whooping-cough*, New York 14, Boston eight, Chicago five, Baltimore and Milwaukee two each, Cincinnati, Providence, Cambridge, and Salem one each. From *measles*, New York 13, Chicago 10, Fall River one. From *malarial fevers*, New York, Baltimore, and St. Louis four each, Nashville and Springfield one each. From *cerebro-spinal meningitis*, New York five, Lowell three, Chicago, Boston, Lawrence, Springfield, Holyoke, and Salem one each. From *puerperal fever*, Chicago two, New York, Baltimore, and Milwaukee one each. From *erysipelas*, New York and Fall River one each.

Cases reported in Boston: scarlet fever 56, typhoid fever 34, and diphtheria 14; in Milwaukee: scarlet fever 21, and diphtheria two.

In 112 cities and towns of Massachusetts, with an estimated population of 1,429,739 (estimated population of the State 1,955,104), the total death-rate for the week was 19.75 against 20.93 and 22.24 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending August 16th, the death-rate was 24.1. Deaths reported 4052: acute diseases of the respiratory organs (London) 162, diarrhœa 789, measles 103, fever 68, whooping-cough 68, scarlet fever 49, diphtheria 21, small-pox (London nine, Sheffield one) 10. The death-rates ranged from 17.4 in Bristol to 43.3 in Wolverhampton; Birmingham 27.6; Blackburn 28.3; Bradford 25.7; Leeds 29.2; Leicester 28.3; Liverpool 26.7; London 21.2; Manchester 25.6; Nottingham 30.5; Sheffield 27.1. In Edinburgh 15.9; Glasgow 26.0; Dublin 24.2.

For the week ending August 16th, in the Swiss towns there were 42 deaths from diarrhœal diseases, consumption 30, typhoid fever nine, lung diseases eight, scarlet fever two, diphtheria and croup two, small-pox one, whooping-cough one. The death-rates were, at Geneva 9.2; Zurich 11.8; Basle 12.4; Berne 23.3.

The meteorological record for the week ending August 30th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
August, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 24	30.060	65	75	55	58	40	62	53	W	NW	NW	9	20	8	C	C	C	—	—
Mon., 25	30.283	57	64	51	64	61	84	70	NW	SE	SW	7	13	14	C	C	C	—	—
Tues., 26	30.054	63	70	55	95	95	95	95	SE	S	W	11	8	9	R	O	C	—	—
Wed., 27	30.125	65	77	60	80	70	87	79	NW	SE	SW	7	9	6	C	C	C	—	—
Thurs., 28	30.085	65	76	55	100	69	93	87	W	S	SW	3	7	7	O	C	C	—	—
Fri., 29	29.888	68	73	60	99	97	93	96	SE	S	SW	3	13	8	O	R	O	—	—
Sat., 30	29.789	72	81	69	93	86	99	93	S	S	SW	9	12	6	O	O	O	—	—
Mean, the Week.			74	58														24.35	0.51

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OBITUARY.

Charles Walter Chamberlain, M. D., Secretary of the State Board of Health of Connecticut, died at Hartford August 21st, at the age of forty years. Dr. Chamberlain received the degree of A. B. at Brown University, and was graduated in medicine at the College of Physicians and Surgeons of New York in 1871. He was for a number of years examining surgeon to the Pension Bureau, and was well known throughout the country as a distinguished sanitarian. He has from time to time furnished interesting reports to the Journal.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM AUGUST 31, 1884, TO SEPTEMBER 5, 1884.

Byrne, Charles C., major and surgeon. Relieved from duty in Department of California, and to report in person to the commanding general, Department of the Platte, for assignment to duty. S. O. 207, A. G. O., September 3, 1884.

Town, F. L., major and surgeon. Relieved from duty in Department of the Columbia, and to report in person to the commanding general, Department of Texas, for assignment to duty. S. O. 207, C. S., A. G. O. Granted leave of absence for twenty-five days. S. O. 127, Department of the Columbia, August 25, 1884.

Havard, Valery, captain and assistant surgeon. Relieved from duty in Department of Texas, and to report in person to the commanding general, Department of the East, for assignment to duty. S. O. 207, C. S., A. G. O.

Hall, William R., captain and assistant surgeon. Relieved from duty in Department of Texas, and to report in person, on October 1, 1884, to the superintendent general recruiting service in New York City, for duty at David's Island, N. Y., relieving Assistant Surgeon M. E. Taylor from duty at that station. S. O. 207, C. S., A. G. O.

Gibson, R. J., first lieutenant and assistant surgeon. Relieved from duty in Department of the Missouri, and to Department of California for duty. S. O. 202, A. G. O., August 28, 1884.

Hopkins, William E., first lieutenant and assistant surgeon. The leave of absence granted him in S. O. 67, August 7, 1884, Department of Arizona, is extended one month. S. O. 204, A. G. O., August 30, 1884.

Dietz, William D., first lieutenant and assistant surgeon. Relieved from duty at the Military Academy, West Point, N. Y., and ordered to the Department of the Missouri for duty. S. O. 202, A. G. O., August 28, 1884.

CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING SEPTEMBER 6, 1884.

Rixey, P. M., passed assistant surgeon. From special duty at Washington, D. C., September 8th, and to the Lancaster, European Squadron.

Oberly, A. S., surgeon. From the Richmond, August 30th, and wait orders.

Dickson, S. H., passed assistant surgeon. From Asiatic Squadron, July 29th. Sick leave August 30, 1884.

Died, — In Havilah, Cal., August 31, 1884, Frank Abner Langworthy, M. D., M. M. S. S., aged thirty-four years ten months thirteen days.

Books and Pamphlets Received. — The Formation of Poisons by Micro-Organisms. A Biological Study of the Germ Theory of Disease. By G. V. Black, M. D., D. D. S. Philadelphia: P. Blakiston, Son & Co. 1884.

The Treatment of Diabetes Mellitus. By Austin Flint, Jr. M. D. Reprint from Journal of the American Medical Association, July 12, 1884.

Twenty-Fifth Annual Announcement and Catalogue of Hahnemann Medical College and Hospital of Chicago, Ill.

On a New Method of Recording the Motions of the Soft Palate. By Harrison Allen, M. D., Professor of Physiology, University of Pennsylvania. Philadelphia: P. Blakiston, Son & Co. 1884.

Diphtheria, Croup, etc., or the Membranous Diseases: Their Nature, History, Causes, Treatment, etc. Also a Delineation of the New Chloral Hydrate Method of Treating the Same. By C. B. Galentin, M. D. New York: J. H. Vail & Co. 1884.

Lectures.

TUBERCULOSIS OF THE SEROUS MEMBRANES; DEATH; AUTOPSY.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

BY WILLIAM PEPPER, M. D., LL. D.,

Provost of and Professor of Clinical Medicine in the University of Pennsylvania.

Gentlemen, — I shall briefly read the history of this young woman, as it is of importance in the diagnosis.

C. K., seventeen years of age, was born in this country. She has lived in a malarial district of Delaware, and has been occupied as a domestic, working hard, and sometimes, especially in summer, much exposed to damp and bad weather. This was particularly so in the summer of 1882. Her father and mother present a history of rheumatism. She had all the ordinary diseases of childhood excepting scarlet fever. She was perfectly strong and hearty until eight months ago, when, after slight exposure, she was taken sick with pains through the body, headache, loss of appetite, feverishness, some sore throat, with a hacking cough, dull pain behind the sternum, and so much shortness of breath that it was impossible for her to lie down for several days. This reads very much like an attack of influenza. The attack came on suddenly, with general soreness, pains through the body, headache, loss of appetite, fever, sore throat, cough, pain behind the sternum, and so much dyspnœa that she could not lie down for several days. This was probably not pneumonia, for we find that in a few days the general symptoms and dyspnœa had disappeared, and that she had returned to her normal condition, with the exception of a little cough, which remained for three months. This was dry and hacking, accompanied with scanty mucous expectoration. This, as I have said, sounds very much like the history of an attack of influenza, followed by a catarrhal condition. Of course it is not impossible that it might have been an attack of rheumatism with some heart complication.

Last May she had an attack of acute articular rheumatism, beginning in the feet and involving almost all the joints in the body, attended with very little fever or sweating, but with pain which was sometimes so severe as to bring on a nervous chill. This rheumatism lasted for two months and a half, and since then she has never felt well. Her appetite has not been good, and after eating she has had distress and a great deal of flatulence. The bowels have been regular. She has steadily lost flesh and strength. About October 1st, nine weeks ago, she noticed that the belly was beginning to swell, and this has continued to increase. At the same time she began to have occasional pain in the hypochondriac region. This was never very continuous or severe, and recently has been even less. Since the first of October she has had to urinate more frequently, and the quantity of urine seems to have been increased.

When admitted she was pale. The pupils were dilated, the right somewhat more than the left, but this may have been a natural peculiarity. The pupils reacted well to light. The tongue was coated, the appetite moderate, and the dyspepsia less marked than it had been, the bowels regular. There were occasional pains through the right chest on taking a long breath. There was a hacking cough, which was worse at night, and was accompanied with a little scanty mucous expectoration. All the time she complained of a sense of shortness of breath. Physical examination of the right side showed no marked signs, but on the left side, in front, from the third rib to the base of the chest, there was flatness on percussion; behind, the whole left side was flat. Over this region there was little vocal fremitus and resonance, and the breath sounds were distant and feeble. The breath sounds were heard a little more distinctly in front, and above the level of flatness a few friction sounds were heard. The area of flatness seemed to change somewhat with change of position. The heart was pushed a little to the left, and on ascultation there was heard a high-pitched, very rough, mitral, systolic murmur. The pulse was dicrotic. The belly was distended, but the veins were not enlarged. As far as could be determined neither the liver or spleen was altered. As I have told you, she passed water too frequently, but it contained no albumen. During November she menstruated and then suffered from some dysmenorrhœa. During all this time she has had some fever, which has ranged between a morning temperature of 99° F. and an evening temperature of over 100° F. or 101° F. On one occasion it was as high as 103.5° F. It presents a considerable diurnal variation of a hectic type. There have been no night sweats. The belly has been diminishing a little in size. She has had a good deal of pain in the right side. About December 4th, four days ago, she began to complain of pain in the head, and she also had some deafness. The fever continued as before.

December 6th the following note is made: "Had no headache this morning, but severe during the night. She had slight wandering delirium at night; no vomiting; bowels regular."

December 7th. More delirious during the night, singing, crying, and laughing, and complaining of severe headache. This passed off in the morning. The dullness of hearing increased. During the day the mind was perfectly clear."

When admitted she was put on Basham's mixture with alkaline diuretics. When the fever continued full doses of quinia were given for a number of days, eighteen grains per day being given with solution of acetate of ammonia. This proving unavailing we returned to Basham's mixture and cod-liver oil. As you see, the treatment has consisted of careful attention to diet and in the use of diuretic iron mixture and alkaline diuretics to carry off the pleural and peritoneal effusions, and more recently in the use of bromide of potassium to control the cerebral symptoms which have been mentioned.

This case has given a great deal of anxiety, largely on account of the difficulty in diagnosis, as you see the morbid elements which are present are numerous. You also see why it was that I referred to the possibility of the first attack being one of rheumatism. Her family presents a strong tendency to rheumatism, and in May, five months after the first attack, she had a severe attack of ordinary acute articular rheumatism, which has left behind it mitral regurgitation, as shown by a strong, low-pitched, rough mitral, systolic murmur. In addition, we have coming on without any œdema, internal dropsies, right pleural effusion and ascites, and this long-continued febrile action, and more recently these cerebral symptoms.

In trying to arrive at a correct understanding of the nature of this case the following thoughts have occurred to me: Is this a case of chronic malaria, complicated with sub-acute rheumatism and great anæmia leading to these internal effusions? Is it a case of protracted rheumatic fever with ulcerative endocarditis, with the endocarditis progressing, keeping up the irregular fever with irritation of the serous membranes causing effusion, as will sometimes occur in these long-continued cases of septic rheumatic trouble? Not rarely in such cases will you find nervous symptoms appearing in their course. Is it a case of rheumatic trouble with serous tuberculosis, causing tubercular pleurisy and peritonitis and recently tubercular meningitis? It is very difficult to answer these questions.

You will observe from the history that all renal complications must be left out of consideration. The urine has always been normal. There is no question as to the lesion of the heart. The only question is whether or not it existed before the last attack.

The effusion on the right side interfered greatly with determination of the condition of the lung. Now that this is somewhat removed we may be able to obtain better results. On auscultation, I detect on the left side, in front, below the outside of the cardiac region, sharp, crackling, friction sounds. Over the lower part of the right chest in front, where it is still comparatively dull and slightly tender, the respiratory murmur is weak, but there are no râles or friction sounds. Posteriorly the respiratory murmur is feeble, distant, and blowing. After coughing, I hear a few deep-seated, coarse, snoring râles. The right pleura is thickened by exudation, compressing the lung. This exudation is plastic. There is a condition of chronic pleurisy of the right side, and there is a small patch of dry pleurisy on the left side.

Let us now turn to the abdomen. The distention has been somewhat reduced, but fluctuation is still very distinct. The abdomen is very tender on pressure; I think that there can be little doubt that this effusion is dependent on peritonitis. This is not a passive effusion. There is no affection of the kidneys nor of the liver. The liver is not enlarged, and there is no jaundice. There has been pain which has been referred to the region of the liver and to the right shoulder as though the capsule were involved, but that would not be improbable on the supposition that there was peritonitis. The heart lesion cannot explain the ascites. There is no œdema of the feet or hands, and in cardiac dropsy internal effusion, and especially ascites, does not occur unless the œdema is very great. The degree of the heart trouble is not very serious, but its quality may be. To this I shall refer in a minute. I think that we must regard the peritoneal and pleural effusions as irritative and the result of inflammation of the membranes.

I feel less certain in regard to the nature of the cerebral symptoms, and before expressing any opinion I shall wait until I have obtained the result of the ophthalmoscopic examination, which I consider necessary. At present her condition is a typhoid one, and it would not be unnatural that, after such an illness, cerebral symptoms of a low, adynamic, typhoid type should develop. I should warn you against concluding, even in the presence of the most threatening symptoms, that organic disease of the membranes had developed. We have in the ophthalmoscope a most important aid in the diagnosis of such cases as this, and one which should always be employed. In meningitis, especially of the tubercular variety, retinal changes are apt to develop, which are sometimes so characteristic as to enable the diagnosis to be positively made at a glance. If the symptoms are due to the typhoid condition the results of the examination will be negative.

What other condition than tubercular peritonitis and pleurisy could we have running a slow course and engendering a low typhoid condition with cerebral symptoms the result of the adynamic condition or of meningeal irritation? Another explanation might be found in a septic state of the system from ulcerative endocarditis, a rare condition, but one which is met from time to time, and presents such peculiar symptoms that it requires careful study before it is recognized. Ulcerative endocarditis runs the course of chronic pyæmia. The detritus from the degenerating endocardium, which presents little ulcers which sometimes perforate the valve and sometimes form little masses on the surface of the valve, is thrown into the blood, and passing through the system gives rise to numerous minute septic emboli. Septic foci are established in the spleen, kidneys, and lungs, and with this there is pyæmic fever of a hectic type with marked diurnal variations in temperature, sometimes with distinct sweating, but not, as a rule, with the drenching sweats which attend the rapid development of surgical pyæmia. This runs a slow and chronic course. It is attended with various secondary lesions. Sub-acute inflammation of the serous membranes is not rarely met with. Here we have a girl who has had an attack of a vague character and a second attack of distinct rheumatism, who now has marked cardiac disease. There is no history of tubercular disease in her family. But this is not essential. The association of tuberculosis with cardiac disease is not frequently met with, but still it may occur.

In either case the prognosis is most grave. If there were lesions in the lung there would be no doubt as to the diagnosis. As it is, I must say that my own judgment is in favor of the view that there is tuberculosis of the serous membranes. The ophthalmoscopic examination will be of great importance. I shall have it made and give you the results next week.

The diagnosis rests between these two rare and grave conditions, and on the whole I think that the balance of evidence is in favor of the view that there was an old mitral lesion which was increased by the last attack, and which is now associated with tuberculosis of the serous membranes.

The treatment has been simply a supporting and apyretic one. We cannot use specific remedies against either of these conditions. I do not think that we can do better than continue the careful regulation of diet and the tonic and deobstruent treatment which has been pursued, and the use of bromide when called for to allay the excitement.

(The ophthalmoscopic examination showed indications of intra-cranial trouble. Descending neuritis with œdema of the retina was found, but no retinal tubercles were detected.)

December 22d Dr. Pepper again referred to this case as follows: —

The young girl, C. K., whom you saw two weeks ago, gradually failed and died on December 16th. The autopsy was made by Dr. Formad, who gives us the following report: "A tall, well-shaped girl, not markedly emaciated, but very anæmic in appearance. The abdomen greatly distended with gas and ascitic liquid. Old adhesions obliterated entirely the right pleural cavity. There was no liquid effusion. The pericardium was normal, but contained about five ounces of clear fluid. There was slight thickening of the mitral valve and shortening of the cordæ tendinæ, allowing regurgitation. The right lung was collapsed, the pleura much thickened by plastic exudation and the seat of tuberculous formation. A moderate amount of gray miliary tubercles were found scattered through the substance of the right lung. The left lung also contained a number of gray tubercles, but not as many as the right lung, and without plastic pleurisy.

"The peritoneal cavity contained two quarts of straw-colored liquid. All parts of the peritonæum presented gray tubercles. There were old adhesions in many parts, particularly in the lumbar region around the mesentery and pancreas, matting together the viscera. This new-formed mass was crowded with tubercles. The lymphatic glands were moderately enlarged but not cheesy.

"The liver was normal, its capsule studded with tubercles, but no tubercles were discovered in the parenchyma. The spleen was covered with tubercles, but none inside. The kidneys showed signs of an early stage of chronic parenchymatous nephritis, but this certainly had not advanced far enough to cause alteration of the urine, for this was carefully examined a number of times with negative results.

"The brain was normal, only a few gray tubercles being found in the Sylvian fissure. There was about sixteen ounces of serous effusion."

Original Articles.

CONCERNING THE ÆTIOLOGY AND PATHOLOGY OF HYDRAMNIOS.[1]

BY CHARLES M. GREEN, M. D.

SINCE writing the paper[2] which I read to this Society in February last, wherein I sought to formulate the present knowledge of the origin and pathology of hydramnios, I have met with another contribution to our knowledge of the subject by Dr. Nieberding of Würzburg, who has recently observed and carefully recorded[3] two cases.

In the winter of 1883 Nieberding observed hydramnios in a case of twins from one ovum which he reported in a monograph entitled Beitrag zur Kenntniss der Genese des Hydramnion. In this case not only was one twin more developed than the other; but there was a considerable effusion in its cavities and great œdema of its whole body: hydramnion existed in only one of the amniotic sacs, and that one contained the larger fœtus. The placenta was single, and that part of it which nourished the larger fœtus was of greater size and was in a high degree infiltrated with serum. The pregnancy terminated at the end of the sixth month, and while the smaller fœtus showed no anomaly except a certain hyperæmia, examination of the larger fœtus disclosed a considerable hypertrophy of the heart and kidneys, and great infiltration of all the organs with red and white blood-corpuscles. The hypertrophy of the heart was chiefly of the left side.

If now the question is asked, says Nieberding, to what causes are to be attributed the pathological increase of the liquor amnii of one sac and the dropsy of the fœtus contained in this sac, it must be answered that it is possible that an increased transudation from the maternal blood-vessels might have been the causal factor. Since, however, originally the size and presumably the permeability of both embryos were approximately the same, there is no reason why one sac should be thus filled and not the other. The idea that the vasa propria of one part of the placenta contribute conspicuously to increase the amount of the liquor amnii over and above the same vessels of the other part Nieberding says must be abandoned, since it was established by microscopical examination in this case that the chorionic capillaries were equally developed on both parts of the placenta and that those of the hydramnic part, instead of remaining patent longer than usual, were in great part obliterated. Nieberding therefore believes that the cause of the hydramnic condition of one sac in conjunction with dropsy of the contained fœtus must be sought in the circulatory conditions of this fœtus; and this belief is warranted by the pathological appearances in the present case, which were as follows: hypertrophy of the heart, especially of the left side; great enlargement of the kidneys with dilatation of the pelves, filling of the glomeruli with red and white blood-corpuscles, and the presence of moderate blood-extravasations; considerable dilatation of the ureters and of the bladder, although the urethra was entirely permeable. These pathological changes must have their causes, and these causes were traced by Nieberding to a premature obliteration of the ductus arteriosus. The early closure of this duct must surely entail great changes in the fœtal circulation: more blood must perforce enter the lungs; at the same time the blood-tension in the right ventricle must be greatly increased. On account of this tension not only would there result a backing-up in the whole venous circulation; but at the same time a greater quantity of blood would be forced through the foramen ovale into the left side of the heart, which on account of the greater demands thus made upon it to force on the increased amount of blood would hypertrophy and thus increase the tension in the arterial system. Herein, according to Nieberding, lies the explanation of all the anomalies of the affected ovisac and its contents: while the fœtal œdema and dropsy were caused by the venous backing-up, which through the umbilical veins occasioned also the serous infiltration of the placenta, the increased arterial pressure resulted in an increased filtration by the kidneys, an increased diuresis: this increased amount of urine must have been evacuated from time to time, else there would have been found an enormous distention of the bladder; and this polyuria, according to Nieberding's firm conviction, must have had the most conspicuous share in the dropsical distention of one ovisac, while, on the contrary, the weakened heart of the other twin caused a lower arterial tension, a smaller secretion of urine and a minimum amount of fluid in its containing amnion.

Quite recently Nieberding has had a second instance of hydramnios in a case of single fœtation. A previously healthy secundipara, thirty-two years of age, whose first pregnancy and labor had pursued a normal course, and who was in the sixth month of her second pregnancy, sought advice on account of uterine hæmorrhage. Examination showed that for the time of pregnancy the abdomen was much distended, and that the position of the fundus uteri corresponded to the end of pregnancy. The fœtus was living, but was very small and very freely movable in the great amount of liquor amnii. The hæmorrhage ceased under the influence of rest and opiates. Two weeks later Nieberding found that the circumference of the abdomen had rapidly increased to such an extent that the woman was greatly distressed and had lost much strength. At the same time there was marked œdema of the legs and also of the vulva, indeed each of the labia majora had swollen to the size of a man's two fists: the fœtal heart could no longer be heard. On account of these symptoms Nieberding induced labor on the following day by puncturing the membranes: an enormous quantity of liquor amnii escaped, sufficient to fill once and a half times a large water pitcher.

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[1] Read before the Obstetrical Society of Boston, May 10, 1884.

[2] See vol. cxi., No. 6, page 121, of this JOURNAL.

[3] Allgemeine Wiener Medizinische Zeitung, March 11, 1884.

The fœtus, of female sex, twenty-four hours dead before delivery, was well developed and corresponded to the beginning of the seventh month of pregnancy. On opening the abdomen the bladder showed itself greatly distended with urine and extended as high as the navel: the urethra was completely passable with a small catheter. The heart was very large and hypertrophied in its left half: it was larger than the heart of the pathological twin of the first case: the muscle was healthy and the valves normal. In the lungs, as in the first case, was observed, besides a considerable blood-cell infiltration, a large increase in calibre of the arteries with a well marked thickening of the vessel-walls. The liver was large and infiltrated with red and white corpuscles in the vicinity of the vessels. The kidneys were enlarged, and there was dilatation of the pelves and calices; the glomeruli were filled with blood-cells, and there was blood-cell infiltration of the parenchyma. The placenta was large and very œdematous and studded with a great number of large and small cysts from the size of a hazel-nut to that of a hen's egg, which were seated more or less in the vicinity of the chorionic covering of the placenta. The cord was inserted near the edge. Countless old and new blood clots, some of considerable size, were found as well directly under the chorion as on the uterine surfaces of the cotyledons. Under the microscope was observed, as in the first case, frequent obliteration of the vessels with greatly hypertrophied vessel-walls, which gave the impression of fibroid growths, which were perforated sometimes by one, but commonly by two very small vessel-openings. The cysts hung, as it were, on the vessels which were in intimate connection with the cyst wall. Sections of these vessels at the seat of their passage into the cysts showed that an artery and a vein lay together: the artery appeared obliterated before its insertion into the cyst-wall, in order to develop itself as a cyst. The vein, much dilated and drawn out in breadth, surrounded the obliterated artery in a half circle, so as to lie smoothly over the cyst wall. In the cyst fluid were found countless, more or less altered red and white blood corpuscles. Finally the vasa propria of Jungbluth were seen traversing the chorion, not in great number, but often beautifully injected.

On laying open the ductus arteriosus lengthwise, Nieberding found its lumen filled with crumbling masses which reduced considerably the calibre of the duct. Microscopic examination showed these masses to be proliferations of the muscular coat and intima, as in the first case. He therefore has no hesitation in considering the premature obliteration of the arterial duct as the primary anomaly on which the circulatory disturbances of the fœtus and the other pathological changes depend. He also believes that the great increase in the amount of liquor amnii arose from the extraordinary increase of the secreted urine, without, however, entirely denying that other factors may have had some share in the increase. Nieberding adds that it now remains for him to examine the arterial duct of fœtuses from the same period of pregnancy where hydramnios does not exist, in order to prove whether perhaps the physiological obliteration of the duct at full term can occur in certain cases without being accompanied by so considerable anomalies of the ovum.

It does not seem to the writer, however, that Nieberding's cases and conclusions, interesting as they are, change materially the already accepted views on the pathology of hydramnios. Any pathological change in the fœtus, in the cord or placenta which disturbs the circulation so as to cause venous stasis or increased arterial tension would naturally result in dropsical effusions or increased filtration of urine: the fœtal skin and kidneys, and perhaps the umbilical cord and the chorionic vasa propria, would thus naturally contribute to increase the amount of liquor amnii. Whether the first disturbing cause is found to be in the heart, in the liver, in the kidneys, or in the placental circulation, the final result would doubtless be the same.

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CRANIAL BONES OF A FŒTUS REMOVED FROM THE RECTUM.[1]

BY O. W. DOE, M. D.

E. W., colored, widow, fifty-two years of age, entered the City Hospital on April 8th last, complaining only of diarrhœa. Her discharges averaged about seven in number daily and were very thin and often slightly bloody. Under the use of astringents she had but one daily, and after having been kept in bed for two weeks she was allowed to sit up. On doing so, she stated that a very full watery discharge from the rectum took place, and she had no voluntary control of the sphincter. The nurse was directed to give a laudanum injection, but found it impossible to introduce the syringe, as it seemed to impinge against a hard substance just inside the anus. My assistant, Dr. Welch, was called, and found that the obstruction was caused by a collection of small bones, one of which was removed and found to be the left temporal bone of a fœtus. By questioning her closely the following history was obtained, though she seemed somewhat unreliable in respect to dates: —

She had borne three children, the last thirteen years ago: her labors were not difficult. Ten years ago she had a miscarriage when about four months pregnant; but, as the only thing that came away resembled a piece of liver, she was not sure that it was a miscarriage. Since then her catamenia have been regular, until their cessation five years ago. About six months ago something rather hard, about the size of an orange, passed through the rectum. Since then she has had a diarrhœa, the discharges at first being accompanied with pain and containing crumbly matter. The dejections during the last two months have occurred sometimes as often as every fifteen minutes, and frequently have taken place involuntarily during sleep: they were very much less frequent when the patient was in bed. During the past two months there has been considerable abdominal pain and rectal pain, which would be relieved by defecation. The day before entering the hospital she passed two pieces of bone from the rectum; one resembling half a wish-bone; and the other, the upper part of a chicken's leg. When the patient first entered the hospital examination of the abdomen revealed nothing abnormal. There was some emaciation, but not as much as one should expect to arise from a diarrhœa of six months' duration. On the day when she had the large involuntary discharge on sitting up there were noticed hard masses in the left inguinal region, which moved under the fingers, and also a large tumor above the pubes, which proved to be an over-distended bladder. The patient then stated that she had passed urine only at intervals of three days during the past three months, feeling no inclination to pass it oftener. In removing the bones four of the largest ones were found in close juxtaposition about an inch inside of the anus: they were quite freely movable, and, as the sphincter very readily dilated, they were removed with but little difficulty. Three fingers could be easily introduced into the rectum, and but little, if any, laceration of the sphincter resulted. After removal of the bones near the anus another collection was found closely imbedded together, directly underneath the promontory of the sacrum. There was much more difficulty in removing them, especially the first one, and in their removal a considerable amount of a thick cheesy deposit was noticed. The fingers could not recognize any distinct rectum, but high up seemed to enter a large sac containing the bones, the walls of which seemed to be defined by a thick cretaceous deposit.

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[1] Read before the Obstetrical Society of Boston, May 10, 1884.

The bones were removed fifteen days ago, and since then the patient has had no unfavorable symptom. The temperature was 100° F. the day following the operation, and since then normal. She is now sitting up and has on an average two dejections daily, lately well formed. The sphincter shows no signs of any laceration having been produced; but the rectum is still very capacious and not easily defined, the finger apparently entering a large cavity with soft, cheesy-like walls.

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PENETRATING GUN-SHOT WOUND OF THE NECK.

BY EDWARD O. OTIS, M. D.

On the morning of April 9th, between nine and half past, a stout, fleshy man, about forty or forty-five years old, was riding along a quiet village street. Passing by a house he felt something like the sting of a wasp on the right side of his neck. He fell partially over on his side, and attempted to raise his right arm to beckon to some one who was passing. He found his arm powerless, but five minutes after, he said, it regained its power. He realized that he was shot, and so stated to the one who came to his assistance. Aphonia came on immediately. He was taken to his home in partial shock, from which he was said to have rallied in about an hour. There was much difficulty in breathing.

I saw him in consultation the night of the next day, about thirty-six hours after the accident. He was partially dressed, and sitting in a chair. His respiration was about normal; pulse was 120; and temperature 101° F. He had been coughing much since the accident, with the expectoration of considerable mucus, but no blood. There was no pain, except on swallowing, which was difficult.

On examination I found a rather ragged, circular wound, about five sixteenths of an inch in diameter, on the right side of the neck, which was short and thick, two inches, in a vertical line, below the lobe of the ear, the head being pretty well extended. The edges of the wound were dirty, and I thought I detected a few linen fibres, the bullet having gone through his coat and linen collars. It was moderately swollen and tender about the wound. On the opposite side of the neck, four and a quarter inches below the lobe of the ear, and two inches in front of a vertical line, was a cut about half an inch long, which the attending physician had made in extracting the bullet, which, he said, was just beneath the skin. On the linen collar was a very little blood, which was about all the external hæmorrhage there was at the wound of entrance.

I was told that there had been considerable discharge from the wound of entrance, which, on examination, was very much in appearance like the gruel he was being fed with. I also noticed bubbles of air, mixed with the discharge, after coughing. On coloring some milk with tincture lavender, which happened to be near, and asking him to swallow it, I detected the colored fluid oozing from the wound. No fluid at all appeared from the wound of exit, nor was there much of any swelling or tenderness on that side of the neck. On examining the interior of the throat as well as I could at night, and not under the most favorable circumstances, I found considerable congestion and much mucus. The lungs were clear. The first question to decide was the course of the bullet, and what structures had been injured. The direction of the bullet from the positions of the wounds of entrance and exit must have been from above downward, and from behind forward. As it entered it must have penetrated the sterno-cleido-mastoid muscle or grazed its posterior border, passed through the other muscles and tissues between it and the pharynx, penetrated and passed through the pharynx, then made a detour about the great vessels of the left side, finally stopping directly over them and under the skin. This deflection of the bullet was more to be expected at this place than at any other, because the bullet's velocity was nearly spent. A straight line drawn from the point of entrance to that of exit would strike the vessels of the left side.

Let us now see how the accident occurred.

A student left lying in his room a revolver of 32 calibre, known as the "Excelsior" pattern, having five chambers. Two of these chambers, adjacent to each other, were loaded. A fellow-student coming in, and seeing only the unloaded chambers, supposed they were all so, and so amused himself by snapping the revolver. The first time he pointed it towards his foot, and the hammer came down upon an empty chamber. The next time he aimlessly pointed it out of the window, and the hammer struck one of the two cartridges. The bullet went through a window pane only an inch inside of the sash. Directly in front of the window was an elm tree of moderate size, and perhaps five or six feet distant from the house. The bullet must have just grazed this tree, but it was impossible to discover any trace on the rough, broken bark. A vehicle passes any given point on that street on an average of once in ten minutes, I should think. Just at this time a vehicle did happen to be going by. From the head of the horse to the end of the wagon is quite a distance. Any part of this distance might have been in front of the bullet at the exact time of its discharge, and the chances were many to few against the man's neck being in front. It was in this case. Any part of the neck might have been in the bullet's track. The chances were infinitely few that just the point between the spinal cord behind and the great vessels in front should be the safest place to tap the pharynx from the side. Just that point did happen to confront the bullet.

Let us sum up the immense preponderance of the chances against the bullet's causing the accident it did or, indeed, any accident. First, it struck only one inch beyond the window-sash. Second, a tree was directly in front of the window. Third, a vehicle passes the window only about once in ten minutes. Fourth, the thickness of a man's neck is only a very small part of the line drawn from the head of the horse to the end of the wagon. Fifth, the time the whole of a vehicle is passing a given point is very short; very much shorter is the time a man's neck is passing that point. Sixth, the safe track for a bullet through a man's neck and pharynx is extremely limited. Lastly, there were only two out of the five chambers of the revolver loaded. The hammer had already descended upon one empty chamber, so that there remained two loaded and two empty chambers, making the chances for and against hitting a cartridge just equal.

The bullet went out of the window at a vertical distance of about twelve feet from the ground, and the man's neck was about five or six feet from the ground.

One side of the bullet was turned up while the other side was smooth, and in crevices of the turned-up side were black particles, which, under the microscope, proved to be dark fibres, probably from the coat collar, which was penetrated. The bits of coat and linen collar cut out by the bullet were not accounted for at the time of the accident; later, as we shall see, they appeared.

The treatment advised was of the simplest: surrounding the wound with some light antiseptic material, nourishing the patient partially by the rectum or by a stomach tube, interdicting speaking, a moderate opiate, quiet and good air, careful watching.

I was summoned again two days later to see the patient, and from that time until convalescence, some four weeks later, saw him frequently. A large suppurating cavity formed at the wound of entrance, connecting with the interior of the throat by an upward circuitous passage. Two counter-openings were made at the most dependent portions, one directly below the bullet hole, and another below and in front. A drainage tube was passed from the bullet hole to the counter-opening below. A day or two later this whole tract was cut up. The wound was thoroughly syringed out each day, and an antiseptic dressing applied, — iodoform, carbolic gauze, oakum, etc. At first a carbolic-acid solution was used to irrigate the wound, but as at every washing some of the liquid entered the throat it was thought that the acid increased the irritation there, and its use was abandoned. Alcohol and water and a solution of chloride of zinc were tried, and finally a borax solution was relied upon as being unirritating to the throat. For two or three days considerable sloughing ensued, with much discharge, and a very foul odor. The temperature oscillated between 100.5° F. and 102° F., and the pulse from 116 to 120. After the tenth day the sloughing ceased, and the temperature fell nearly to normal. From the fifth to the twenty-sixth day (twenty-one days) he was fed entirely by the rectum and stomach tube. On the twenty-sixth day the passage from the wound to the throat was apparently closed, and he was allowed to eat the natural way, which he continued to do from that time forward. There was great irritability of the throat and much accumulation of mucus, often purulent, from discharge from the external wound. On the sixteenth day of the accident a large abscess at the point of exit opened, and the lost bits of the linen and coat collars were extracted, having been carried through the neck by the bullet in its wandering; a most fortunate circumstance, that they were not left in the deep portions of the neck to cause grave trouble. This abscess healed in a few days. On the thirty-second day the external wound was healed, with the exception of a small granulating point. The patient was still aphonic, however, and on laryngoscopic examination the pharynx and larynx were found thickened and congested, particularly the ventricular bands. He also complained of lack of power in the right arm, and his head was deflected a little to the right side. Both aphonia and torticollis, more or less permanent, occur in many cases of injury of this kind.

The case is one of interest in several ways: —

First, consider the detour the bullet must have made to avoid the great vessels on the left side of the neck, for it lay beneath the skin immediately over them. The escape of the great vessels in penetrating gun-shot wounds of the neck is noted with wonder in treatises on military surgery. "Few[1] writers on military surgery have failed to remark on the curious manner in which missiles elude the great vessels of the neck, though passing, apparently, in their immediate track. Dr. Williamson, Sixty-Fourth British Regiment, suggests an explanation of this phenomenon. He says: 'It is remarkable that the large arteries and veins in the neck should escape injury so frequently in gun-shot wounds. This may in some measure be accounted for by the structures in this region being so loose and movable that they yield or recede before any projectile.'"

Second, consider the risks to be feared during the first ten days: sloughing and invasion of the great vessels; deep suppuration and descent of pus into the chest; trouble from the bits of foreign substance, the place of lodgment of which was unknown; acute pharyngitis and laryngitis, causing grave disturbance in respiration; pyæmia and erysipelas.

Third, the difficulty of treatment from the location of the wound and the parts involved. Whatever fluid was used to irrigate the external wound entered the throat, so that care had to be used in the selection of the antiseptic. Then there was the difficulty of feeding. A throat already inflamed had to be continually rasped by the passage of a stomach tube.

Hamilton, in his Military Surgery, says that when the œsophagus is wounded, a similar condition to that of this case, the first duty of the surgeon is to pass a stomach tube, and permit it to *remain*. In this case, at least, I think this procedure would have increased the irritation, and added to the discomfort of the patient.

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[1] Medical and Surgical History of the War of the Rebellion, Part I., Surg. Vol., p. 412.

Fourth, as I have already shown the remarkable combination of chances which produced the accident, the unfortunate cause of it would most assuredly re-echo the words of Shakespeare's Cloten, —

> "Was there ever man had such luck."

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REPORT ON NERVOUS DISEASES.

BY S. G. WEBBER, M. D.

TREATMENT OF PARALYSIS AGITANS.

Albrecht Erlenmeyer[1] reports his experience in regard to the action of drugs in a severe case of paralysis agitans. The tremor was so severe as to interfere with sleep. One or two tablespoonfuls of the following procured sleep, but had no influence upon the tremor: —

℞ Chloral hydrat.	7.5
Morph. muriat.	0.05
Aq. dist.	150.
Arrac	50.
M.	

This amount lasted the patient about fourteen days. She took it one and a half years.

An infusion of *valerian*, 20 : 200, to which was added 25.0 *bromide potassium*, in doses of four tablespoonfuls daily, had a marked effect upon the tremor, which was diminished while this was used, but returned when it was omitted.

Curare 0.5, aq. dist. 15.0, acid muriat. gtt. 2, was given subcutaneously, one, two thirds, and finally an entire syringeful being used; 0.011, 0.022, 0.033 of curare respectively. The larger dose caused the tremor to diminish. The improvement continued about three days. The curare was repeated every five days.

The *galvanic current* from eight cells, used for ten minutes, and later fifteen minutes, the anode on forehead, the cathode on the neck, gave very favorable results, but when the treatment was discontinued the tremor returned.

℞ Atropia sulph.	0.03
Ext. secal. cornut.	1.00
Exts. liquir.	q. s.
M. F. pil. 30.	

One of these taken daily controlled a troublesome sweat, and also diminished the tremor. After nine days this had to be omitted, on account of a slight toxic effect from the atropia. Later, it was taken again with the same result.

Crystallized hyoscyamin had no effect upon the tremor unless taken in such doses as to show the beginning of toxic effects.

Nitrate of silver had no effect.

OSMIC ACID IN NEURALGIA.

A. Eulenburg[2] was led by Neuber's experience in neuralgia with osmic acid, injecting one per cent. aqueous solution, to try the same remedy. He found that the injection of the above strength caused no unpleasant symptoms. He selected twelve cases of neuralgia in different cutaneous nerve districts of the upper and lower extremities, of the head, and body; most of these were fresh and not unusually severe cases. The treatment extended over one to six weeks; the number of injections in individual cases was three to fourteen. The solution used, one per cent., gradually became dark colored; even that could be used without injury. The amount injected was 0.5 of the solution, exceptionally 1.0. After the injection there is a slight temporary reddening or swelling in the immediate neighborhood of the injection. The injection was made *in loco morbi*.

Of twelve cases three were cured (no relapse within two to fourteen weeks); four more or less relieved; five were not benefited. The three cases cured were probably cases of neuritis or perineuritis.

Subsequently he used the drug in seventeen other cases; four cured (two sciatic, one lumbar, one intercostal).

OSMIC ACID IN EPILEPSY.

Wildermuth[3] has used osmic acid, or the potassic osmite, in cases of epilepsy with only slight success. In seven cases he found no benefit. In two cases improvement followed; in one of these the benefit was about the same as that obtained by the use of bromide of potassium. In the other case the gain was much greater; the patient, a woman, seemed to be idiotic, indifferent to her surroundings. The attacks were very severe. In 1876 she had 321, in 1881, 980; bromide of potassium had no effect upon the attacks. 7th January, 1882, she began to take 0.002 osmic acid in watery solution; later took three to five mgr. in pill. The bromide of potassium was reduced to 2.00. The attacks diminished in frequency.

	1881.	1882.
January	131	48
February	121	6
March	125	0
April	121	10
May	11	2
June	9	4
July to December	401	0

The mental condition improved greatly. In 1883 several slight attacks caused the bromide to be increased to 4. and 7. for a short time. Since then the daily dose has been bromide 2.00 and 0.004 of potassic osmite. No further attacks. The above cases were all chronic, intractable cases.

The dose was from two to fifteen mgr. a day in pill, each containing 0.001 of the acid or the potassic salt; he prefers the latter.

PARALDEHYDE.

Carl von Noorden[4] gave between 3.0 and 6.0 grammes, with equal parts of inf. cort. aur., in a half wine-glass sugar and water. He saw no evil effects, even from larger doses. Sleep followed in fifteen to forty-five minutes, and in favorable cases continued five to six hours; if accidentally awaked the patients went to sleep again.

Occasionally the taste and smell of the drug remained unpleasantly after waking, but generally no bad effects followed. As contraindication he mentions severe gastric disease and advanced phthisis, with affection of throat. Among thirty patients he found only two who were nauseated or had headache from the use of the medicine. Patients with weakened heart bore the drug well, and obtained rest; the arterial tension was not diminished.

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[1] Cbl f. Nervenheilkunde, Psych., etc., 1 May, 1883.

[2] Die Osmiumsäurebehandlung der peripheren Neuralgien. Berlin kl. Wochenschr., 18 February, 1884, p. 99.

[3] Notiz über Anwendung der Osmiumsäure gegen Epilepsie. Berlin. kl. Wochenschr., 9 June, 1884, p. 358.

[4] Paraldehyd als Schlafmittel. Cbl. f. kl. Med., 22 March, 1884, p. 185.

E. Kurz[1] reports his experience with paraldehyde in twenty-four cases. The dose was three grammes, sometimes four. The sleeplessness was due to different causes. It failed only in four cases. In no case did it have an exciting effect. The sleep began within half an hour after taking the dose, and lasted five to seven hours, sometimes interrupted. Headache did not follow its use; it was not necessary to increase the dose. It causes a very natural sleep, and is of most value when the sleeplessness is not caused by pain or mechanical disturbances, as coughing, dyspnœa, etc. The chief indication is the same as for chloral.

Langreuter[2] has used paraldehyde and acetal to produce sleep, the former in doses of six grm., the acetal in doses of ten grm. Acetal is less pleasant in its action, and is weaker than paraldehyde. As vehicle he used olive oil with oil of peppermint. Both drugs were used for months without unfavorable effect. The taste and odor are unpleasant. When given at bed-time paraldehyde was successful in causing sleep in ninety per cent.; when given during the day in sixty-one per cent. Sleep occurred in five to thirty minutes after taking the dose.

CEREBRAL CHANGES IN DELIRIUM.

Mr. Handfield Jones[3] gives three cases attended with delirium, one of phthisis, one of typhoid fever, and one choreic, in which the microscope showed the presence of active interstitial inflammation of the cerebral cortical gray substance.

CEREBRAL TUMOR.

C. Wernicke[4] reports the case of a patient who had the general symptoms of cerebral tumor, — extreme headache, choked disk, fainting fits, vomiting, and, later, overpowering sleepiness. The focal symptoms were a slight left hemiparesis, which might, however, have been indirect, bilateral anosmia, and total blindness. From the total blindness, which he considered the most important symptom, Wernicke reasoned that, with retention of the pupillary reaction, there was probably destruction of the fibres of the corona radiata, which run backward from the posterior part of the internal capsule to the occipital lobe, that the conducting power of these fibres was lost on both sides, either by two tumors, one in each occipital lobe, or by one tumor which extended into both lobes, or by pressure caused the interruption of conduction on both sides. At the autopsy a tumor was found in the right temporal lobe; the softening of the cerebral tissue extended so as to destroy the fibres of the corona radiata running to the occipital lobe on the right, but the occipital lobe and those fibres were intact on the left. The left optic tract, however, was compressed or strangulated by the posterior communicating artery, which was tightly stretched across the tract in consequence of the amount of fluid which was in the ventricle. Wernicke explains the reaction of both pupils by the fact that the fibres from the right optic tract, which was healthy, pass to both eyes.

THOMSEN'S DISEASE.

Schönfeld[5] reports a case of this peculiar affection; the patient was a soldier. Schönfeld thought at first that the patient was simulating, but soon found that that was impossible. The soldier was twenty years old; he had never been ill until his fourteenth year, when he was bitten by a dog. He referred his affection to the shock from fright received at that time. Soon after recovery from the injury he began to complain of weakness in his legs, so that after standing long, or after much labor, he fell, but did not lose consciousness. Sometimes when he stepped on solid substances his legs suddenly became stiff, and he was obliged to stand still to avoid falling. The arms had never become stiff. When the patient was caused to stand still in one spot for ten minutes and then told to walk quickly, he could not do so, but slowly and with evident exertion raised one leg, which bent to an angle of about 120° at the knee and hip, and, standing very unsteadily on the other, he set it down again in nearly the same angle. If he then raised the other leg he often fell, generally on the knee, with his arms outstretched, rarely backwards. Consciousness was not disturbed. He lay about five minutes, and then with great difficulty rose. If he did not fall he walked very unsteadily; the hip and knee were bent at an angle of 120°, and remained thus flexed during walking, the limb not being extended. The point of the foot was drawn strongly downwards, so that the great toe almost touched the ground, as in spastic spinal paralysis. The impression was given that all the muscles of the lower extremities were in a state of moderate contraction, and the predominating power of the flexors caused the limb to assume the above position. After ten or twelve steps the gait improved, and soon became natural.

When the patient had been sitting quietly a while there was the same difficulty in walking, and passive motion met with resistance, which was the more marked the more rapid the motion.

When the arms remained some minutes hanging passive by the side there was a difficulty in moving them similar to that found in the legs. The same peculiarity was noticed in the fingers and the eyes; speech was slow and drawling.

ATAXIA OF PERIPHERAL ORIGIN.

J. Dejerine[6] reports two cases which very closely resembled locomotor ataxia, in which he found no change in the spinal cord nor in the nerve roots, but extensive changes in the cutaneous nerves.

The clinical characters in his cases were, as to sensation, rather severe pains, some fugitive, some permanent, the first resembling in their spontaneity and quick subsidence the fulgurant pains of ataxia; the others were more durable, and were seen as lively suffering in the limbs, analogous to sciatica, but they did not follow any determinate tract, appeared also in the trunk, and the whole body except the face.

The objective change of sensibility was pronounced, there was anæsthesia, analgesia, and retardation of sensation. In his second case the anæsthesia and analgesia were very marked over the whole surface of the body except the face: also the sense of temperature was affected much earlier than is usual in ataxia.

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[1] Paraldehyd als Schlafmittel. Cbl. f. kl. Med., No. 18, 3 May, 1884.

[2] [illegible] Wochenschr., [illegible] June, 1884, p. [illegible]

[3] [illegible] Medical Journal, Apr. 12, 1884, p. [illegible]

[4] [illegible] Hirntumor. Zeitschrift für kl. Medicin, vi., 1883, p. 361.

[5] Ein Fall von Thomsen'scher Krankheit. Berlin kl. Wochensch., 2 July, 1883, p. 412.

[6] [illegible] périphérique. Ataxie locomotrice par [illegible] des racines postérieures, des ganglions spinaux et de la moelle épinière.) Arch. de Physiol., 1884, p. 231.

The loss of motor power was real, and greater than is seen in ataxia, though not very marked. The incoordination was extreme, and in his second case was noticed in the upper as well as the lower limbs.

The patients could not with their eyes shut recognize the position of their limbs. The tendon reflexes were absent; there was no paralysis of the sphincters of the iris, and no myosis; in one case muscular atrophy and diminished faradic reaction.

The rapid progress of the disease is of great diagnostic value. In a few months the symptoms resembled those found in a case of confirmed ataxia.

The author considers that the loss of motor power and slight muscular atrophy, with diminution of faradic contractility, are most valuable for diagnosis; when these symptoms are met in ataxia it is only after the disease has continued a long time.

The only lesion found was a parenchymatous neuritis, the cutaneous nerves being most severely affected.

JUVENILE FORM OF MUSCULAR ATROPHY.

W. Erb[1] reports several cases of muscular atrophy commencing early in life, progressing slowly, which have certain peculiarities. His conclusions are: "There is a special form of muscular lesion, consisting in part of hypertrophy with subsequent atrophy (or the atrophy may be established in the first place), in part of hyperplasia of the interstitial connective tissue, and completed by a greater or less formation of fat tissue. It is uncertain whether the changes in the muscular fibres or the connective tissue is the primary. The peripheral nervous system, as well as the spinal cord, offers no recognizable change of structure. This is a very chronic, slowly progressive affection. As result every muscle attacked may appear now atrophied, again hypertrophied, or the subject of pseudo-hypertrophy.

Clinically the disease is characterized by a most marked and ever-recurring localization of the muscular lesion (in the upper part of the body, especially the pectorales, cucullares, latissimi, and other muscles of the scapula, the flexor group on the arm, including the supinator longus, triceps, etc., the fore-arm and hand are not affected; in the lower part of the body the lumbar extensors, a portion of the abdominal muscles, those of the thigh, then the peroneal region and calf in part). There is absence of the fibrillary tremor and of the degenerative reaction, and of all nervous or other disturbance. This disease begins most frequently in the upper part of the body, occasionally in the lower, according to the age of the patient. Most of the cases of this affection have heretofore been considered progressive muscular atrophy, a part pseudo-hypertrophy.

"The disease appears in the form of a progressive muscular atrophy in childhood, or youth (some time before or after puberty), and then forms what I first described as 'juvenile form of progressive muscular atrophy.' Not rarely it occurs in 'family' groups through many generations.

"When it begins in earliest childhood, and without marked lipomatosis, it is the 'hereditary muscular atrophy;' but if it is in this case combined with early and marked lipomatosis (especially of lower limbs) it is the 'pseudo-hypertrophy.'

"But all these forms are identical, and are the same disease, only with different modes of commencing, or course, or degrees of intensity.

"This affection is to be sharply differentiated, clinically as well as anatomically, from the spinal form of progressive muscular atrophy."

VISCERAL NEUROSES.

Dr. T. C. Allbutt[2] commented first upon the large number of cases of dyspepsia not due to organic gastric disease which are of nervous origin. It is quite common to overlook the neurotic character of these symptoms, yet the same is true in regard to other viscera. Many uterine disturbances are due to the general condition of the system rather than any local disease.

Dr. Allbutt mentioned several illustrative cases, and condemned hasty diagnoses, leading to error in treatment.

Gastralgia is not only found in women, but is common also in men, but only in one half the number. It is found at all ages from fourteen to sixty, but is most common between twenty and forty-five. Like migraine it tends to die out in middle life, and, like migraine again, it is attended less and less with vomiting as age increases. Gastralgia comes on earlier in woman than in man. In man it is rare before the twenties; girls often have it in their teens. Migraine is by far the most common associated affection. Eighty per cent. of the author's cases had both. The two affections usually alternate one with the other. Asthma is often associated with gastralgia. Like asthma gastralgia is often nocturnal, and is aroused by improper food or by any food. Hence the persistent confusion of gastralgia with dyspepsia. The cardiac neuroses are found associated with both these vagus neuroses, including true angina. Pseudo-angina is quite frequent with gastralgia; of this several examples are given.

Cervico-brachial and intercostal neuralgias are also found associated with gastralgia. Yawning is another curious symptom which occasionally occurs with gastralgia. There may or may not be vomiting. The vomiting allied to migraine is more common in the morning, is more periodic, and recurs at longer intervals; that allied to gastralgia is more dependent upon ingestion of food, irregular in recurrence, may be daily or almost incessant. The former is encephalic, the latter is reflex.

Several cases of gastralgia with pyrosis, flatulence, and vomiting are given. The author thinks that these cases of vomiting with gastralgia have often been called hysteria.

Gastric neuroses are not specially frequent at the catamenial period. Vomiting blood complicates the case and renders diagnosis less easy.

Anorexia may become so great as to amount to a disgust for food, and the patient may eat so little that emaciation becomes extreme.

In *enteralgia* the pain is in the umbilical region, about two inches to one side, usually the right, or in the right flank a little higher than the iliac fossa. He thinks it is not rarely of gouty nature, is aroused rather by the strife of public life than by the teasing of homely worries.

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[1] Ueber die "juvenile Form" der progressiven Muskelatrophie und ihre Beziehungen zur sogenannten Pseudohypertrophie der Muskeln. Deut. Arch. f. kl. Med., xxxiv., 1884, p. 467.

[2] The Gulstonian Lectures on Neuroses of the Viscera. British Medical Journal, March 15, etc., 1884.

The pain is severe, the bowels are seldom disturbed. He hesitates to place the seat of the pain in the bowels. Sometimes a rough periodicity marks the recurrence of the attacks.

The pain of lead colic is diagnosticated by its being more diffused than the pain of enteralgia, and not limited to *lieux d'élection;* it is not often an excruciating, nor a slashing pain; it is rather of a grinding or fretful character. The parallel constipation and other circumstances serve also to distinguish lead colic.

Hepatalgia is referred to the presence of gall-stones at rest in the gall-bladder in an impressionable or neurotic patient. But the diagnosis of this and the remaining visceral neuralgias he considers to be very difficult.

Allbutt briefly notices the frequent association of neuroses of the vagus with certain kinds of eczema, lichen, and psoriasis, with eczema and lichen chiefly, and the question as to gout being the cause of both the skin eruption and the vagus neurosis. He also refers to a rheumatic taint as a possible cause.

In speaking of treatment, Allbutt mentions that the neurotic has no reserve. When once the natural reserve has been dissipated it is never reaccumulated. This reserve may have been spent in beneficent activities, or it may have been dissipated in fidgets, fretfulness, or shrewishness; in sleeplessness, in anxiousness, or in pain, according to the quality of the person. To trade daily only upon the supplies of the day is to court collapse; we must have more brain, more spinal marrow, more liver, more kidney than we want for the day. We must have stored up force, partly for greater occasions, partly to secure the equable running of our machinery. In the early life of neurotic subjects we must favor the accumulation of nerve force by controlling expenditure and cherishing nutrition.

In an exhausted neurotic the secret of treatment is — by food, fresh air, exercise, and happiness — to lift up the patient from the invalid couch, to teach him so to manage expenditure, and so to promote nutrition as to replace his capital.

The necessity of feeding well, even at the expense of some pain, is dwelt upon at length. Release from toils or worries, change of air and scene are advised. Inland resorts are better than the sea-side for gastralgics. High mountains are not favorable.

The only things to be forbidden are tea, coffee, tobacco, and the stronger meats, such as beef; alcohol is not to be encouraged; so of morphia, though severe cases cannot be treated without the latter.

Arsenic takes the chief place among drugs.

Small blisters to the epigastrium, often repeated, are of service. Quinine, boldly pushed, with belladonna form a valuable combination. So do quinine and bromide of ammonia dissolved in hydrobromic acid. The infusion of *prunus Virginiana* makes an excellent vehicle.

The silver salts are of undoubted use.

Allbutt has found iron of comparatively slight value.

Phosphorus is not of value, but the compounds of hypophosphites often are.

Cod-liver oil should be added as soon as it can be borne.

In enteralgia arsenic is of less value than in gastralgia; quinine and belladonna seem best.

Reports of Societies.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. M. GREEN, M. D., SECRETARY.

MAY 10, 1884. The President, DR. C. ELLERY STEDMAN, in the chair.

GASTRO-NEPHRIC FISTULA.

Brief notes of a case of this extremely rare lesion were read by DR. J. R. CHADWICK, who reserved a full report until the case should be made complete by an autopsy.

A married lady, sixty-two years of age, had had attacks of gastric colic, with vomiting, at intervals of one to six weeks for seven years. She had had frequent micturition for a year and a half, and had seen particles of food in her urine. She entered his private hospital on November 12, 1883, when the abdomen was found to be generally tympanitic, except in the upper part of the right lumbar region, where a resisting, tender body was felt protruding from beneath the ribs like an enlarged kidney. Turbid urine was drawn from the bladder, the flow being occasionally interrupted by solid particles and by bubbles of gas. This urine was found by Prof. E. S. Wood to contain a "trace of albumen, much pus, a little blood, muscular fibre, boiled potato, vegetable fibre." The examinations of the urine were made for many consecutive days by Professor Wood with essentially the same results. As the attacks of colic were apparently confined to the stomach, as the tumor was in the region of the right kidney, as the particles of food found in the urine were invariably undigested, and above all as no trace of bile was found in the urine, except for three days following an attack of vomiting, the diagnosis of gastro-nephric fistula was thought warranta This was accepted by Drs. G. H. Lyman and C. Stedman, who saw the patient in consultation. V ous diets were tried without effect, so that afte month the patient was sent home to Rhode Island relieved, as her condition did not warrant a resort o the very hazardous chances of an operation. Dr. Chadwick had found in medical literature the reports of but two authentic cases of this lesion; one i French thesis of 1856, where a gastro-nephric fist had been discovered post mortem, but no history of course recorded; the other in an Italian journal p lished in 1866, where no confirmation of the dia s by autopsy had been reached at the time of publication. The probable origin of these lesions is in urulent nephritis.

DR. LYMAN said the case was one of the most interesting that he had ever seen: it was wonderful that the woman had maintained her nutrition so well. He inquired if the woman had been fed by rectum.

DR. CHADWICK replied that she had not. It was found that liquid food given by stomach escaped without much change through the bladder: hence it was thought best to give solid food which remained longer in the stomach. At one time there was much gas discharged by the bladder.

DR. ABBOT asked if the ne had been examined at times of long abstinence from food, and compared with the urine passed soon after taking food, with a view to determining whether the fistula was gastro- or intestino-nephric. The reply was that no such experiment had been tried.

CRANIAL BONES OF A FŒTUS REMOVED FROM THE RECTUM.

Dr. Doe reported the case[1] and showed the specimen.

Dr. Lyman asked what amount of inflammatory action was going on. The reply was that there was no febrile movement at the time.

Dr. J. W. Elliot reported

A CASE OF DOUBLE UTERUS AND VAGINA.

The patient was thirty-four years of age, had been married sixteen years, and complained of sterility, constant pain in the lower part of the abdomen, dysmenorrhœa, mental depression, and nervous spasms. On April second she entered Dr. Elliot's private hospital and was examined under ether. There were two separate vaginæ, both slightly smaller than usual: the septum, about one eighth of an inch thick, began just behind the hymen. At the end of each vagina was a cervix slightly smaller than normal. A probe could be passed into each cervix. The bimanual examination showed distinctly that there were two independent uteri: both were enlarged; one anteflexed, the other in about the normal position. The patient was afterwards seen during menstruation, and the menstrual flow came from both uteri.

Dr. Davenport asked if examination had been made by rectum.

Dr. Elliot replied that rectal examination gave the same result as by vagina: the finger passed behind both cervices and felt the double fundus above; without ether, however, nothing could be felt but the double cervix.

Dr. Chadwick expressed skepticism as to whether a double uterus could attain such a size as the reader had stated, since the double uterus was usually an arrested development and therefore smaller than the normally developed uterus.

Dr. Elliot said that the size of the double uterus was large in this case: he thought the bodies were dilated by fluid, there being stenosis at the ora interna. The menstrual flow is profuse.

Dr. Elliot also reported

A CASE OF RETROVERSION OF THE GRAVID UTERUS.

He was called to Mrs. E. in Brookline on March 9: he found the family much alarmed, and the patient in a critical condition. She said that she was twenty-three years old, that she had been married three months, that the catamenia had not appeared for the last two months. Three weeks before he was called, the patient began to vomit: for the first week she could retain a very little simple food; for the last ten days she had retained almost absolutely nothing. She had been under the care of a homœopathic physician who had not succeeded in relieving her. A female homœopathic gynæcologist had relieved her for one day by the use of a soft rubber ball pessary which had soon caused flowing and was therefore removed.

When Dr. Elliot saw her she was very thin and worn, and was tossing about the bed in a state of extreme nervous and physical exhaustion. She was retching and spitting incessantly, even when not attempting to take food. On examination he found the uterus somewhat enlarged, very low in the pelvis, and retroverted. She was flowing. There was evidently retroversion of a pregnant uterus, and a beginning miscarriage caused by the pressure of the soft rubber ball pessary. He pushed the uterus up out of the pelvis and directed her to lie in the semi-prone position: this relieved her for a time; but in the afternoon of the same day she sent for him again, and he found her vomiting as badly as before. He found that the uterus had partially retroverted again but the flowing had stopped. He put the patient in the knee-chest position and replaced the uterus without difficulty. He then placed a pessary which held it in position: the vomiting ceased entirely almost immediately and has never returned. The patient was able to take food every hour, and on the second day took two quarts of milk. She regained her strength very rapidly and is now in prime condition. He removed the pessary in about two months, when the uterus had grown so large that it could not retrovert. Although the vomiting was entirely relieved by the replacing the uterus, the spitting continued to trouble her more or less for several months.

Dr. Fifield asked whether, when the patient was placed in the genu-pectoral position and the perinæum was retracted with a Sims' speculum, the uterus replaced itself.

Dr. Elliot said that it was necessary to draw down the cervix with a tenaculum and then push the fundus into place.

Dr. Chadwick asked the reporter if he ever saw the uterus replace itself with the patient in the genu-pectoral position.

Dr. Elliot said no, unless the blade of the speculum is long enough to push the fundus forward.

Dr. Chadwick thought the knee-chest position a poor one for replacing a uterus. If the cervix is hooked down, the uterus can be replaced; but he disbelieved in hooking down the cervix. He had raised the fundus by inflating the rectum; but he now places the patient in an erect posture, when the uterus sinks, and, when the vagina is lax, can be easily replaced. He thought the erect position far better than the genu-pectoral.

Dr. Elliot saw no objection to the use of the tenaculum and believed the knee-chest position a good one, when it was desirable to use as little manipulation as possible.

CONCERNING THE ÆTIOLOGY AND PATHOLOGY OF HYDRAMNIOS.

Dr. C. M. Green read a short paper[2] on this subject.

Dr. Benj. Cushing, present by invitation, alluded to the methods now advocated for removing the placenta after abortion. He had formerly given ether and introduced his hand or had employed placental forceps; but for the past twenty years he had employed with good results an instrument of his own device which was essentially a small scoop or spoon with a long handle. He could use this scoop whenever the os was sufficiently dilated to allow the introduction of his finger, and he believed the instrument was far better than placental forceps.

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[1] See page 263 of this number of the Journal.

[2] See page 267 of this number of the Journal.

DR. CHADWICK had used the scoop for the last four or five years with great satisfaction: he thought it contained all the value of Thomas's serrated scoop.

DR. FIFIELD also testified to the value of the instrument. He seldom gave ether. He disbelieved in too early and too persistent search for the placenta and thought a little waiting and a little ergot would often bring away the placenta without trouble. It was his practice, in abortions from the second to the third month, to tampon the vagina and wait for twelve hours; then to place the patient on a bed-pan and give a vaginal douche: he usually found the placenta in the bed-pan. In abortions later on it was his custom to wait until the os was sufficiently dilated to admit the scoop or the finger.

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CHICAGO MEDICAL SOCIETY.

LISTON H. MONTGOMERY, M. D., SECRETARY.

STATED meeting, September 1, 1884. DR. A. K. STEELE in the chair.

DR. J. A. ROBISON read some

REMARKS ON ANEURISMS,

of which a few of the principal points are herewith appended, omitting reference to the ætiology, pathology, or diagnosis: —

The general principles governing the treatment have been to prohibit the patient from taking much exercise, to secure as nearly as possible absolute rest, and to restrict the diet. When the heart was tumultuous cardiac sedatives were exhibited and such symptoms as dyspnæa, pain, etc., have been met with appropriate palliatives. The first attempt at specific treatment for internal aneurisms was employed many years since by Albertini and Valsalva, and has been known as Valsalva's method. It consisted in weakening the patient by repeated blood lettings, and by gradually diminishing his meat and drink till only half a pound of pudding was taken morning and evening, with only a measured quantity of water, so that at last the patient was so exhausted he could not lift his hand from the bed in which he was ordered to lie from the commencement of the treatment. When this stage was reached the amount of nutriment was increased until the patient's strength was restored, but this plan of treatment did not yield the beneficial results which were anticipated. In our day it would be regarded as barbarous were we to try and enforce this treatment to the extreme which Valsalva reached. A modification of this method, consisting of enforcing absolute rest, and diminishing the food and drink, so as to diminish the quantity but not the physiological quality of the blood, has benefited a number of cases, if not entirely cured them. While some physicians have refused to employ the depleting treatment, they have resorted to measures fully as severe. Dr. Murchison and Mr. Moore, of England, have recommended, and in one case tried, the introduction of fine wire into the aneurismal sac, on the theory that the large amount of surface exposed to the circulating fluid would produce coagulation of the tumor. In the case referred to they introduced twenty-six yards of fine iron wire into the aneurismal sac, and it is needless to say that the treatment was unsuccessful, although they contend that the result obtained demonstrated the principle was sound, and that further experiments were justifiable. A much less dangerous and probably more efficient mode of treatment is by electrolysis. Pravaz was the first to use electrolysis for reducing external aneurisms, and Ciniselli and others have applied it to internal aneurisms, but with very indifferent results; in eight cases of thoracic aneurisms only one was benefited, only one case of abdominal aneurism was cured, and this patient died from rupture of the sac on account of premature exertion. The results obtained from the use of the galvano-puncture have not justified us in hoping for much from that method. Professor Langenbeck has published accounts of two cases which he claimed to cure by hypodermic injections of one half to three grains of Bonjean's watery extract of ergot every three days; Balfour says he has tried this method frequently, but without any success, although he was positive that his ergot was active. Pressure as a mode of treatment is wholly inapplicable to thoracic aneurisms, and rarely to abdominal. Dr. Murray records a case of the latter, in which pressure on the aorta for five hours, the patient being under chloroform, was successful.

Treatment of internal aneurisms by the administration of the iodide of potassium is conceded by Flint and Bramwell, and Balfour insists that the iodide of potassium is the only drug which offers any hope of cure, and in every case it will relieve the distressing symptoms. This author says: "Of all the various modes of treating internal aneurism, there is not one hitherto mentioned which is not attended with considerable risk or danger except Mr. Tufnell's plan of perfect rest, while the advantages to be derived from some of them are, to say the least, very problematical."

The reader claimed that the treatment by the iodide of potassium is perfectly safe and free from all risk, and it is equally certain to afford relief, although relief is not always to be gained instantaneously. It relieves the pain and other symptoms of aneurisms more rapidly and more effectually than any other treatment, apart even from the powerful agency of the recumbent posture. The relief to the pain and other symptoms is so great and so speedily obtained, usually from the action of the drug alone, that it is often difficult to get the patient to submit to any restrictions. The author has employed this method of treatment during the last eight years in a very considerable number of cases with unvarying success so far as the relief to symptoms is concerned, and with such favorable results as to retarding the further progress of the case, and even in some cases promoting an apparent cure, as certainly to stamp this treatment as one of the most efficient hitherto propounded for the relief of this intractable complaint. Balfour relates the history of twelve cases treated by this method with the following results. The symptoms, such as pain, dyspnœa, etc., were relieved in every case: The physical signs of aneurism were diminished in seven cases, pulsation of the tumor ceased in two cases, diminished in four, and was not apparent from the commencement in six. The aneurismal tumor disappeared in three cases and diminished in five. The bruit disappeared in two cases, and diminished in two cases, but never existed in two cases. Five of the patients were so relieved that they could work, four were discharged at their request, feeling well; one patient absconded, and the result of treatment is not known.

Five cases were termed cured, and seven were relieved; one of the twelve cases referred to was an aneurism of the innominate artery, which was cured, and Balfour claims to have cured several cases of aneurism of this artery. One of the four cases discharged at their own request was under treatment three different times, being discharged twice at his own request, but died suddenly while under the third course of treatment, the autopsy revealing an aneurism of the aorta which had ruptured into the lower lobe of the right lung. One of the twelve cases was diagnosticated as a weeping aneurism, implicating the origin of the left carotid, and communicating by a small opening with the left bronchus, the patient on admission expectorating arterial blood, but this soon ceased and the patient was discharged cured.

While the writer did not believe he was justified in being as enthusiastic in the praise of the iodide of potassium treatment as Balfour, he believed he was justified in relating the following case, and giving the iodide of potassium the credit of prolonging the patient's life and making his days comparatively comfortable: —

John H. C., aged forty, a blacksmith, was first seen March, 1883. Had had attacks of inflammatory rheumatism several years previously. In February, 1883, he was attacked with severe pains in the chest in the præcordial region, and was treated by his physician for rheumatism for some weeks, when Dr. J. P. Ross saw him, and diagnosticated aneurism of the aorta. At this time the patient had a good deal of dyspnœa, some hoarseness of the voice, and quite a little difficulty in swallowing solid food. When fatigued the pains in his chest were excruciating. No tumor was perceptible, although there was pulsation in the upper sternal region, and dullness upon percussion over the area of pulsation. Two months afterward there was a swelling in the upper sternal region at the junction of the left first and second ribs, about the size of a silver dollar. A very slight bruit was heard. The voice was very husky, and the difficulty of deglutition had increased until now the patient could take no solid food whatever. He was emaciated and was losing strength very rapidly. He was ordered to lie in bed continuously, and was given fifteen grains of the iodide of potassium three times daily, gradually increasing the dose until signs of iodism appeared. It was truly remarkable how soon after this plan of treatment was inaugurated the patient expressed himself as free from pain, and the distressing symptoms from which he had suffered. He persevered until May, when he said he was so well and weary of the bed he would like to sit up. Leave was granted, and a few weeks after the writer was surprised to see him walk into his office. He complained of nothing, but he was cautioned against such rash experiments, and was told to return home and take better care of himself. His condition at this date was as follows: The continued pulsation of the tumor against the chest wall had produced absorption of a large portion of the manubrium, and an inch of the inner portion of the left first and second ribs. Consequently we could feel the pulsations of the tumor through the chest wall at a point where only soft tissues intervened. No bruit was discernible. On laryngoscopic examination there was found complete paralysis of the left vocal chord. His voice was anserinous. During all these months he had been taking the iodide of potassium without any disturbing effects, until now, when he complained of symptoms of iodism. He was permitted to discontinue its use. From the date of this office visit the patient grew rapidly worse. Dyspnœa and dysphagia increased, and finally he died of asthenia July 19, 1884.

Autopsy. On opening the thorax a large aneurismal tumor was seen behind the sternum, about five inches in diameter. Friable adhesions of the sac to the sternum were broken up when the sternum was removed. Absorption of a large portion of the sternum and the left first and second ribs had taken place. Heart and pericardium were normal; adhesions between the aneurismal sac and the left lung; the left lung was pressed upward and backward into the left pleural cavity, and collapsed. On opening the heart the aortic valves were roughened; the arch of the aorta was dilated, and at the front of the arch, between the origin of the innominate and the left carotid arteries, was an opening, oval in form, one inch by one and a half, into the sac of the aneurism. Through this opening the wall of the aorta was continuous with the wall of the aneurism.

Dr. E. T. Ingals was much interested in the case just reported, for he had also seen the patient. Last April he had been consulted and found all the symptoms present that have been described. The speaker cited briefly a case of aneurism of the abdominal aorta which he treated five or six years ago by iodide of potassium two thirds of the time for two years, and as a result there was obtained loss of the bruit, cessation of pain, and the size of the tumor was reduced one half. He saw the case recently, and there has been no return of the difficulty. Another case quite similar, he treated three or four years ago in the same manner and the pain was relieved. A case of thoracic aneurism treated three years, by giving twenty grains of the iodide three times daily, did not result so favorably, for the patient died suddenly. He was at present treating a case of abdominal aneurism in which all the symptoms have improved, and the enlargement is reduced one half. He desired to ask of any of the members their views as to how long the remedy can be taken continuously, before it has an injurious effect on the mucous membrane of the stomach or kidneys? About a year ago he began treating a case of stricture of the trachea, by giving four hundred and eighty grains of iodide of potassium, freely diluted, for some time daily until symptoms of iodism appeared, and he found the stricture was being absorbed, when sixty grains of the remedy was ordered to be taken three times a day. This was continued for six months; then five grains, three times daily. This amount the patient has been taking almost continuously during the past few months.

Dr. John Bartlett cited a case of general chronic bronchitis and asthma in a man seventy years of age. Eight years ago he began treating him by the administration of iodide of potassium in eight-grain doses, three times daily, and not a single day has he omitted to take the medicine down to this time; as a result the patient has steadily gained in flesh, grown fatter and stronger, his appetite is not impaired, and his kidneys perform their normal function.

Dr. Robison concluded by stating that Balfour does not administer as large doses now, at the beginning of the treatment of a case of any form of aneurism, as he used to. That fifteen or twenty grains three or four times a day is about the quantity he gives, then when the pulse is quickened or the heart becomes irritable the remedy is stopped temporarily.

Dr. H. M. Scudder read a paper on

THE TREATMENT OF ASIATIC CHOLERA IN SOUTHERN INDIA,

whose contents possess the more interest from the fact that the writer was for nine years a resident in India and passed through four epidemics of cholera there, and himself had the disease. Dr. Scudder was the only European physician in a town of nearly 50,000 inhabitants, and was at the head of a district hospital supported by the English government, and treated a large number of cases. One of the severest of these epidemics occurred during the famine of 1877 and 1878. He was assigned to take the medical charge of a large inclosed famine relief camp containing over five thousand persons, where there were often as many as three hundred at a time in the hospital sheds with a death roll during the height of the epidemic of over fifty per diem. In this camp the writer had the opportunity of trying on an extensive scale different remedies and the various modes of treatment, and comparing the results. The description of the treatment is therefore confined to the methods employed of late years in Southern India. Before proceeding to this, the writer stated his views in regard to the contagiousness of the disease. In India, he said, it is generally considered that cholera is an infectious disease and also somewhat contagious, though not highly contagious or readily communicable by personal association with the sick, as is the case with small-pox and measles. The noxious power of the cholera germ or virus (whether it is Dr. Koch's microbe or something else) seems to be more powerfully exerted some time after it has escaped from the body of the patient than when it is freshly passed. His own careful observation in the epidemics that he had passed through, and experience the world over, seems to establish this fact, yet the contagiousness of the disease still seems to be a vexed question, and remains yet to be decided. The writer further stated that from his experience and the careful study of the history of Indian epidemics he is led to believe that the attendants and those who come into frequent and close contact with cholera patients are somewhat more apt to contract the disease than those who do not.

For purposes of treatment, the writer divided the course of this disease into the following stages: (1) a period of prodromes or prodromic stage; (2) a first stage or stage of diarrhœa or cholerine; (3) a second stage or stage of invasion; (4) a third stage or stage of collapse (algid state); (5) a fourth stage or stage of reaction; this last stage may be succeeded by a typhoid condition, or cholera typhoid state, or the patient may pass directly into a state of convalescence.

In the prodromic stage, manifested by lassitude, mental depression, chilliness, nausea, and abdominal discomfort, give ten or fifteen drop doses of spirits of camphor in dessert spoonfuls of hot brandy every hour or two, but be careful not to allow any considerable quantity of stimulants to be taken. When epidemic cholera is prevalent many are affected by the symptoms just described. If the remedies indicated were promptly taken the writer was confident that many attacks of cholera would be warded off. It is true that fear often produces these very symptoms, but the spirits of camphor in spoonfuls of warm brandy tends to soothe the fears and dissipate the symptoms, and yet it does not usually disorder the digestion.

As soon as diarrhœa supervenes begin the administration of some preparation of opium, together with aromatic camphor; a little chloroform is then urgently called for. Two parts of chlorodyne to one of spirits of camphor is a very good combination, thirty drops for a dose, to be repeated as required. Another very serviceable preparation consists of equal parts of spirits of chloroform, spirits of camphor, laudanum, aromatic tincture of rhubarb, and tincture of ginger. Teaspoonful doses every hour or two, according to the urgency of the case, or until four or five doses have been taken, alternated with either of these combinations: an aromatic sulphuric-acid mixture or the following popular formula: —

℞ Acid. sulphuric aromat. . . . . ʒi.
Tinct. opii deodorat. . . . . ʒvi. vel ℥i. M.
Sig. Twenty or thirty drops in water every hour or two.

The writer suggested the importance of administering these remedies hot unless they create nausea. The hot water (two or three tablespoonfuls) in which the doses are given may be sweetened if desired. The patient should be required to lie down, and kept perfectly quiet, covered with heated blankets, and dry heat applied to the surface of the body, especially to the extremities, by means of hot bottles, heated flatirons, etc.

In India the administration of calomel to any extent has been lately discouraged. One or two doses may be given if thought best, but not more. As soon as frequent vomiting commences, or the stage of invasion becomes established, the combinations containing opium which have been mentioned had better be discontinued, and either of the following mixtures given instead, in teaspoonful doses to check vomiting, while at the same time some morphine, or morphine combined with chloral, should be administered by hypodermic injection, as the severity of the case may demand: —

℞ Chloroform,
Tinct. capsici,
Tinct. cannab. ind., ... āā ♏xxx.
Acid hydrocyanic (dil.) . . . . . ♏xx.
Ether . . . . ♏viii.
Spts. menthæ pip. . . . . . . ♏xv.
Syrup sassafras. comp. . . . . . ad ℥ii. M.
Sig. A small teaspoonful every half hour or hour.

or

℞ Spts. ammoniæ aromatic.
Spts. chloroform, ... āā ʒi.
Tinct. capsicum,
Comp. tinct. cardamon.
Tinct. ginger. . . . . . āā ʒss. M.
Sig. Give in the small doses as above.

A mixture of aromatic powder, gum arabic, and acetate of lead, may also be given alternately with either of these, if desired. In any case mustard plasters should be applied over the stomach and abdomen, but not left on too long; and, if required, enemas of eight or ten grains of acetate of lead may be given after each evacuation. The writer further stated that it was important to bear in mind that some preparation of opium or morphine, combined with chloral, is the chief remedy for cholera, and the surest agent we can use to arrest the progress of the disease. When called, therefore, to a case already in the stage of invasion, morphine, or morphine and chloral, should be administered hypodermatically, without delay, in order to get these sovereign remedies into the system as soon as possible; for if we can arrest the disease before the patient become collapsed his chances of recovery will be greatly increased.

Caution must be exercised, however, when this form of treatment is pursued, for narcotism is easily induced by repeated hypodermic injections, whereas very large doses of opiates can be given in this disease by mouth and rectum with comparative impunity. The strength of the solution usually employed for injection is: morphine, gr. iiiss. vel gr. iv., with chloral hydrate, ʒiiss. vel ʒiii., to the ounce of water. Inject twenty or thirty minims. The hypodermic use of morphine and chloral is, of course, contra-indicated when the stage of collapse has become developed.

During this stage it is most essential that the patient should be kept perfectly quiet, and in the horizontal position. No violent rubbings should be allowed, but the writer had found it beneficial to gently rub the limbs and extremities with hot oil.

To allay thirst let the patient suck ice frequently. Carbonic-acid water or simple acidulated effervescing drinks may also be given by the tablespoonful. It is unsafe to allow the patient to drink any fluid whatsoever in large quantities. In this stage, especially when the acts of vomiting and purging have become less frequent, and the algid state well developed, very small quantities of stimulants are useful, but they should be given with great caution lest vomiting be provoked. Stimulant enemas may also be given, but where the stomach has an inverted action it is often better to inject small quantities hypodermatically. Experience teaches that anything like the free use of stimulants in cholera is uncalled for and exceedingly harmful. They may, however, be given in small quantities in the prodromic stage, and in the stage of collapse. The reader has sometimes used small doses both of atropine and strychnia, administered by hypodermic injection, apparently effectually, to bring about reaction. Amyl nitrite by inhalation may be given a trial, but it seems to exercise very little permanent or beneficial effect. Intra-venous administration of milk and salines may be resorted to, but the reaction they induce is not generally of a permanent character, so that many of those who have given this method a fair trial have abandoned it.

Of late years, in Southern India, careful experiments have been carried out in reference to the value of impregnating the atmosphere of the sick-room with sulphurous acid by the burning of sulphur. The result is that this procedure has been introduced as part of the treatment of cholera. The writer has on several occasions tried this plan by subjecting the inmates of two different cholera sheds to exactly the same conditions and treatment in every respect with the exception that in one the atmosphere of the shed was impregnated with sulphurous acid, and that in the other this precaution was omitted. He found that the proportion of recoveries was considerably greater in the shed where sulphur was used. He therefore considered this an important adjuvant as part of the treatment. The atmosphere should not be so highly impregnated as to cause the patient or attendants to cough violently. Sulphurous acid thus applied is not only a useful remedy, but it is also believed to decrease the possibility of the disease being propagated or contracted by the attendants.

During the stage of reaction great care should be exercised; vomiting often continues, and the normal absorbing power of the stomach and intestines is but slowly restored. Liquid nourishment by the spoonful should be most cautiously given, well salted broth and milk given hot as possible and not too frequently are the only forms of food admissible until the enfeebled stomach shows signs of recovering its tone. Peptonized beef tea and milk are frequently well borne, if carefully prepared so as not to nauseate the patient. If vomiting persists the following emulsion may be given if deemed best: —

℞ Acid. carbolic	gr. vii.
Bismuth sub nitrat.	ʒ ii.
Mucilag. acaciæ, Aquæ menthæ viridis	āā ʒ i. M.

Sig. A teaspoonful every hour or two.

But in this stage it is good treatment to let nature do the work of restoration and give as little medicine as possible. We must bear in mind, however, that the kidneys must be assisted to resume their functions, and for this purpose mild diuretics should be carefully administered. If fever supervenes it is apt to be of a typhoid character; a combination of iodine and carbolic acid then exerts a beneficial effect.

(*To be concluded.*)

CHEESE POISONING.

THE secretary of the Michigan State Board of Health, Dr. Henry B. Baker, reported at the last quarterly meeting of the Board, held at Lansing on the 8th of July, among other matters of interest, on the subject of cheese poisoning. The secretary presented a report on four outbreaks during the months of May and June at Middleville, Jerome, Jonesville, and Big Rapids. All of the persons who ate of the cheese in question, about 164 in all, were taken sick with the same symptoms, namely, pain and a burning sensation in the stomach, intense vomiting and purging, feebleness of the pulse, coldness of the extremities, and a tendency to collapse. All finally recovered. The cheeses were ordinarily good-looking specimens, but, when they were cut or broken, a liquid oozed into the pores. In each case the cheese was made at a factory in Fruitridge, Lenawee County.

Dr. V. C. Vaughan also read a report on the subject. At the request of the secretary he had visited the factory in Fruitridge, and had analyzed specimens of the cheese. Everything about the factory had appeared to be scrupulously clean, and nothing in the vats, the cans, or the surroundings offered an explanation of the cause of the poisoning. Analysis showed no arsenic, copper, lead, iron, or other mineral poison. When the cheese was cut or broken, a whitish liquid oozed into the pores, and in this liquid microscopic organisms were detected. The liquid was very strongly acid. For more than a hundred years, the report continued, the attention of the scientific world had been drawn to the subject of cheese poisoning by repeated outbreaks of this sort, both in this country and in Europe. Much had been written on the subject, and many investigations had been carried on, especially in Germany. By various observers the poisoning had been ascribed to diseased milk, decomposition, and the development of certain fatty acids, etc.; but we did not yet know what made the cheese poisonous. In regard to the cases under consideration the maker of the cheese had stated that the cheese which had produced the bad results had all been made between the 26th of April and the 26th of May, in the same manner and with the same care as other lots which had given no cause for complaint. Good cheese was only very slightly acid, and was slow in reddening blue litmus paper, but the poisonous cheese was intensely acid, a freshly cut surface of it reddening litmus paper instantaneously. This test for poisonous cheese appeared to be practical, as the litmus paper could be applied by any grocer to a freshly cut surface of the cheese. If it was instantly turned red by the liquid which oozed into the pores the cheese was to be suspected of being poisonous.

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COLLEGE ATHLETICS.

Two papers were read at the meeting of the Social Science Association in Saratoga last week before the Section on Health, one by Professor Sargent, of Harvard, the other by Professor Hitchcock, of Amherst. The former gentleman alluded to the obvious and manifold advantages of properly directed physical culture to young men, particularly to students, but laid especial stress on the danger of the encroachments of professionalism with all its degrading influences on the field of natural healthful sports. The large amount of space devoted by the public press to "sporting intelligence" was strongly deprecated. In all sports the growth of the professional element marks the decline of the sport itself. When a man learns that his exceptional physical powers in any line have a money value, it is a temptation to use them in that line, and with him sport becomes a business. Then he loses his respect as a man very rapidly, and finds that he is like a horse or a dog, valuable only for the prizes he can win for his master, and he rapidly begins to look for success alone, no matter by what jockeying tricks or frauds it must be secured. The mercenary spirit is not confined to the athletes, but property owners, hotel proprietors, transportation companies, etc., all take an interest in athletics which is purely and wholly mercenary. Betting has always been and always will be the bane of competitive contests, not alone because it is wrong in itself, but also because of its demoralizing influence on all concerned. In order to controvert the law of chances and make betting a safe and paying business, "tips," "points," and "understandings" must be obtained, so that it becomes simply a disguised but sure robbery. Yet many of our young men are foolish enough to stake their week's earnings on a contest whose issue is known to the sharps that "bet" with them. Professor Sargent strongly favored athletic exercises in colleges, but wanted the evils eliminated. The first remedy suggested was that prominent educators and college officials should come to some agreement as to the part athletic sports are to play in a system of education. College faculties should announce their positions, and define them accurately, about the whole matter of athletic sports and training during the college course. Great good would come from the reform in the conduct of college sports recommended by the intercollegiate athletic conference which met last February. The question is no longer of simple physical significance, but has become of great moral and social importance, and the community at large must strengthen college faculties in devising common means for meeting a common danger.

Professor Hitchcock in his paper took even stronger ground than Dr. Sargent in his claim as to the obligation of the college to furnish physical training to its students. It is not enough, Professor Hitchcock says, for the Faculty of the college to enlarge upon the value of long walks, inspiring pure air, and an occasional bath, as the condition of the weather, the inducements of the natural surroundings, or the inclination or daily duties of the student may allow. In fine, then, the advanced idea of a college should recognize, as a part of its work, a supervisory care over the conditions of health in the student, and an education how to use the physical powers in harmony with the intellectual, by instruction and enforced attendance upon healthful, recreative duties, so far as to be able to maintain the highest power of the whole man, and keep them thoroughly active in the summer time of existence. In conclusion, he said the value of physical education is shown in the decrease of illness during college life, freshmen losing twenty-nine per cent. from illness; sophomores, twenty-eight; juniors, twenty-three; seniors, nineteen; or a decrease of disability of about ten per cent. The number of Amherst students from whom these data were obtained is 2106, and the average 21.1 years. The period of their observation was four years, and their average per cent. of good health was seventy-five per cent. of the whole number.

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RICKETS IN ANIMALS.

An opportunity has fallen to Mr. J. B. Sutton to make the post-mortem examinations of wild animals dying in the Zoölogical Gardens, in Regent's Park, and the result has been an article on Rickets in Wild Animals. (*Journ. Anat. and Phys.*, July, 1884.)

Rickets appear to be a very common cause of death among wild animals in the captive state, equaling in the Zoölogical Garden fifty per cent. of all kept in confinement, and Mr. Sutton has carefully recorded the clinical and pathological aspects of the disease. He describes the disease in three forms: (1) rickets of infancy, (2) of puberty, and (3) of maturity.

In the (1) rickets of infancy the clinical aspects of the disease have been principally followed out in monkeys. The animal becomes less lively than usual; he grovels about on the floor, and if pushed shrieks with pain; this is soon followed by impairment of the power of locomotion, finally ending in paraplegia, accompanied by priapism, incontinence of urine and fæces. The disease develops with great rapidity, and a rickety monkey that develops a cough soon succumbs.

The observations on (2) rickets of puberty ("late rickets" in the human subject) were conducted chiefly on baboons, bears, tigers, and lions. The symptoms are very few, but very definite. The animal shows signs of paralysis and defective dentition; gradually it becomes completely paraplegic, and is killed on this account.

The (3) rickets of maturity are rarest of all, the characteristic features of the disease being deformity, paraplegia, loss of teeth, and fractures of the bones of the limbs.

The causes of rickets are considered to be an unsuitable diet, frequent pregnancies, want of proper exercise, and what is termed "in-and-in breeding."

Mr. Sutton draws up the following table to indicate the distribution of the various pathological lesions according to age: —

	Infancy.	Puberty.	Maturity.
Skull.	Soft and somewhat thickened at the vault. Exterior may present a worm-eaten appearance. The base often presents tabetic patches.	Vault thickened.	Softened generally, and eroded.
Vertebræ.	Spongy and soft, encroach on the neural canal, causing paraplegia.	Present bulging at the disks and epiphyseal plates. Paraplegia.	Soft, spongy, and vascular. Paraplegia.
Thorax.	Deformed and beaded. Infractions of ribs.	Beaded. Infractions of ribs.	Nil.
Long Bones.	Soft, curved, with large epiphyses. Spongioid tissue reaches its maximum.	Fibrous tissue in a thin layer at the epiphyseal line Spongioid tissue at a minimum.	May be often soft and curved, or the compact tissue exceedingly thin and brittle.
Teeth	Temporary set. Normal.	Permanent set, late in appearing.	Fall out prematurely, due to absorption of sockets.

This is an instance of careful pathological study in animals, which is not without its direct application to the human species. We have often expressed our belief that such study of comparative pathology was one of the ways by which our knowledge of human ills might be best increased. The existence of a chance specimen of rickets in a domestic animal was made, not long ago, in the pages of the Journal, the basis of an argument against the identity of rickets and syphilis. One result of Mr. Sutton's autopsies will be to greatly strengthen such an argument. Such study bids fair also to throw even more definite light upon the ætiology of the disease. And we believe the time will come when not only the results of pathological processes in animals will be studied for the benefit of humanity, but when the observation of the course of these processes will be used as a means of clinical instruction.

— The return of a hernia, irreducible for many years, is reported as having occurred after a fit of sneezing.

TUBERCULOSIS OF THE FEMALE GENITAL ORGANS.

In the Transactions of the Société Anatomique[1] appears an account of the case of a woman, aged fifty-one, whose symptoms at first suggested typhoid fever, but in the absence of epistaxis, rose spots, ilio-cæcal gurgling, etc., and after the detection of disease at the apices of the lungs, the diagnosis of tuberculosis of the intestine was made. The course of the disease was rapid, and death ensued. At the autopsy tuberculosis of the lungs was observed, with cheesy softening, and cavities at the left apex. No tubercles were discovered in heart, spleen, kidneys, or liver. The latter organ was fatty. The mesentery showed miliary granulations, with swelling of the lymphatic glands. The intestine had whitish spots on its serous surface, elevating the peritonæum. These were scattered all over the small intestine and the ascending colon, especially abundant at the cæcum, where they became confluent. On opening the intestine it was found that each of these external spots corresponded to an ulceration of the mucous membrane internally, the ulcers being irregular, scalloped, rather deep, with sharp edges and sanious bases. Here and there a Peyer's patch was found ulcerated.

The uterus and its adnexa showed nothing externally, except an ulceration at the left of the cervix, extending through the mucous membrane. The vagina was perfectly healthy. The uterine cavity had preserved its physiological dimensions, and was quite filled with a whitish caseous substance. The mucous membrane was much altered, channeled with winding cavities of small dimensions, which contained the same substance, and discharged it into the uterus. The Fallopian tubes were much increased in volume, having at their free extremity a diameter equal to that of a quill. They were very tortuous, their calibre filled with the same cheesy substance as the uterus, and their mucous membrane presenting the same appearance. The broad ligaments had old adhesions, but no tuberculous lesions. The ovaries were both in a state of caseous degeneration. The peritonæum over them presented whitish salient spots like those of the intestine.

The age of the woman was such that, menstruation having ceased, nothing had called attention to the diseased state of the genital organs.

MEDICAL NOTES.

— Dr. Chervin has, according to *Science*, been study-
Seine Inférieure with reference to disabilities which
are developed by the annual conscription. The period
chosen covered twenty years. After those cases of
feeble constitution, evidently unfit for military duty,
the most frequent disability was dental caries, after
ing the medical geography of the Department of the
which followed hernia, etc. In considering the Department as a whole the average number of conscripts

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[1] Le Progrès Medical, August 16, 1884.

rejected on this account was fifteen per cent., but in considering the separate cantons it was shown that they vary greatly in this regard, the least average being eight per cent., and the highest nearly twenty-four per cent. In seeking a cause for this singular difference, that sometimes alluded to, the drinking of sour Norman cider, was considered to have little real influence. The question of race was believed to be more important. So far as form and height are concerned, the tables for twenty years showed two physical groups or races, — the smaller in the west, the larger in the east, especially about Dieppe and Neufchatel. The taller race is much more subject to dental caries than the other, and this is confirmed by testimony from other departments. Baldness prevails to such an extent that two per cent. of the recruits examined were exempt on that account at the early age of twenty. Some connection appears to exist between this deficiency and decay of the teeth.

— The *Medical Times and Gazette* quotes from *Lo Sperimentale*, December, some observations on the irregularity of the pupil in the insane by Dr. Mosso, of the Turin Manicomia. He describes the results of the examination he has made of the pupils in three hundred insane and one hundred sane persons. Since Baillarger called attention, in 1851, to the frequency and diagnostic value of inequality of the pupils in general paralysis of the insane, other observers have shown that the same circumstance is observable in many other affections of the nervous centres, but in the present paper Dr. Mosso wishes to draw attention to the frequency of irregular shape of the pupil in insanity, and its occasional occurrence in the sane. Of the three hundred insane the pupil was found rotund or sub-rotund in sixty per cent.; oval in seven per cent.; irregular in twenty-five per cent.; and very irregular in three per cent. In the one hundred sane persons it was found to be irregular in nine. The general conclusions drawn are: (1.) That in the insane pupillary irregularity is of frequent occurrence, and is usually bilateral. (2.) In diseases of the nervous centres irregularity and inequality of the pupils have the same pathological significance, irregularity being, in fact, the first stage of inequality. Dr. Mosso only puts forward these observations tentatively, and asks for their corroboration by other inquirers.

— A telegram to the *London Times* from Philadelphia states: "The defunct Medical University of Philadelphia, which has caused great annoyance and trouble by selling bogus diplomas, has reappeared. The English consul at Philadelphia, Mr. Clipperton, states that he is in receipt of letters from various parts of Great Britain asking for information about the standing of the college, and to what extent its diplomas are accepted. The government here has done all in its power to stop the illegal traffic in diplomas by canceling the charter of the college and closing it. If impostors are still committing fraud upon the public through agencies in England they should be prosecuted by the British authorities."

— From a foreign exchange we learn, remarks the *Medical Press*, that Professor Hegar has recently read a paper at Freiberg in which he advocates stretching the spinal cord. Our readers will be glad to hear that the operation does not consist in opening the spinal canal and directly stretching the spinal medulla. But Dr. Hegar has found that when the spine is very much bent the cord is actually lengthened. His mode of procedure is to place the patient on his back, and then, with the knees kept carefully straight, the lower limbs are bent up towards the chin as far as possible. In this way the great sciatic nerves are put on the stretch, and this, as well as the over-bending of the spine, stretches the lower end of the cord. The cases for which Dr. Hegar recommends this treatment are those of women who suffer from pelvic pain, and of nervous phenomena referable to the branches springing from the lumbar enlargement of the cord. Already the treatment has been employed in a few instances, and, it is stated, with success.

— The following words will be read with interest by all prayerful souls who are looking for the millennium of medicine. The remarks are from an article upon the Microscope in Analysis in the *Scientific American* of August 30, 1884: "The student of medicine is to-day enabled to unravel, before the potent glance of the perfected microscope, the deepest mysteries of the medicinal plant, flower, herb, or root. The nature, virtues, attributes, etc., of these can be studied at leisure, and gazed upon with an eye that magnifies from a few hundred to thousands of diameters."

— A new sponge and wound-pad has, we learn from the *British Medical Journal*, been manufactured for Mr. Sampson Gamgee as the result of a suggestion made by Sir T. Spencer Wells. It differs from the ordinary sponge inasmuch as it is a powerful absorbent in its dry state, and need not be previously wetted. Its absorbing power is said to be equal to fully sixteen times its own weight. It consists of concentric layers of absorbent cotton and cocoa-nut, or like fibre, within a covering of absorbent gauze. Its antisepticity is secured by placing in the centre a thin and easily friable capsule containing the antiseptic of any kind desired, eucalyptia or thymol, carbolic acid, bichloride of mercury, etc. An antiseptic may thus be inclosed within absorbent materials, and preserved intact for weeks and months together, if necessary, until required for use. All that is required is a sharp squeeze of the sponge or pad just before using it; and by subsequent burning all fear of sponge-infection is avoided and becomes impossible.

NEW YORK.

— The first meeting this season of the Society of Medical Jurisprudence and State Medicine was held Thursday evening, September 11th, when two papers read at previous meetings were discussed. The first was one on the Fillmore Will Case, by Dr. L. C. Gray, and the second one was on the Dwight Insurance Case, by Dr. J. G. Kiernan, now Superintendent of the Chicago Lunatic Asylum.

— The Academy of Medicine has lost a legacy of $5000 by its action last autumn in rescinding the Flint resolutions requiring the committee on admissions to recommend for membership only such candidates as supported the National Code of Ethics, which the Constitution distinctly declares to be the Code of the Academy. The late Corresponding Secretary, Dr. John G. Adams, left the Academy $5000 in his will; but after the action referred to added a codicil revoking the legacy and devoting the amount to various charities. Among the bequests in the will is the endowment of a free bed in the Presbyterian Hospital.

— During the first week of September the joint water commission of Newark and Jersey City held a meeting in reference to the pollution of the Passaic River by the sewage of Paterson and Passaic City.

Correspondence.

HOUSE OFFICERS OF THE MASSACHUSETTS GENERAL HOSPITAL DURING ELEVEN YEARS PAST.

Massachusetts General Hospital,
Boston, *August* 11, 1884.

Mr. Editor, — I herewith send a list of the house officers of the Massachusetts General Hospital for the past eleven years, believing that the more carefully it is examined the more clearly it will appear to all unprejudiced minds that the appointments have been made from no motives of nepotism or favoritism, but with the simple purpose of getting the best available men for the service of the hospital. Whether this object has been obtained with a fair degree of success, or whether better men would have been selected by strict adherence to the results of a competitive examination, is a matter of individual opinion.

J. H. W.

MEDICAL.

1874. W. F. Whitney, Boston; C. M. Jones, Worcester.
1875. T. W. Huntingdon, Burlington, Vt.; T. F. Moore, Boston.
1876. Marcellus Hutchinson, Wakefield; E G. Booth, Somerville.
1877. W. O. Moseley, Newburyport; J. J. Minot, Boston.
1878. W. W. Gannett, Boston; V. Y. Bowditch, Boston.
1879. H. P. Jaques, Boston; W. N. Bullard, Boston.
1880. W. N. Swift, New Bedford; T. F. Sherman, Boston.
1881. F. W. Taylor, Cambridge; H. F. Vickery, Weymouth.
1882. F. A. Dunbar, Cambridge; A. H. Hodgdon, Arlington.
1883. H. W. Newhall, Lynn; J. T. Bowen, Boston.
1884. H. Jackson, Boston; G. G. Sears, Boston.

SURGICAL.

1874. Walter Ela, Cambridge; George Stedman, Boston; Wm. Dunn, Boston; Samuel Howe, Cambridge.
1875. A. T. Cabot, Boston; G. H. Tilden, Boston; W. A. Winn, Arlington; J. E. Garland, Gloucester.
1876. O H. Everett, Charlestown; O. T. Howe, Lawrence; C. W. Cooper, Amherst; H. C. Haven, New London, Conn.
1877. J. W. Elliot, Keene, N. H.; J. W. Brannan, Cincinnati, O.; W. C. Mason, Bangor, Me; H. L. Morse, Bangor, Me.
1878. F. S. Watson, Boston; J. B. Wheeler, Burlington, Vt.; S. J. Mixter, Boston; G. W. West, Salem.
1879. W. J. Otis, Chicago, Ill.; G. H. Monks, Boston; D. P. Allen, Cleveland, Ohio; G. G. Hayward, Boston.
1880. F. B. Harrington, Salem; W. D. Hodges, Boston; C. P. Strong, Bridgewater; C. B. Witherle, Castine, Me.
1881. John Homans 2d, Boston; F. H. Lombard, Boston; O. K. Newell, Boston; A. T. Wakefield, Cambridge.
1882. C. M. Godding, Providence, R. I.; C. S. Holden, St. John's, Fla.; F. M. Briggs, Boston; C. W. Galloupe, Lynn.
1883. W. M. Conant, Bridgewater; O. J. Pfieffer, Portsmouth, N. H.
1884. H. C. Baldwin, Somerville; G. M. Kimball, Concord, N. H.; Edward Reynolds, Boston; Dillon Brown, Louisville, Ky.

Miscellany.

ERYTHROXYLON COCA.

Dr. Squibb writes[1] regarding this drug: The condition of the principal markets of the world for coca for the past six months has been exceptionally bad. That is, whether good coca was sought for in the ports of Central and South America, or in London, Hamburg, or New York, the search, even without limitation in price, was almost invariably unsuccessful. Not that the drug, independent of quality, was scarce, for hundreds of bales were accessible at all times, but the quality was so poor as to be quite unfit for use. The samples, instead of being green and fragrant, were brown and odorless, or musty and disagreeable, at once condemning the lots they represented, to the most casual observation, and yet the price was high enough to have represented a good article. The best that could be done, by the most careful buyers, was to accept occasional parcels, the best of which were of very inferior quality, and therefore unfit for medicinal uses, and these at very high prices. Coca is well known to be a very sensitive and perishable drug, only fit for its somewhat equivocal uses when fresh and green and well cared for in packing and transportation. Very much like tea in this and other respects, it should be packed and transported with the same care and pains, in leaded chests, or in some equivalent package. It is very well known that tea, if managed, transported, handled, and sold as coca is, would be nearly or quite worthless, and therefore coca, managed as the great mass of it is, must be nearly all of it comparatively worthless. If used as tea is, this would probably soon appear, but when used as a medicine, which has been highly extolled and well advertised, it seems to go on equally well whether of good or bad quality. It is pretty safe to say that nineteen twentieths of the coca seen in the United States market within the past two years must be almost inert and valueless, yet all is sold and used, and its reputation as a therapeutic agent is pretty well kept up. At least many thousands of pounds of the brown ill-smelling leaf, and of preparations made from it, are annually sold. And worse than this, considerable quantities of a handsome looking green leaf, well put up, and well taken care of, have been sold and used as coca, when wanting in nearly all its characteristics.

The writer for more than a year past has seen but one or two small lots of moderately good coca, and in common with other buyers has been obliged to buy the best that could be found to keep up his supply of the fluid extract. Almost every purchase has been made on mental protest, and he has been ashamed of every pound of fluid extract sent out, from the knowledge that it was of poor quality; and there seems to be no more prospect of a supply of better quality than there was this time last year, because so long as an inferior quality sells in such enormous quantities at good prices the demands of trade are satisfied.

Under this condition of the markets the writer has finally decided to give up making a fluid extract of coca, and has left it off his list, adopting a fluid extract of tea instead, as a superior substitute, for those who may choose to use it, and regrets that this course was not taken a year ago.

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[1] Ephemeris, July, 1884.

The character of coca as a therapeutic agent is discussed by Dr. Squibb, and the discrepancy referred to between the results obtained by Sir Robert Christison and those by Mr. Dowdeswell in the physiological laboratory of University College. This discrepancy can be accounted for only by supposing the two observers to have used a different article. Mr. Dowdeswell claims that the annual consumption of 40,000,000 pounds of this comparatively inert substance at a cost of $10,000,000 is an example of one of the large economic blunders of the age.

Dr. Squibb's own remarks upon the power of coca were based upon the premise that the same power in tea, coffee, guarana, etc., which refreshes, recuperates, and sustains in the condition which needs or requires such effects, also counteracts the tendency to sleep or produces wakefulness when a tendency to sleep exists, and, therefore, if a tendency or disposition to sleep could be prevented by these agents this tendency might be used as a measure of their effects when used in varying quantities, and thus measure the agents against each other for dose or quantitative effect. In this way the proposition is to first measure coca against tea, then coffee against guarana, and finally to compare the four agents, using pure caffeine as a kind of standard to measure by.

An opportunity for such trials occurred in a healthy individual, sixty-five years old, not habituated to the use of either tea, coffee, tobacco, or any other narcotic substances, of good physical condition and regular habits, and not very susceptible or sensitive to the action of nervines or so-called anti-spasmodics. Quantities of preparations of valerian, asafœtida, compound spirit of ether, etc., which would yield a prompt effect upon many individuals, seem to have little or no effect upon him, nor do moderate quantities of wines or spirits stimulate him. That is to say, he has not a very impressible nervous organization, is not imaginative, nor very liable to accept results on insufficient or partial evidence.

Fully occupied with work, both physical and mental in due proportion, for more than ten hours every secular day, when evening comes he finds himself unable to read long on account of a drowsiness, supposed to be of a purely physiological character. With a full breakfast at about 7.30, a full dinner at about 2.30, and a light evening meal about seven, and no stimulants or tea or coffee at any time, he finds, as a matter of not invariable but general habit, that by half-past eight drowsiness becomes so dominant that it becomes almost impossible, and generally impracticable, to avoid falling asleep in his chair while attempting to read, even though ordinary conversation be carried on around him.

The first trial to combat or prevent this drowsiness was made with caffeine. The first specimen used was a very beautiful article made by Merck, of Darmstadt, and after that by pure specimens made for the purpose, the two kinds being found identical in effect.

Commencing with a one-grain dose at about 6.30 P. M., on alternate evenings, leaving the intermediate evenings in order to be sure that the nightly tendency still persisted, and increasing by half a grain each alternate evening, no very definite effect was perceived until the dose reached two and one half grains, and this dose simply rendered the tendency to sleep resistible by effort. After an interval of three evenings, with the tendency to sleep recurring with somewhat varying force each evening, a dose of three grains was taken, the maximum single dose of the German Pharmacopœia. This gave a comfortable evening of restedness, without sleep, or any very strong tendency to it, until ten o'clock. Without anything to counteract sleep the rule was to read with difficulty by nine, without much comprehension by a quarter-past nine, and either be asleep or go to bed by half-past nine. The three-grain dose of caffeine repeatedly obviated all this discomfort up to ten o'clock, but did not prevent the habitual, prompt, and sound sleep from the time of going to bed till morning.

To produce a corresponding effect three fluid drachms of a good preparation of fluid extract of coca were necessary. An equivalent amount of the coca preparation assayed .45 grain of cocaine. If, then, three grains of caffeine equals in physiological or therapeutical effect .45 grain of cocaine, it follows that cocaine is about 6.5 times more effective than caffeine, but it also follows that the coca accessible, and even the very best coca, contains very much less of its alkaloid than those articles which yield caffeine do of that principle.

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A BUSY LIFE.

A CORRESPONDENT of the *Canadian Medical Journal* for July gives an interesting glimpse of a many-sided man — the distinguished professor of pathology at Berlin, Professor Virchow. After a short sketch of his life, the different chairs of instruction he has held, the noted men who have been his pupils and assistants, including Klebs, Recklinghausen, Rindfleish, the recently-dead Cohnheim, Liebreich, Hoppe-Seyler, Orth, Ponfick, etc., we are shown how after forty years of teaching he still works: —

"For the first three or four Mondays of the semester, from 7.30 to 10 A. M., he performs an autopsy before the class, giving detailed directions as to methods and the proper modes of observation. On Wednesday and Saturday are held the famous demonstration courses on morbid anatomy, in which the material for the week, often ten or fifteen cases on each occasion, is brought before the students. The time occupied is at least two and a half hours, the first half of which is taken up by some special subject, the pathology of which is well illustrated by the specimens at hand. At eleven A. M. he gives each day a lecture on special pathology. Politics and anthropology now absorb the greater part of his time. He is a member of the German Parliament and of the Prussian House of Representatives; and I noticed a day or so ago in one of the daily papers that Virchow had spoken in one of these thirty-eight times during the session. It need scarcely be stated that he is an advanced Liberal. He is also a member of the City Council — not an idle one either, as the copious literature of the "canalization" (drainage) system of the city can testify. His archæological and anthropological studies are most extensive, and it is upon these subjects that he now chiefly writes. When one turns to the Index of the Berlin Archæological or Anthropological Societies, the figures after his name stand thick and deep, just as they do in a similar index of medical subjects. He has been collaborator with Dr. Schliemann in several of the important works issued on Trojan antiquities. His collection of skulls and skeletons of different races, one of the most important in Europe, will doubtless find an appropriate place in the new Archæological Museum erected by the government. There are those who grudge him the time he spends on politics and his favorite studies, but surely he has earned a repose from active pathological work, and may well leave section cutting and bacteria staining to the smaller fry; and when we consider that in addition to the classes above mentioned he is President of the Berlin Medical Society, and edits his *Archiv*, now a large monthly journal, it can scarcely be said that he neglects professional duties. On all questions of general, medical, and scientific interest his utterances are not infrequent, and display a judicious conservatism — as witness his sound position regarding the Darwinian theory as opposed to the vagaries of Haeckel. It is satisfactory to note that the attack of gouty nephritis of some eighteen months ago appears to have left no trace. Aged, of course, he is (he is now sixty-three), but there is still a vigor and sprightliness in the wiry frame which bespeak years of continued activity."

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A CASE OF ACUTE POLIOMYELITIS IN THE ADULT.

Dr. John Van Duyn, of Syracuse, N. Y., reports, in the *Archives of Medicine*, August, 1884, a case which is of interest as presenting a nearly typical record of this disease, as well as showing the apparent cause of the malady with unusual distinctness.

F. D., a clothier's clerk, twenty-three years old, of average height and good muscular development. Had worked on a farm during summers until 1880, which year he spent at school. Early in 1881 he entered a clothing store as clerk, but in the following November he had malarial fever, and in February, 1882, had a moderately severe attack of typhoid fever. From the time of his recovery, in early spring, until the following October, he worked on a farm, and then resumed his position as clerk. Had never had venereal disease, and had never been intemperate in the use of alcohol.

August 24, 1883, he walked nine miles, arriving at his destination at two o'clock the next morning; went to bed at three o'clock, and slept six hours. At noon he engaged with others in "putting" a stone, which weighed nearly forty pounds, and in jumping. The stone was "put" from the shoulder by the right arm forward, and thrown by both arms over the head backward. This contest was most violent, and lasted two hours. Then he ate a hearty dinner. At 4.30 P. M. he walked over three miles, then rode in a stage two miles, and in the cars ten miles, after which he walked with friends in the city, and finally went to bed at eleven o'clock. The next day he felt some soreness, which, in a day or two, entirely passed away. Until the end of the two weeks following his life was as it had been before. By his exertion he did not become overheated, was not chilly, nor did he take cold. On September 7th, when he woke in the morning, he felt severe pain between the shoulders, equal in intensity on both sides of the spinal column, which was greatly increased by turning the head to either side. He went to work, but during the day he felt chilly, and his face was very red. In the afternoon the right hand began to lose its grasp, so that he could hardly hold the pencil in making sale-tickets. The power to use this hand grew gradually less, until, three days later, it disappeared entirely. That evening he rode ten miles by rail. He could not sleep because of headache, chills, and nausea. The soreness became universal. The second day he got up, could raise the right hand to his face, but could not button his clothes with it. He walked to see the village doctor, but found the strength of his legs failing to the extent that, in the afternoon, when he rode home, three miles distant, he could with difficulty get into and out of the wagon. Went to bed at night and "took a sweat." The third day felt sick and sore, but could get up, and even went out of the house. When he tried to put on his hat with his left hand, the right being powerless, he found it impossible, and with difficulty only could he lift this hand to the latch of the door. After he had gone to bed at night he found he could not raise either elbow from the bed. From this time on he was confined to the bed. He suffered from general soreness. To breathe gave him pain, and he could not lie on either side because of the pain which the pressure on the chest gave him. The whole body, excepting the head and neck, was so sensitive that suffering was caused by the gentlest touch. During the following three or four days paralysis of motion became general in the extremities, but not affecting the head, neck, thorax, and the left fore-arm and hand. Could not raise his heels from the bed, but, while on his side, could partially flex the thighs on the abdomen. Constipation became severe, but the bladder was unaffected. During this time the temperature was twice observed and recorded. On the fourth day it rose to 102° F.; a few days later to 101° F. After the tenth day improvement began to be manifest, and continued until the end of the second week, when he could get into a chair, but could not stand, nor could he raise his feet from the floor. The soreness had receded to the shoulders. At the end of the third week could walk with assistance, but could not lift the feet higher than enough to prevent dragging. Constipation continued, and did not disappear until two months later. The right arm was powerless. The left arm was recovering strength rapidly. This arm had not been affected below the elbow. At the end of the fourth week he could walk alone, the right leg having regained considerable strength, but the left leg could as yet be moved only with difficulty. At this time he began to feed himself again by using the left hand after the elbow had been rested on the table. Throughout there had been no abnormal sensations, no numbness. During these four weeks he lost sixty pounds in weight.

Examination, January 12, 1884. Complete loss of voluntary motion in, and great atrophy of, all the muscles supplied by the right brachial plexus, exceptin those supplied by the fifth and sixth cervical roots The right hand, with extreme atrophy in all parts, was *en griffe*. The muscles of this extremity, including those of the shoulder, were unaffected by faradism, but all, with the exception of those in the hand, reacted to strong galvanism. On the left side the supra-spinatus and infra-spinatus were greatly atrophied, the pectoral muscles less so, while all contracted under faradism. The elbow could with greatest difficulty be raised to the level of the shoulder. Below the shoulder the left arm was normal. Power to raise either knee was diminished. The left anterior tibial was not under control of the will, and was atrophied, but reacted to strong faradism. Because of the loss of this muscle the foot falls in extension when raised.

To the present time, May 16th, treatment by electricity has been almost daily. All the muscles of the right upper extremity contract under galvanism, with the formula CCC. > ACC., while the brachialis anticus, biceps, sup. longus, and pectorales major and minor contract under faradism. The pectoral muscles, biceps, and anterior brachial show decided contractions by the will. The nutrition of these muscles under the influence of the will so far exceeds that of the others that their growth causes them to stand out in marked contrast with the surrounding atrophy. The will has control of all the affected muscles of the left shoulder and of the left anterior tibial.

The writer remarks that should the gymnastic violence be conceded as the cause, than which no other is apparent, then interest must attach itself to the length of time which intervened between the cause and the outbreak of the disease, and to the fact that while both extremities, upper and lower, were affected during the fever, the muscles which remained paralyzed and atrophied were those most violently exercised, and the severity of the results and their permanency are in direct ratio with the use of the muscles.

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CHRONIC ILEO-COLITIS AND LARYNGISMUS STRIDULUS.

Dr. Roberts Bartholow, in a clinical lecture, made the following remarks upon a case showing the above complication: The child before you was shown you some time ago, suffering with chronic ileo-colitis. The disease had been extremely persistent and severe, but under a properly regulated diet and the use of tincture of iodine and carbolic acid, the so-called carbolate of iodine, — a half a drop of each being taken three times a day, — there has been rapid improvement, and now the symptoms have disappeared, notwithstanding that the instructions in regard to the regulation of the diet have been imperfectly obeyed. You will remember that I insisted upon a change in the diet as of the first importance in the treatment of this case.

I hope that you will observe the character of the cough which the child has. It has frequently occurred ever since the existence of the ileo-colitis. Every time the child takes cold it has this hard, ringing cough which you now hear, and which is termed a "croupy cough." I have on several occasions insisted that this phrase is a misnomer. It is called croupy simply because it has the loud, ringing, metallic character which is associated with the cough of spasmodic croup. This is not the true croupy cough. The cough of exudative laryngitis is husky in addition to being ringing and metallic. The cough which this child presents is significant of laryngismus stridulus; that is, an affection of the larynx in which the muscles are thrown into a state of spasm. A child who during the day has been exposed to the cold, or who in the evening has eaten heartily of indigestible food, wakes up in the night with an attack of so-called croup. This is really an example of laryngismus stridulus, or spasm of the muscles of the larynx. In the case I have supposed there are two factors: the child takes cold, or it has an irritation of the gastro-intestinal mucous membrane. We can here apply with great certainty our physiological knowledge. The mechanism is very obvious. The pneumogastric nerve which supplies the mucous membrane of the fauces, and the gastro-intestinal mucous membrane in part, also has branches going to the larynx. This nerve is both motor and sensory in function. All the muscles of the larynx, with the exception of the crico-thyroid, are supplied by the inferior laryngeal nerve, while the superior laryngeal nerve is distributed to the mucous membrane and the crico-thyroid muscle. Now we have the terms of the problem. Irritation of the peripheral distribution of the pneumogastric nerve is referred to its motor branches, and the muscles of the larynx are thrown into a state of spasm. It would be a great mistake to confound this condition with true croup.

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ACUTE INTUSSUSCEPTION IN AN INFANT EIGHTEEN WEEKS OLD.

A case of acute intussusception remarkable for the favorable result in so young a child and for the clearness of the diagnosis is reported in the *Lancet* (August 30th) by Dr. Collier. The infant had been suckled from birth, but as the mother did not have sufficient milk she supplemented this diet with small quantities of bread soaked in water and sweetened with sugar. For a week before he was seen the child had vomited a little milk after each meal. The dejecta had been constipated, slimy, and offensive. On February 15th, whilst lying asleep in his mother's arms, he suddenly became convulsed and appeared in great pain, screaming loudly and struggling, so that it was with difficulty that he could be held. After the fit had lasted a few minutes the struggling gave place to violent straining, "as if he was trying to relieve himself," and during these efforts a large quantity of gas was discharged per anum. On the diaper being inspected it was found to be soaked with bright blood and slime, but did not contain any fæcal matter. He now appeared more calm, and after a short time took the breast, but almost immediately afterwards became very sick, bringing up a large quantity of milky fluid. Since then he had mostly been quiet, crying and straining only by "fits and starts." He had taken small quantities of milk and water from a teaspoon, but nearly always returned them immediately. No natural action of the bowels had occurred since an hour before the onset of the attack, although the diapers were several times found stained with "bright watery blood." Urine was passed more frequently, but in smaller quantities than usual.

On examination the following day at four P. M., the condition of the child was found to be as follows: He was well nourished, but much collapsed, with pale face and pinched, drawn features; pulse 100, feeble and irregular; respiration 30, shallow; skin cold and perspiring; temperature 100.5° F., taken in the rectum. There was much distention of the abdomen, and percussion yielded a tympanitic note, except where the right inguinal and hypogastric regions were occupied by an elongated swelling, which ran in a direction upwards and inwards and could plainly be seen and felt. Pressure over this tumor gave rise to crying and struggling on the part of the infant. On account of his tender age it was not considered advisable to extend the examination to an exploration of the rectum. Three blood-soiled diapers were shown by the mother, and one of them, said to be in use at the onset of the attack, contained about two ounces of blood and mucus.

The treatment for five or six hours consisted of hot fomentations applied to the abdomen, and a mixture containing tincture of belladonna, chloric ether, and sal volatile in appropriate doses every two hours. Brandy was also given. At nine P. M., the condition remaining substantially the same, it was decided to anæsthetize, and attempt to dislodge the prolapsed portion of bowel by injecting water. After chloroform had been inhaled some few seconds, and before insensibility was produced, the patient became violently sick, ejecting about half a pint of pale-yellow fluid, having a strong fæcal odor. The pulse at this moment became scarcely perceptible, and the child appeared in the gravest danger, but on chloroform being suspended and ammonia applied to the nostrils the pulse returned, and remained fairly strong throughout the remaining stages of anæsthesia. The fingers of one hand being kept in contact with the sausage-shaped tumor described above, warm water was slowly injected into the rectum by means of a Higginson's enema syringe, care being taken to prevent its return by the side of the nozzle. When about twenty ounces had been injected a sense of the tumor slipping away was plainly perceptible to the fingers in contact with the abdomen. By the time some thirty-five to forty ounces had been injected the tumor had entirely disappeared, and the most careful examination failed to detect it. The patient was now wrapped in warm blankets, and the injected fluid allowed to drain off. During returning consciousness the child once more vomited freely, bringing up fluid of the same color, and possessing the same strong fæcal odor as before. Ten drops of brandy in a teaspoonful of ice-cold water were subsequently administered and retained, and the child afterwards manifested an inclination to sleep. The hot fomentations were again ordered to be applied to the abdomen, and the belladonna mixture to be given every two hours. At twelve P. M. a large quantity of water was found to have been passed per anum. The child appeared more comfortable, and was sleeping calmly. He had not evinced a desire for milk when placed to the breast. On the diapers being changed about two tablespoonfuls of dark-yellow fæcal matter were found to have been passed. The fomentations were ordered to be continued to the abdomen, and the mixture given every four hours.

During the night the child took the breast twice, and had another natural action of the bowels at six o'clock the following morning. From this time the patient made an uninterrupted recovery.

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DISSEMINATED SCLEROSIS.

THE study of a case of disseminated sclerosis which, in its clinical features, closely simulated lateral amytrophic sclerosis, has given M. Déjérine[1] the opportunity of making some interesting and valuable remarks on the pathology of scleroses in general. The case which forms the starting point of the paper was that of a woman, aged forty-six years, who had had for fourteen months atrophic paralysis, with contracture of all four limbs. The disease commenced in the legs, spreading thence to the arms, and ultimately to the lower part of the face; the paralysis of the limbs became absolute, and the atrophy extreme; it was throughout symmetrical. An interesting feature of the case was the high degree of contracture which was present; so great was it that it could not be altogether overcome by the employment of force; the tendon reflexes were highly exaggerated. The general and special sensibility was unimpaired; but towards the end there were some symptoms of labio-glossal paralysis. At the autopsy it was found to be a case of disseminated and not of lateral amyotrophic sclerosis. Spinal and cerebral scleroses, M. Déjérine goes on to say, may be and ought to be divided into primary when the neuroglia is affected from the outset by the irritative process, and secondary when it is only the result of the nerve disorder. In disseminated sclerosis the affection of the neuroglia is primary, as is shown by the fact that the nerve tubes and axis cylinders disappear very slowly from gradual compression by the contracting neuroglia. In tabes dorsalis the contrary is seen; for the axis cylinder disappears before the neuroglia has commenced to proliferate. Disseminated sclerosis, then, and probably all forms of non-systematic sclerosis have a vascular origin; whereas, in systematic sclerosis, the vascular lesions which are present are secondary. Thus, in a case of hemiplegia, fatal just when rigidity was setting in, the vessels of the pyramidal fasciculus were already found to be undergoing endo- and peri-arteritis, and their lymph sheaths were distended with corpuscles; but the nerve tubes showed a much more advanced state of degeneration, the axis cylinders having already disappeared, and the neuroglia showing traces of irritation at a point far removed from the vessels, contrary to what takes place in non-systematic sclerosis. The vascular origin of the patches in the latter explains both their scattered distribution and the absence of any tendency to spread in a systematic manner.

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HYDRAMNION IN EXTRA-UTERINE PREGNANCY.

AN interesting case of this kind is reported by Dr. R. Teuffel, of Chemnitz, in a recent number of the *Archiv für Gynäkologie.* It is important as exemplifying a rare source of error in diagnosis. The patient was thirty-six, and her last child had been born fourteen years previously. Menstruation stopped in March, 1881, and the usual symptoms of pregnancy were noticed. In August, 1881, the patient suffered from severe and long-continued abdominal pain, and was medically treated for inflammation of the bowels. September 25, 1881, labor-like pains came on, with hæmorrhage and the expulsion of a membrane, this latter being seen only by a midwife. Birth was daily expected, but did not follow, and fœtal movements were still felt in October and November, after which they ceased, and the size of the belly began to slightly diminish. In 1882 the abdomen began to increase again; she felt well, and in March, 1882, menstruation reappeared. When she came under treatment she was wasted, sleepless, suffered pain, but was not feverish. The circumference of the belly was 116 centimetres (forty-six inches); it was dull, with resonance in the flanks, fluctuating, with solid masses here and there to be felt. A firm, rounded swelling occupied the pelvis, pushing the uterus upward, forward, and to the right. There was no œdema of legs or other parts. The case was diagnosticated as one of ovarian cyst, and an exploratory puncture was made. The fluid withdrawn gave a sediment, on standing, in which striated muscular fibre was identified. Feverish symptoms followed the puncture, with pain, diarrhœa, and vomiting, and in ten days the patient died. On autopsy the cyst was found to contain a full-term, macerated child and several litres of amniotic fluid. There was neither effused blood nor signs of peritonitis, so that the immediate cause of death remained a mystery.[1]

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[1] Revue de Médecine, March, 1884, and Practitioner, August, 1884.

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PROF. R. E. ROGERS, M. D.

Prof. Robert Empie Rogers, of Jefferson Medical College, Philadelphia, died on Saturday, September 6th, at the age of seventy. He was born in Baltimore in 1814, and graduated from the Medical Department of the University of Pennsylvania in 1836. He was for eight years Professor of Chemistry in the University of Pennsylvania, and subsequently Professor of Chemistry in the Medical Department of the University of Pennsylvania. In 1877 he accepted the chair of Chemistry in Jefferson Medical College, the duties of which position he only recently ceased to discharge. He was an excellent teacher and a lecturer, much liked and appreciated both by his colleagues and students.

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DR. RIGGIN BUCKLER.

Dr. Riggin Buckler, of Baltimore, who died recently (August 31st) at Narragansett Pier, was a graduate of Harvard College and of the Medical School of the University of Maryland. After graduating in medicine he studied four years in Paris giving special attention to physiological chemistry.

He was popular and successful as a practitioner in Baltimore, continuing the medical reputation attached to the name since the active days of his father and uncle, Drs. John and Thomas Buckler. He was twice Surgeon-General of Maryland.

OBITUARY. DR. JULIUS COHNHEIM.

Professor Julius Cohnheim, of Leipsic, one of the foremost of pathological investigators, died on the 14th ult., at the early age of forty five, from the chronic affection (renal disease) from which he has been so long a sufferer. After having studied medicine from 1856 to 1860 at Berlin, Wurzburg, Greifswald, and Prague, he commenced practice at Berlin. In 1864 he served under Rudolf Virchow as assistant in the Pathological Institute in Berlin. It was with much appropriateness that the announcement of his death was made by his old master, Virchow, before the Section of Pathology in the closing days of the Copenhagen Congress. In 1868 he was professor of the same department in the Medical School of Kiel, and four years later he was transferred to the chair of Pathology in the University of Breslau, where his prelections attracted so much attention that on the first vacancy he was called to fill the professorship at Leipsic, which became immediately associated with his best work. His name will live chiefly for his signal contributions to the doctrine of inflammation, his experimental proofs — by vivisection mainly — having been universally admired for their careful exclusion of every source of fallacy. He showed that in all inflammatory processes, without exception, the greatest part of the pus-corpuscles [illegible] of white blood corpuscles that have passed through the walls of the veins and capillaries. [illegible] the prevalent one, — namely, that the pus corpuscles are connective-tissue corpuscles transformed through cell-cleavage. "Without blood-vessels no inflammation is possible," was Cohnheim's great thesis, [illegible] which had been foreshadowed by [illegible], notably Waller in 1848, but waited for its full scientific establishment for Cohnheim.

London Medical Times, July 5th.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM SEPTEMBER 6, 1884, TO SEPTEMBER 12, 1884.

Greenleaf, Charles R., major and surgeon. To conduct a detachment of recruits to the Department of the Columbia, and upon completion of this duty rejoin his station, Columbus Barracks, Ohio. S. O. 210, A. G. O., September 6, 1884.

Gorgas, W. C., first lieutenant and assistant surgeon. Assigned to duty at Fort Randall, D. T. S. O. 98, Department of Dakota, September 5, 1884.

Egan, P. R., first lieutenant and assistant surgeon. When relieved by Assistant Surgeon Fisher to report at Fort Lowell, A. T., for duty as post surgeon. S. O. 82, Department of Arizona, September 2, 1884.

Fisher, W. W. R., first lieutenant and assistant surgeon. Assigned to duty at Fort Apache, A. T., relieving Assistant Surgeon Egan. S. O. 82, C. S., Department of Arizona.

Ewing, Charles B., first lieutenant and assistant surgeon. Assigned to duty, as post surgeon, at Fort Stanton, N. Mex. S. O. 177, Department of the Missouri, September 6, 1884.

McCaw, W. D., first lieutenant and assistant surgeon (recently appointed). To report in person to the commanding general, Department of the Missouri, for assignment to duty. S. O. 209, A. G. O., September 5, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING SEPTEMBER 13, 1884.

Heyl, T. C., surgeon. September 8, 1884, from the Adams and to the Receiving Ship Independence, Mare Island, Cal.

OPEN TO UNIVERSAL COMPETITION.

The Cartwright Prize of the Alumni Association of the College of Physicians and Surgeons of New York is open to the competition of alumni of *any* medical college.

It consists of a prize of *five hundred dollars*, to be awarded to the best medical essay submitted upon any subject the writer may select. The award will be paid as soon as the successful article shall have appeared in print.

If no one of the competing essays be deemed sufficiently meritorious the prize is not awarded. An essay, in order to be held worthy of the prize, must contain the results of original investigations made by the writer.

An award of this prize will be made at commencement, 1885. Essays must be sent to a member of the prize committee before April 1, 1885.

Competing essays must each be marked with a device or motto, and accompanied by a sealed envelope, similarly marked, containing the name and address of the author.

R. W. Amidon, M. D., Chairman, 18 W. 21st St.,
Robert Abbe, M. D., 32 East 20th St.,
Walter Mendelson, M. D., 209 W. 46th St.,
Committee on Prize Essays.

Erratum. — In the note appended to the chart in Dr. Boardman's paper, on page 247 of the last issue of this journal, read The sign *o* indicates a dejection (not an injection).

Books and Pamphlets Received. — Practical Manual of Diseases of Women and Uterine Therapeutics. For Students and Practitioners. By H. Macnaughton Jones, M. D., etc. New York: D. Appleton & Co. 1884.

Excision of the Rectum for Cancer. Operation. By Walter Coles, M. D., St. Louis, Mo. (Reprint.)

Old and New Codes. By A. M. Wilder, M. D. Read before the California State Medical Society, April 16, 1884.

Hospital Sunday and Hospital Saturday. Their Origin, Progress, Development, etc. By Henry C. Burdett. London, Kegan Paul, Trench & Co. 1884.

Preventable Blindness. By Samuel Theobald, M. D., Chairman Section on Ophthalmology, Otology, and Laryngology. Reprint from Transactions of the Medical and Chirurgical Faculty of Maryland. 1884.

Medical College of Virginia. Forty-Seventh Session, 1884-85.

Original Articles.

AMPUTATIONS AT THE RHODE ISLAND HOSPITAL FROM 1868 TO 1883.

BY EDWARD T. CASWELL, M. D.,
Surgeon to the Hospital.

The following tables present the statistics of all the major amputations performed at the Rhode Island Hospital for the fifteen years that have elapsed since the opening of the hospital, October 1, 1868. The record closes with September 30, 1883, and includes the results of three cases then remaining in the hospital. The whole number of cases is, of course, small, and it is not to be supposed that their presentation will add to or alter the well-known and established principles applicable to these operations. Recognizing the uncertainty of figures and the prevalent belief that statistics are unreliable, I still think that any such collection of data possesses a certain degree of interest, and can afford instruction to every surgeon whose labors are in the same field. Both successes and failures have alike their lesson. At all events, they show something of the work accomplished by the hospital. In the earlier years of its existence this hospital, the first of its kind in the city of Providence, had to win its place in popular favor, and to overcome more or less opposition and distrust. As a consequence it will be seen that in the earlier years the number of cases brought to the hospital demanding operation were comparatively few. Its position now has become firmly established, and with the growth of the city and the increase of varied manufacturing interests it is more than probable that the next decade will see it taxed to its utmost capacity.

The operations have been tabulated under the heads of Traumatic Primary, including a period of less than forty-eight hours, Traumatic Secondary, at any time after that period, and Pathological. For the sake of convenience I have used the numbers 1, 2, 3, to designate respectively the upper, middle and lower thirds of a limb, and the junction of two thirds has been expressed thus: 1 — 2. Any one who has had occasion to look up hospital records will probably appreciate the dissatisfaction that is felt by the compiler when he finds that his blanks cannot all be filled. Sometimes the side of the body is not specified; the cause of the injury is not always given; frequently the method of operating is entirely ignored, and in some cases of death the cause of death is passed over. The latter blank I have filled according to my best judgment, after a careful study of the case. Double amputations and reamputations have been included under their appropriate heads, with cross references. I have said that the list is of the major amputations, but nine operations upon the foot are included.

The Lister method and dressings were first used in the hospital in February, 1878. Since that date very many of the operations have been done according to the various modifications of that method that have been in vogue. The two chief points of Listerism, drainage and cleanliness, have been faithfully sought by all the surgeons of the staff. Some have had more decided views than others as to antiseptic treatment. No attempt has been made to institute a comparison between the methods of treatment in this respect, as the number of cases was so small, and the results of such large experience are already matters of record. The various antiseptics, carbolic acid, thymol, boracic acid, phenol, iodoform, chlorinated soda, and corrosive sublimate have all been used. The spray has been rarely used, if at all, during the last few years.

The results of treatment compare, perhaps, favorably with those of other hospitals, although it seems as if they ought to have been better when we consider the salubrious situation of the hospital, the possession of large and well-ventilated wards, and the freedom from overcrowding which has generally existed. But it must be remembered that most of the accidents are caused by railroads and machinery, and are often of so severe a nature that the best efforts of the surgeon will prove fruitless.

With these preliminary statements I pass to the tables. There have been 123 operations performed on 111 patients. There were nine cases of double amputation, and there were three cases of reamputation, all of which will be found in detail in the summary. One case of traumatic secondary of the thigh is not included: the operation was repeated for secondary hæmorrhage not controlled by ligature. And in the last recorded case of double amputation, the only one of both legs, both stumps were reamputated, but the second operation was subsequent to the period at which this record terminates.

Of 123 operations 57 were traumatic primary, 26 traumatic secondary, and 40 pathological. Of the 111 patients operated upon 24 died, or 21.62 per cent. Of the primary there were 51 cases with 11 deaths, or 21.57 per cent.; of the secondary 22 cases with eight deaths, or 36.36 per cent.; and of the pathological 36 cases with five deaths, or 13.88 per cent. There were two cases of double amputations, in which one operation was primary and the other secondary, and both cases recovered. Classing together the operations for injury we have 73 cases with 19 deaths, or 26.03 per cent. The causes of death will be found in the Summary, tabulated both as to the limb amputated and the nature of the operation.

AMPUTATION AT THE SHOULDER-JOINT. TRAUMATIC PRIMARY. .

No.	Sex.	Age.	Date of Admission.	Nature] of Injury.	Cause.	Method.	Result.	Date of Discharge.
1	M.	13	July 28, 1869.	– –	Machinery.	–	Recovered.	Oct. 8, 1869.
2	M.	10	Feb. 28, 1882.	R. Compound fract. arm and exten. laceration.	Cotton mill gear.	Double flap.	Recovered.	April 17, 1882.

Recovered, 2.

AMPUTATION OF THE ARM. TRAUMATIC PRIMARY.

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation.		Result.	Date of Discharge or Death.	Remarks.
						Point.	Method.			
1	M.	15	Jan. 26, 1869.	R.	Machinery.	2 — 3	Circular.	Recovered.	March 22, 1869.	–
2	F.	18	Aug. 18, 1869.	R. Torn off 4 in. above elbow.	R. R.	Middle.	Circular.	Recovered.	Oct. 14, 1869.	–

AMPUTATION OF THE ARM. TRAUMATIC PRIMARY. (Concluded.)

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation.		Result.	Date of Discharge or Death.	Remarks.
						Point.	Method.			
3	M.	21	Jan. 12, 1870.	L.	Machinery.	2 — 3	Flap.	Recovered.	March 2, 1870.	–
4	M.	30	July 19, 1870.	R.	R. R.	2	Circular.	Recovered.	Aug. 6, 1870.	–
5	M.	15	Sept. 27, 1870.	–	Machinery.	1	Integ. flaps.	Recovered.	Dec. 10, 1870.	Abscess in axilla.
6	M.	74	Oct. 4, 1870.	R.	R. R.	1	A. P. flaps.	Died.	24 hours.	Shock.
7	M.	14	July 31, 1872.	Torn off 1 — 2.	Machinery.	–	–	Recovered.	Sept. 8, 1872.	–
8	M.	75	Sept. 7, 1872.	–	R. R.	–	–	Died.	1½ hours.	Leg amputated, Traumatic Primary, No. 3. Shock.
9	M.	26	Feb. 25, 1873.	–	R. R.	1	A. P. integ. fl.	Recovered.	May 15, 1873.	Erysip. Stump with slough. March 13, 1 in. bone removed.
10	M.	17	June 18, 1874.	L.	R. R.	3	Flap.	Recovered,	Dec. 29, 1874.	Leg amp., Trau. Prim., No. 7. Repeated attacks erysipelas.
11	M.	28	Sept. 17, 1874.	L.	R. R.	2	–	Recovered.	Nov. 23, 1874.	Operat. performed outside by one of the staff, and sent at once to hospital.
12	M.	50	July 27, 1875.	R. Comp. com. fracture.	Machinery.	3	Circular.	Recovered.	Sept. 18, 1875.	–
13	M.	24	Jan. 1, 1877.	L.	R. R.	1	–	Recovered.	March 10, 1877.	–
14	M.	8	Dec. 4, 1879.	L.	R. R.	3	Flap.	Died.	Dec. 17, 1879.	Lacerated wounds both feet. Metatars. Amp. of one. Foot, Traum. Prim., No 3. Sec hæm. feet. Slough foot and arm. Pyæmia.
15	M.	12	Sept. 27, 1883.	R. Comp. fract. and laceration.	Machinery.	Below surgical neck.	A. P. flaps.	Recovered.	Dec. 4, 1883.	Brachial ligated prior to operation.

Recovered, 12
Died, 3
Total, 15

Cause of death: Shock, 2
Pyæmia, 1
Total, 3

AMPUTATION OF THE ARM. TRAUMATIC SECONDARY.

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation.			Result.	Date of Discharge or Death.	Remarks.
						Date.	Point.	Method.			
1	M.	50	Aug. 2, 1882.	L. Comp. fract. f. arm.	Mach'y.	Aug. 15.	3	A. P. flaps.	Died.	Aug. 17, 1882.	Pyæmia.
2	M.	35	Aug. 22, 1882.	R.	R. R.	Aug. 24.	–	–	Recovered.	Nov. 23, 1882.	Amp. left leg, traum prim. No 23 Oct 21st, fell and dislocated stump at shoulder. Attempt at reduct. unsuc.
3	M.	29	Dec. 15, 1882.	R. F arm crushed.	Mach'y.	Dec. 28.	1 — 2	A. P. flaps.	Recovered.	April 5, 1883.	–

Recovered, 2
Died, 1
Total, 3

Cause of death: Pyæmia, 1.

AMPUTATION OF THE ARM. PATHOLOGICAL.

No.	Sex.	Age.	Date of Admission.	Nature of Disease.	Operation.			Result.	Date of Discharge.	Remarks.
					Date.	Point.	Method.			
1	M.	30	Feb. 23, 1882.	R Necrosis. Prev resect.	April 20.	1	–	Recovered.	June 8, 1882.	Resection performed March 7th.

Recovered, 1.

AMPUTATION OF THE FORE-ARM. TRAUMATIC PRIMARY.

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation.		Result.	Date of Discharge or Death.	Remarks.
						Point.	Method.			
1	M	30	July 27, 1869	–	Machinery.	3	Circular.	Recovered.	Aug 25, 1869	–
2	M.	17	May 31, 1871	–	Machinery.	1 — 2	Circular.	Recovered.	July 20, 1871.	–
3	M	15	Oct 31, 1872	–	Machinery	2	–	Recovered	Dec. 13, 1872.	
4	M.	12	May 12, 1874	R	Machinery.	2	Flap.	Recovered	June 22, 1874	–
5	M.	20	Jan. 22, 1882.	L.	Machinery, steamboat	3	Integ. flap.	Recovered	Feb. 24, 1882.	–
6	M	28	Nov 7, 1882	L.	R. R	2	–	Recovered	Dec. 30, 1882.	–
7	M.	14	July 12, 1883	Hand lacerated	Caught in cog	Just above wrist	–	Died.	July 18, 1883.	Profuse hæmorrhage at time of accident Shock.

Recovered, 6
Died, 1
Total, 7

Cause of death Shock and hæmorrhage, 1

AMPUTATION OF THE FORE-ARM. TRAUMATIC SECONDARY.

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation.			Result.	Date of Discharge.	Remarks.
						Date.	Point.	Method.			
1	M.	31	Dec. 21, 1876.	Lacer. wound.	Machinery.	Jan. 10, '77.	3	Circular.	Recov.	March 3, 1877.	Sec. hæm. Rad. ligated January 29th.
2	M.	30	Jan. 28, 1882.	Comp. dislocat. wrist.	Blow, heav. timber.	March 14.	3	Integ. fl.	Recov.	April 22, 1882.	Dislocation reduced prior to admission.
3	F.	43	March 19, 1883.	R. Necros. carpus.	Blow.	March 23.	3	A. P. integ. fl.	Recov.	May 29, 1883.	Injury five weeks prior to admission.
4	M.	21	April 4, 1883.	L. comp. fracture.	Machinery.	April 23.	1	A. P. integ. fl.	Recov.	June 12, 1883.	-

Recovered, 4 cases.

AMPUTATION OF THE FORE-ARM. PATHOLOGICAL.

No.	Sex.	Age.	Date of Admission.	Nature of Disease.	Operation.			Result.	[Date of Discharge.	Remarks.
					Date.	Point.	Method.			
1	M.	41	Nov. 15, 1869.	L. Necrosis. Comp. fract. Resect.	March 5, 1870.	2	Circular.	Recovered.	April 13, 1870.	Resection, Nov. 20, 1869.

Recovered, 1.

AMPUTATION OF THE THIGH. TRAUMATIC PRIMARY.

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation.		Result.	Date of Discharge or Death.	Remarks.
						Point.	Method.			
1	M.	19	Feb. 21, 1879.	R. leg torn off bel. knee. Joint opened.	R. R.	2 — 3	Long A. integ. flap.	Died.	Three hours.	Accident two hours before admission. Shock.
2	M.	21	June 23, 1880.	L. Compound com. fract. leg.	R. R.	2	Oval integ. flaps.	Recovered.	July 24, 1880.	Accident 5 hrs. before admission. Op. 14 hrs. after admis.
3	M.	27	Sept. 9, 1881.	R. Compound com. fract. leg.	R. R.	2	Flap.	Recovered.	Nov. 23, 1881.	Commi. fract. l. ankle. Dead bone removed Nov. 9th. Discharged nearly well.
4	M.	14	Oct. 24, 1882.	R. Compound fract. knee.	Elevator.	2	Circular.	Recovered.	March 24, 1883.	Fracture left femur.

Recovered, 3
Died, 1
Total, 4

Cause of death: Shock, 1.

AMPUTATION OF THE THIGH. TRAUMATIC SECONDARY.

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation.			Result.	Date of Discharge or Death.	Remarks.
						Date.	Point.	Method.			
1	M.	47	Jan. 14, 1870.	Lacerat. wound leg.	Blasting.	Feb. 19.	2	Long A. integ fl.	Died.	Feb. 19, 1870.	Attempt to save limb. D. six hours after operation. Shock.
2	M.	16	Nov. 21, 1872.	R. Necros. Ununited fract.	Machinery.	Dec. 18.	2	Anterior flap.	Recov.	March 8, 1873.	Accident three months before admission. Both thighs broken. Natural bone-setter. L. united with curvature and six inches shortening.
3	M.	29	July 5, 1874.	L. Inc. wound knee-joint.	Stepped upon scythe.	July 27.	2 — 3	Flap.	Died.	Aug. 2, 1874.	Accident three days before entrance. Pyæmia.
4	M.	47	March 2, 1878.	L. Fract. thigh. Rupt. popliteal art. Gangrene.	Run over.	March 27.	2	Lat. integ. flap.	Died.	July 12, 1878.	Fracture left humerus. Two days after admission gangrene developed. June 17th, stump nearly healed. Erysipelas.
5	M.	35	Dec. 14, 1882.	Compound fracture leg.	Heavy timber fell upon him.	Dec. 23.	[illegible]	Ant. post. flap.	Died.	Jan. 23, 1883.	Repeated sec. hæm. Femoral tied, Jan. 11th, lower third, followed by immediate reamputation. Pyæmia.
6	M.	8	July 24, 1883.	Fracture thigh. Separation of epiph. Gangrene.	Jump from a wagon.	Aug. 4.	[illegible]	Ant. post. fl. Transfix.	Recov.	Jan. 2, 1884.	Gangrene developed two days after admission. Dead bone removed November 24th.

Recovered, 2
Died, 4
Total, 6

Cause of death: Pyæmia, 2
Shock. 1
Erysipelas, 1
Total, 4

AMPUTATION OF THE THIGH. PATHOLOGICAL.

No.	Sex.	Age.	Date of Admission.	Nature of Disease.	Operation.			Result.	Date of Discharge or Death.	Remarks.
					Date.	Point.	Method.			
1	M.	24	Nov. 27, 1869.	L. Knee. Painful stump.	Nov. 27.	2 — 3	Long A. integ. fl.	Recov.	May 3, 1870.	See Knee, Patholog., No. 1. 1¼ inch nerve removed
2	M.	33	Aug. 30, 1870.	Strum. disease knee joint.	Oct. 25.	1	Long A. flap.	Recov.	Dec. 26, 1870.	Bone eburnized. Disease existed sixteen years.
3	M.	29	Sept. 22, 1870.	Strum. disease knee-joint.	Sept. 25.	2	Integ. flaps.	Died.	Oct. 13, 1870.	Secondary hæmorrhage. Pyæmia.
4	M.	41	Jan. 26, 1872.	Strum. disease knee joint.	March 16.	2	–	Died.	March 17, 1872.	Shock, twenty hours. Joint aspirated February 2d.
5	M.	17	Oct. 16, 1872.	Necrosis.	Oct. 16.	2	Ant. flap.	Recov.	Nov. 16, 1872.	–
6	M.	16	April 27, 1876.	Medull. tumor leg.	April 27.	3	Flap.	Recov.	June 29, 1876.	–
7	M.	48	March 22, 1880.	Infl. knee. Necros. femur.	March 25.	3	Short ant., long post. integ. flaps.	Recov.	June 25, 1880.	Fell from yard-arm three years previous. Stump painful, not entirely healed.
8	M.	29	Jan. 9, 1882.	Necrosis.	Jan. 28.	2 — 3	Lat. integ. flap.	Recov.	March 15, 1882.	Fistulous track extended eight inches above point of section.
9	F.	28	Oct. 13, 1882.	Necrosis.	Dec. 28.	3	Ant. post. flap.	Recov.	April 12, 1883.	For two weeks after operation delirium, vomiting, diarrhœa.
10	M.	2	Nov. 8, 1882.	Infl. knee-joint. Necrosis.	Feb. 10, 1883.	3	Long ant., short post. integ. flap.	Recov.	March 19, 1883.	Injury caused by blow.
11	M.	42	Dec. 21, 1882.	Dis. knee-joint from injury.	Jan. 10, 1883.	3	A. P. integ. flaps.	Recov.	March 14, 1883.	Injury nine years previous. Patholog. dislocat. posterior.
12	M.	21	March 9, 1883.	R. Knee. Sup. arthritis. Injury.	March 20.	3	A. integ. post. musc. flap.	Recov.	May 21, 1883.	Injury four years prior to admission.

Recovered, 10.
Died, 2

Total, 12

Cause of death : Pyæmia, 1
Shock, 1

Total, 2

AMPUTATION AT THE KNEE-JOINT. PATHOLOGICAL.

No.	Sex.	Age.	Date of Admission.	Nature of Disease.	Operation.		Result.	Date of Discharge or Death.	Remarks.
					Date.	Method.			
1	M.	24	Feb. 23, 1869.	L. Painful stump.	Feb. 28.	Long ant., short pos. flaps. Patella left.	Recovered.	June 10, 1869.	Leg amputated two years before admission. When discharged stump entirely well. Reamputated. See Thigh, Path. No. 1.
2	M.	40	Aug. 8, 1876.	Necrosis.	Aug. 12.	Post. flap.	Died.	Aug. 12, 1876.	Shock. Three hours.
3	F.	28	Aug. 19, 1881.	Painful stump.	Jan. 28, 1882.	Smith's.	Recovered.	March 18, 1882.	See Leg, Traum. Prim., No. 20.

Recovered, 2
Died, 1

Total, 3

Reamputation, 1

Cause of death : Shock, 1

AMPUTATION OF THE LEG. TRAUMATIC PRIMARY.

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation.		Result.	Date of Discharge or Death.	Remarks.
						Point.	Method.			
1	M.	30	June 15, 1871.	L.	R. R.	2 — 3	Flap.	Recov.	Aug. 24, 1871.	Fracture right leg.
2	M	38	July 1, 1871.	–	Machinery.	2 — 3	Flap.	Died.	July 16, 1871.	Pyæmia.
3	M.	75	Sept. 7, 1872.	–	R. R.	–	–	Died.	Sept. 7, 1872.	Shock, 1½ hours. Arm amputated. See Traum. Prim., No. 8
4	M	27	April 20, 1873.	–	R. R.	1	Lat. flaps.	Died.	April 29, 1873.	Exhaustion.
5	M.	61	June 28, 1873.	L.	R. R.	–	Ant. post. integ. flaps.	Died.	July 4, 1873.	Pneumonia. Comp fract L. olecranon Amputat R. metatars. See Foot, Traum. Prim , No. 1.
6	M.	26	Sept. 4, 1873.	L.	R. R.	1	Post. flap.	Died.	Sept. 4, 1873.	Shock, ten hours. R. foot crushed. Lacerated wound back, exposing spin processes lumb verteb & innom. bone
7	M	17	June 18, 1874.	R.	R. R.	3	Circular.	Recov.	Dec. 29, 1874.	Arm amputated. See Traum. Prim , No 10
8	M	52	Aug. 4, 1875.	L.	R. R.	–	Integ. flaps.	Died.	Aug. 31, 1875.	Comp commin fract R foot. Fract. R. leg. Septicæmia.
9	M.	35	March 15, 1876.	R.	R. R.	3	Integ. flaps.	Recov.	May 21, 1876.	
10	M	30	Feb. 4, 1878.	R comp com fracture	Machinery.	1	Lat integ flaps	Recov.	May 11, 1878.	First use of Lister's method.
11	M.	35	June 2, 1879.	R Foot crushed	R. R.	1 — 2	Integ flaps	Recov.	Nov. 1, 1879.	Dead bone removed Sept. 5th.
12	M	37	Aug. 1, 1879.	R Leg torn off	Caught in tow rope.	1	Ant. post flap.	Recov.	Sept. 11, 1879.	
13	M	20	Dec. 6, 1879.	L Leg crushed	R R.	1	Long ant. flap	Recov	March 20, 1880	Feb. 21, 1880, orchitis R. testicle Suppuration.
14	M	31	April 30, 1880.	R Comp com fracture	Falling of a tree.	1	Double flap.	Recov.	July 1, 1880.	–
15	M	43	July 3, 1880	R. Comp. com. fracture	Thrown from a wagon.	1 — 2	Ant. integ. pos. or musc. flap	Died.	July 15, 1880.	Primary hæmorrhage. Exhaustion.
16	M	22	May 5, 1881	R Comp com. fracture	R R.	1 — 3	Flap	Recov	Aug. 6, 1881.	May 24, 1½ inches bone removed See hæmorrhage

AMPUTATION OF THE LEG. TRAUMATIC PRIMARY. (Concluded.)

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause	Operation.		Result.	Date of Discharge or Death.	Remarks.
						Point.	Method.			
17	M.	42	June 2, 1881.	R. Comp. com. fracture.	Crush'd by iron.	2 — 3	Ant. pos. integ. flaps.	Recov.	Aug. 17, 1881.	June 24, half inch fibula removed.
18	M.	34	July 12, 1881.	L. Lacera. foot and ankle.	R. R.	2 — 3	Ant. pos. integ. flaps.	Recov.	Sept. 10, 1881.	Intense neural. pains in stump, with delirium. Aug. 10, half inch bone removed.
19	F.	22	July 20, 1881.	R.	R. R.	3	Flap.	Recov.	Oct. 27, 1881.	–
20	F.	28	Aug. 19, 1881.	R Com. disloc. ankle.	Jump from 2d story.	2 — 3	Flap.	Recov.	March 18, 1882.	Reamputation See Amp. Knee-joint, Path., No. 3.
21	M.	12	Oct. 12, 1881.	R. Foot crush'd	R. R.	–	Flap.	Recov.	Nov. 23, 1881.	–
22	M.	28	June 15, 1882.	L. Leg torn off.	R. R.	2	Smith's.	Recov.	Sept. 8, 1882.	Comp. fract. right tarsus. Sec. amp. See Leg traum. sec. No. 5.
23	M.	35	Aug. 22, 1882.	L.	R. R.	–	–	Recov.	Nov. 23, 1882.	Arm amp. Aug. 24. See Traum. Sec., No. 2.
24	M.	37	Oct. 19, 1882.	R. Comp. com. fracture.	Jump from window.	–	–	Recov.	Jan. 18, 1883.	–
25	M.	48	Nov. 21, 1882.	L.	Jump from building.	2	–	Recov.	Jan. 26, 1883.	

Recovered, 18
Died, 7
Total, 25

Reamputation, 1

Cause of death: Shock, 2
Exhaustion, 2
Pyæmia, 1
Septicæmia, 1
Pneumonia, 1
Total, 7

AMPUTATION OF THE LEG. TRAUMATIC SECONDARY.

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation.			Result.	Date of Discharge or Death.	Remarks.
						Date.	Point.	Method.			
1	M.	21	June 16, 1874.	R. Cont. wound toe.	–	Aug. 7.	3	–	Recov.	Dec. 18, 1874.	Toe amputated, July 3. Cellulitis.
2	M.	42	April 11, 1878.	R. Comp. frac. tib. & fib.	–	July 3.	1 — 2	L. A. sh. pos. flap.	Died.	July 25, 1878.	Septicæmia.
3	M.	40	Jan. 2, 1880.	L. Leg and foot crushed.	Wardrobe fell on him.	Jan. 5.	1	L. A. sh. pos. integ. flaps.	Died.	Jan. 15, 1880.	Gangrene developed on 3d. Refused operation. Died from exhaustion.
4	M.	40	Sept. 6, 1881.	R. Leg. L. metatars. crushed.	Heav. stone.	Sept. 8.	2	A. I. pos. mus. fl.	Recov.	Nov. 3, 1881.	Amputat. L. metatars. See Foot, Traumat. Second., No. 2.
5	M.	28	June 15, 1882.	R. Comp. frac. tarsus.	R. R.	July 14.	3	Teale's.	Recov.	Sept. 8, 1882.	Knee became flexed. Tenotomy, Aug. 12. Left leg torn off. See Leg, Traum. Prim., No. 22.
6	M.	38	Aug. 29, 1882.	R. Comp. commin. fract.	Caught by rope.	Sept. 6.	2	–	Recov.	Dec. 4, 1882.	–
7	M.	12	July 7, 1883.	Comp. commin. fract. ankle.	Jump from 3d story.	Sept. 5.	2 — 3	Teale's.	Recov.	Oct. 26, 1883.	Eloped.
8	M.	–	July 24, 1883.	R. Vicious union comp. fract.	–	Aug. 15.	1 — 2	A. post. integ. fl.	Recov.	Oct. 19, 1883.	–
9	M.	73	Aug. 2, 1883.	R. Comp. frac. tib.	Kick of horse.	Sept. 3.	1	A. post. flap.	Died.	Sept. 11, 1883.	Septicæmia.
10 11	M.	17	Sept. 23, 1883.	Both legs. comp. frac.	R. R.	Sept. 26.	3	A. pos. fl.	Recov.	Feb. 7, 1884.	Stumps sloughed.

Recovered, 8
Died, 3
Total, 11

Cause of death: Septicæmia, 2
Exhaustion, 1
Total, 3

AMPUTATION OF THE LEG. PATHOLOGICAL.

No.	Sex.	Age.	Date of Admission.	Nature of Disease.	Operation.			Result.	Date of Discharge or Death.	Remarks.
					Date.	Point.	Method.			
1	M.	20	Jan. 26, 1869.	L. Ulcer.	Jan. 30.	3	Circular.	Recov.	–	Reamputation.
2					May 19.	1 — 2	Circular.	Recov.	Sept. 25, 1869.	Stump not healed.
3	M.	43	May 5, 1869.	L. Painful stump.	May 5.	2	Circular.	Recov.	June 11, 1869.	Amputated five years previous.
4	M.	42	July 21, 1869.	L. Syphilit. ulcer.	Dec. 29.	2 — 3	Integ. flaps.	Recov.	Mar. 12, 1870.	–
5	M.	32	Oct. 25, 1869.	R. Necrosis.	Oct. 27.	2 — 3	Flap.	Recov.	Feb. 12, 1870.	–
6	F.	71	Feb. 3, 1871.	R. Epithelioma foot.	Feb. 3.	1 — 2	Circular.	Recov.	Mar. 29, 1871.	–
7	M.	42	March 8, 1871.	Necrosis.	June 8.	2 — 3	Flap.	Recov.	Aug. 28, 1871.	–
8	M.	40	Sept. 1, 1871.	Ulcer.	Sept. 26.	1	Flap.	Died.	Oct. 31, 1871.	Pyæmia.
9	M.	16	May 9, 1872.	Necrosis.	May 25.	3	–	Recov.	June 17, 1872.	–
10	F.	11	Oct. 2, 1872.	Necrosis.	Feb. 12, 1873.	3	–	Recov.	June 23, 1873.	May 30, ½ in. bone removed.
11	M.	57	May 20, 1873.	L. Scrof. ulcer, foot.	June 16.	3	A. pos. int. fl.	Recov.	Sept. 12, 1873.	–
12	F.	35	May 28, 1873.	L. Painful stump.	June 13.	2	–	Recov.	Aug. 14, 1873.	Original amputation 12 years previous. R. foot also amputated. See Foot, Path., No. 2.
13	M.	60	Jan. 14, 1876.	R. Necrosis.	Feb. 2.	2	Circular.	Recov.	Mar. 28, 1876.	–
14	M.	24	July 16, 1876.	L. Necrosis.	Sept. 13.	3	Flaps.	Recov.	Oct. 28, 1876.	–
15	M.	38	May 4, 1878.	L. Necrosis.	May 11.	1	A. post. flaps.	Recov.	June 28, 1878.	Injured in the war. Resection of tibia in the hosp. Jan. '77.
16	M.	12	Nov. 4, 1878.	L. Necrosis ankle.	Nov. 11.	2 — 3	A. post. flaps.	Recov.	Dec. 12, 1878.	–
17	M.	34	Oct. 26, 1880.	R. Chron. arthrit. ank.	Jan. 27, 1881.	3	Circular.	Recov.	April 1, 1881.	–

AMPUTATION OF THE LEG. PATHOLOGICAL. (Concluded.)

No.	Sex.	Age.	Date of Admission.	Nature of Disease.	Operation.			Result.	Date of Discharge or Death.	Remarks.
					Date.	Point.	Method.			
18	M.	42	May 31, 1881.	R. Necrosis ankle.	June 2.	2 — 3	A. post. flaps.	Recov	Aug. 8, 1881.	
19	M	3	April 13, 1882.	R. Necrosis ankle.	May 5.	3	Smiths.	Recov.	July 19, 1882.	
20	F.	57	Sept. 5, 1883.	L. Gangrene foot.	Sept. 5.	1	A. post. flaps.	Died	Sept. 11, 1883.	Exhaustion.

Recovered, 18
Died, 2
Total, 20

Reamputation, 1.

Cause of death : Pyæmia, 1
Exhaustion, 1
Total, 2

AMPUTATION OF THE FOOT. TRAUMATIC PRIMARY.

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation. Method.	Result.	Date of Discharge or Death.	Remarks.
1	M.	51	June 28, 1873.	R. Met. crushed.	R. R.	Lisfranc.	Died.	July 4, 1873.	Pneum. Amp. L. leg. See Traumat. Prim., No. 5.
2	M.	27	April 2, 1878.	R. Comp. fract.	Fall of a stone.	Chopart.	Recov.	June 19, 1878.	
3	M.	8	Dec. 4, 1879.	Lacer. wound.	R. R.	Metatarsal.	Died.	Dec. 17, 1879.	Pyæmia. Amp. arm. See Traumat. Prim., No. 14.
4	M.	7	April 6, 1880.	L. Lacer. wound.	R. R.	Lisfranc.	Recov.	Aug. 28, 1880.	Comp. fract. skull. Exfoliation of os frontis.

Recovered, 2
Died, 2
Total, 4

Cause of death : Pneumonia, 1
Pyæmia, 1
Total, 2

AMPUTATION OF THE FOOT. TRAUMATIC SECONDARY.

No.	Sex.	Age.	Date of Admission.	Nature of Injury.	Cause.	Operation.		Result.	Date of Discharge or Death.	Remarks.
						Date.	Method.			
1	M.	-	Dec. 13, 1870.	Crushed toes, gan.	Fall of box.	Dec. 25.	Metatars.	Recov.	Mar. 8, 1871.	-
2	M.	40	Sept. 6, 1881.	L. Metat. crushed	Fall of stone.	Sept. 28.	Par. meta.	Recov.	Nov. 3, 1881.	Amp. R. leg. See Traum. Sec. No. 4.

Recovered, 2.

AMPUTATION OF THE FOOT. PATHOLOGICAL.

No.	Sex.	Age.	Date of Admission.	Disease.	Operation.		Result.	Date of Discharge.	Remarks.
					Date.	Method.			
1	M.	42	Jan. 11, 1872.	Necrosis.	Jan. 13.	Chopart.	Recov.	Jan. 29, 1872.	-
2	F.	35	May 28, 1873.	R. Painful stump.	May 30.	-	Recov.	Aug. 14, 1873.	Original amputation 12 years previous. L. leg also amputated. See Leg Path. No. 12.
3	M.	37	Jan. 18, 1881.	R. Malign. tumor of stump.	Jan. 24.	Syme.	Recov.	Mar. 27, 1881.	Toes amputated 17 years previous. Growth developed 2 years before admission.

Recovered, 3.

SUMMARIES.

Cases	111
Double amputations	9
Reamputations	8
Operations	123

OPERATIONS.

	Traum Prim.			Traum. Second.			Pathological.			Total.		
	No.	Recov	Died.	No.	Recov	Died.	No.	Recov	Died	No.	Recov.	Died.
Shoulder	2	2	-	-	-	-	-	-	-	2	2	-
Arm	15	12	3	3	2	1	1	1	-	19	15	4
Fore arm	7	6	1	4	4	-	1	1		12	11	1
Thigh	4	3	1	6	2	4	12	10	2	22	15	7
Knee	-	-	-	-	-	-	3	2	1	3	2	1
Leg	25	18	7	11	8	3	20	18	2	56	44	12
Foot	4	2	2	2	2		3	3	-	9	7	2
Total	57	43	14	26	18	8	40	35	5	123	96	27

CASES.

	Traum. Prim.			Traum. Second.			Pathological.			Total.		
	No.	Recov.	Died.	No.	Recov.	Died.	No.	Recov.	Died.	No.	Recov.	Died.
Shoulder	2	2	–	–	–	–	–	–	–	2	2	–
Arm	12	11	1	2	1	1	1	1	–	15	13	2
Fore-arm	7	6	1	4	4	–	1	1	–	12	11	1
Thigh	4	3	1	6	2	4	11	9	2	21	14	7
Knee	–	–	–	–	–	–	2	1	1	2	1	1
Leg	20	15	5	7	4	3	18	16	2	45	35	10
Foot	2	2	–	1	1	–	2	2	–	5	5	–
Single cases	47	39	8	20	12	8	35	30	5	102	81	21
Double	4	1	3	2	2	–	1	1	–	7	4	3
	51	40	11	22	14	8	36	31	5	109	85	24
	2 cases T. P. and T. S. recovered.									2	2	–
Total										111	87	24

DOUBLE AMPUTATIONS.

	Recovered.	Died.
TRAUMATIC PRIMARY.		
2 cases arm and leg	1	1
1 case arm and foot	–	1
1 case leg and foot	–	1
TRAUMATIC SECONDARY.		
1 case both legs	1	–
1 case leg and foot	1	–
TRAUMATIC PRIMARY AND SECONDARY.		
1 case leg, traum. prim., leg, traum. sec.	1	–
1 case leg, traum. prim., arm, traum. sec.	1	–
PATHOLOGICAL.		
1 case leg and foot	1	–
9 cases.	6	3

REAMPUTATIONS.

1 case leg, pathological.,
1 case leg, traum. prim. and knee, path.
1 case knee, path., and thigh path.

3 cases. Recovered.

MORTALITY.

	Cases.
Arm, traum. prim., shock	2
Arm, traum. prim., pyæmia	1
Arm, traum. sec., pyæmia	1
	4
Fore-arm, traum. prim., shock	1
Thigh. traum. prim., shock	1
Thigh, traum. sec., pyæmia	2
Thigh, traum. sec., shock	1
Thigh, traum. sec., erysipelas	1
Thigh, path., pyæmia	1
Thigh, path., shock	1
	7
Knee, path., shock	1
Leg, traum. prim., exhaustion	2

	Cases.
Leg, traum. prim., shock	1
Leg, traum prim., pyæmia	1
Leg, traum. prim., septicæmia	1
Leg, traum. prim., pneumonia	1
Leg, traum. sec., septicæmia	2
Leg, traum. sec., exhaustion	1
Leg, path., pyæmia	1
Leg, path., exhaustion	1
	11

RECAPITULATION.

Shock	8
Pyæmia	7
Exhaustion	4
Septicæmia	3
Pneumonia	1
Erysipelas	1
Total	24

			Death-rate.
Primary	51 cases.	11 deaths.	21.57 per cent.
Secondary	22 cases.	8 deaths.	36.36 per cent.
Primary and Secondary	2 cases.	–	—
	75 cases.	19 deaths.	26.03 per cent.
Pathological	36 cases.	5 deaths.	13.88 per cent.
Total	111 cases.	24 deaths.	21.62 per cent.

Although these numbers are small it may not be uninteresting to compare them with the statistics given by Dr. Ashhurst in the International Encyclopædia of Surgery, and by Professor Agnew in his work on Surgery: —

ASHHURST.

	Death-rate.
Total, 6448 cases.	32.9 per cent.
Injury, 3024 cases	39.8 per cent.
Disease, 3424 cases	26.8 per cent.

AGNEW.

5956 cases	32.42 per cent.
Primary, 2572 cases	35.81 per cent.
Secondary, 781 cases	50.19 per cent.
2603 cases	23.74 per cent.

Dr. Agnew also gives the mortality of all amputations at the Pennsylvania Hospital for the years 1870–1878 as 21.43 per cent. in 252 cases. It is more than probable that the next ten years will witness in all well-managed hospitals a decided diminution in the death-rate following amputation.

Providence, *April* 11, 1884.

◆

TWO CASES OF GENERAL CHRONIC PROCTITIS

CAUSED BY RETROVERSION OF THE UTERUS WITH PROLAPSE OF RIGHT OVARY IN THE FIRST CASE, BY SIMPLE RETROVERSION OF THE UTERUS WITH CHRONIC ENDOMETRITIS IN THE SECOND CASE.

BY F. W. JOHNSON, M. D.,
Surgeon, Out Patients, Free Hospital for Women.

Inflammation of the rectum involving the mucous, submucous, and muscular layers of the gut is of quite frequent occurrence in women suffering from some acute or chronic affection of the ovaries, tubes, uterus, or vagina. The onset of the attack is not marked. According to my experience, limited to six cases, the inflammation does not begin as an acute proctitis which gradually subsides into the chronic form, but from a feeling of burning and weight in the rectum with perhaps some backache, frequent micturition, watery stools soon after rising in the morning, followed by a feeling as if the rectum had not been emptied, it gradually increases until the patient is driven to the physician complaining of loose muco-purulent dejections which are sometimes mixed with blood, tenesmus, frequent and painful micturition, sometimes retention, constant pain and burning in the rectum, leucorrhœa, dysmenorrhœa, acute attacks of indigestion, accompanied at times, as in Case No. II., with stercoraceous vomiting, and inability to stand or walk with any comfort. There is loss of flesh, restless nights, and general impairment of health. This condition, varying in severity, may last for a long time, but eventually ends, if left to itself, in infiltration and thickening of the rectal wall. It may end in ulceration involving the whole thickness of the mucous membrane. It may involve the mouths of the tubular follicles causing ulceration and perforation of the bowel. It may cause an abscess which may result in fistula, and it is a frequent cause of stricture. Very little has been written on general or localized chronic proctitis occurring secondarily to some affection of the uterus or its appendages. It was only in the work of Charles B. Kelsey that I was able to find anything satisfactory on the subject.

CASE I. Mrs. W., twenty-seven, married, born in Boston of German parents. Mother insane. Menstruation began at thirteen. Always regular every four weeks until seven years ago, since which time has been irregular, going five, six, and seven weeks without menstruating. During the past seven years has had dysmenorrhœa. The pain, confined to the ovarian regions, begins six to eight days before the flow, and lasts during the first day. Flows six days and saturates seven to eight napkins. No clots. Has never been pregnant. Frequent pain and almost constant feeling of pressure at the top of the head. Constant pain in sacral region, increased by walking or standing. Constant burning and feeling of pressure in the rectum. Leucorrhœa white and thin in character. Appetite poor. All kinds of food cause distress. The right ovary was prolapsed into Douglas's pouch; was enlarged to the size of an English walnut, and was very sensitive. The uterus was retroverted, sensitive at the fundus, and was prolapsed in the first degree. The rectal mucous membrane was much thickened, of a dark-red, almost purple color, and covered with an abundant muco-purulent secretion. Sphincter ani unyielding, no eversion of rectal mucous membrane, and no dilatation of the hæmorrhoidal vessels.

In this case the evacuations numbered ten to twelve each day and consisted of muco-purulent material, at times mixed with fæcal matter, and always attended with more or less pain. When fæcal matter was present the stools contained blood. Each evacuation was attended with tenesmus and sharp pains through the pelvis. There was frequent and painful micturition. Most of the above symptoms, though less severe, had been present for six months. During this time she had used suppositories containing iodoform, tannin, and morphia, enemas of starch and laudanum, and various drugs by the mouth. She said the iodoform did the most good, but she would not continue its use on account of the offensive odor it gave to the evacuations. After my examination she was put on the following course of treatment: Every fifth night she took of hydrarg. cum creta eight grains, followed in the morning by a saline cathartic. Three times a day two quarts of hot water as hot as could be borne (she was able in ten days to use water at a temperature of 140° F.) were injected into the rectum through a vaginal nozzle, while reclining on the left side with a thick pillow under the hips. This position was insisted upon in order that the rectum might be ballooned out, and as much as possible of its mucous membrane brought in contact with the hot water. The same position was maintained for twenty minutes after the injection was completed. The diet consisted principally of milk with stale bread. All vegetables, except lettuce, tea, coffee, beer, and wine were forbidden. In two weeks, time great improvement took place. The sensitiveness of the right ovary and fundus uteri had gone, and I was able to replace them and keep them where they belonged by a Thomas' retroflexion pessary, the bulb of which was made large enough to fill the posterior cul de sac, and thus prevent the ovary from prolapsing. Improvement was rapid, with now and then a drawback due to her own carelessness. On one occasion she was thrown down while skating, and as a result the pessary was forced part way outside the vagina, the fundus flexed over the posterior bar, and the right ovary again prolapsed. It was two weeks before the sensitiveness diminished enough to allow the replacing of the pessary.

During the two weeks before the pessary was adjusted the rectal symptoms improved very much, but after the pessary was put in place the improvement in the rectal symptoms was simply astonishing. The evacuations were soon reduced to two each day. The tenesmus, pains throughout the pelvis, dysmenorrhœa, dyspepsia, and painful micturition soon departed. It is now three months since the treatment was begun, and she considers herself perfectly well.

CASE II. Miss D., twenty-five, single, born in this State, family history phthisical. A few years ago she went through a long and hard siege of neurasthenia. She was one of those fat, anæmic, flabby individuals, who so often fall victims to nervous exhaustion.

The rectal symptoms were heat and burning, sharp, shooting pains, frequent and, at times, painful evacuations, containing blood and mucus, and backache. There was no tenesmus. All these symptoms were worse during menstruation. Frequent attacks of indigestion at menstrual periods, accompanied, as I mentioned above, with stercoraceous vomiting, requiring morphine for its relief. This condition had lasted for three months. Menstruation first appeared at twelve. Menstruates each twenty-five to thirty-one days. Flows seven days. Uses fourteen napkins, and saturates seven to eight. Dysmenorrhœa during the third and fourth days, the pain being in the lower part of the abdomen in front, and in the right ovarian region, confining her to bed. Frequent dizziness. Almost constant pain in right ovarian region, which is increased on walking. Constant bearing down when standing. Persistent vaginal discharge; slight in quantity, thick, and brownish-white. Frequent and painful micturition. Appetite poor. Digestion poor. Vagina large and relaxed. Uterus low down in the pelvis, retroverted and enlarged throughout, with a cavity measuring three inches. Cervix rested on the floor of the pelvis, and admitted index finger to internal os. External os eroded. Secretion from cervix muco-purulent, and of a brown color. Internal os and fundus uteri very sensitive. She was put on the same course of treatment as the other patient, except that she was given one fiftieth of a grain of valerianate of strychnia and one fiftieth of a grain of arsenious acid three times a day. She began to improve from the first, and in one month's time a Thomas' retroflexion pessary was adjusted, and the improvement has been uninterrupted.

How long it will take to cure the chronic endometritis with the attending areolar hyperplasia, which I consider to be at the bottom of the trouble, it is very difficult to say. In Case I. my theory is that retroversion took place about seven years ago, accompanied with ovarian disturbance, and these were the cause of the dysmenorrhœa; finally the right ovary prolapsed into Douglas's pouch, and as a consequence rectal trouble was set up. In Case II. the chronic endometritis produced areolar hyperplasia; the uterine ligaments being inadequate to support the enlarged and heavy uterus, retroversion ensued; with the retroversion ovarian disturbance was set up, and as a result dysmenorrhœa and proctitis were developed.

The subject of Case I. is able to do her own housework and keep her husband's books, while before she had treatment she could not be on her feet long enough to get breakfast. Menstruation is still irregular, but it comes on without any pain; in fact, the appearance of the flow is the first indication she has that she is unwell.

AMPUTATIONS AND ARTIFICIAL LEGS.

BY D. DE FORREST DOUGLASS, SPRINGFIELD, MASS.

MANUFACTURERS are constantly called upon to make and adjust artificial legs to stumps where amputation was performed by the "rules" taught in works on surgery previous to the modern invention and great improvements in the construction and adjustment of artificial legs.

The two *professions* should coöperate for the welfare of the patient, where so much is depending upon the point of amputation. It should be the leading thought with the medical profession not only how skillfully can it be performed, but how well the patient can be fitted for the duties and burdens of life, how well the chasm between the natural and artificial can be bridged, how well the adjustment be made where the natural ends and the artificial begins.

The absolute "rule" laid down in the works on surgery — in amputations always to save as much as possible — has had and passed its day of usefulness. It had its origin in the earliest days of surgery, when an amputation was attended with much greater risk of life than at the present time with such great improvements in the practice of the profession.

Previous to the invention and application of artificial legs the loss of a member, or any part of it, was looked upon by the patient as a great affliction, and he enjoined upon the surgeon to save as much as possible, as he feared both the result of the amputation and physical appearance. It was a natural and spontaneous feeling, the growth of surrounding circumstances.

While it may or may not be correct that the longer the stump the less liable to fatal results, there are other considerations which should have weight and influence with surgeons. If the saving of a life is desirable, life should be desirable after it is saved. If through the great kindness and zeal of the surgeon he has saved the life of his patient, and has at the same time entailed upon him a condition preventing him from the enjoyment of the full or partial duties of life, he has saved it, but full of bitterness.

An experience of more than thirty years with patients who have submitted to amputation has shown this important fact, that the last and most absorbing thought previous to the operation would find expression in, "Doctor, give me the very best stump to wear an artificial leg," showing life a secondary consideration unless made desirable.

I would, therefore, suggest, as giving the best results to the patient, not only immediate but during the subsequent time the artificial must coöperate with the natural member, first, never to amputate through the joint. In these cases the stumps are almost invariably thinly covered at the end; from necessity, the tissues not being abundant, the circulation is feeble, vitality at the extreme end much reduced, and the liability to excoriation is great. The power in using an artificial leg is reduced in the same ratio that the stump is enfeebled or sensitive, and the value and usefulness of the leg enhanced the more nearly we approach the right point of amputation.

It is impossible, in amputations at the joint, to construct an artificial appliance that will so well supply the loss, symmetrically or in durability, as in amputations in the continuity, and never is it so satisfactory to the patient.

Artificial legs are fitted to such amputations because they are presented for treatment, and the patient has walked well. But this proves nothing. Compare these with leg or thigh amputations after two or three years' experience, and the result will be quite different from what would appear at first. Many cases result in a secondary amputation.

We frequently meet stumps showing fine skill in the art of surgery, none finer *of the kind* could be made, but unfortunately made at the wrong point.

Another and a serious objection is that the space occupied by the remaining portion of joint is required for a properly constructed artificial joint. Both cannot occupy the same space.

Nearly the same objections will apply to extremely long stumps, either of leg or thigh, — feeble circulation at the end, low vitality, danger of excoriation, and therefore slow process of healing. Long stumps are liable to swell at the end, and the artificial leg is required to be made larger at this point to meet the difficulty.

After passing nine inches below the lower edge of the patella, we make no use of the stump either for bearing or propelling power. Therefore as considerations of utility, safety, usefulness, and symmetry in the artificial leg, long stumps are undesirable. The best length of stump for thigh amputation is ten inches, measuring inside from body.

Of course the conditions of injury or disease determine shorter stumps. But the rule stands the same, and the more nearly it can be conformed to the better the results.

In all cases of anchylosis of knee-joint, flexed at right angles, the end of stump should fall one inch back of a line of the thigh. Such cases are well adapted for a leg with bearing on the knee. In these cases a greater length of stump is undesirable, as the perfect outline of the patient when dressed would be broken by a protruding stump.

The most desirable method of amputation, giving the best stump, capable of exerting the greatest power of locomotion, leaving the tissues the more nearly in their natural position and condition, and the least liable to injury or excoriation, is the anterio - posterior flap operation.

TREATMENT OF STUMPS.

It will be proper to remark in connection with this subject, that after a stump is well healed — to put it in the best condition for the application of an artificial leg, — it should be constantly bandaged as tightly as can be comfortably worn for four or five weeks. This renders it more conical in form, better adapted to sustain the weight of body on the artificial leg.

These observations and suggestions are the result of, and are based upon, a thorough practical experience of over thirty years in making and adjusting artificial legs to every form of stump.

CASE OF ACUTE DIABETES OF UNKNOWN DURATION; DEATH FROM COMA SEVENTY-TWO HOURS AFTER COMING UNDER OBSERVATION.[1]

BY DR. O. F. ROGERS.

THE patient was a rather pale and fleshy gentleman of forty-four years, possessed of abundant means, and previously in good health. His business gave him little labor and no anxiety. His habits were correct. On the evening of the 21st of December, 1882, he was out late and got thoroughly chilled. The next morning he had a sore throat.

On the evening of the 24th he called me to prescribe for his throat and to advise him whether or not to drive several miles the next day to fulfill a Christmas dinner engagement. He was in his parlor when I called, and gave me a brisk and cheerful greeting. The throat was of a dark-red color, the uvula and left faucial pillars were œdematous, and the left tonsil was somewhat swollen. A few herpetic patches were noticed upon the anterior pillar of the right side and upon the velum palati. The lips and nose were liberally strewn with herpes. There was slight dysphagia. The pulse was 120, and rather weak; the temperature 99° F.; the bowels were regular; the appetite impaired. He felt neither sick nor well. I remarked upon the feebleness and frequency of his pulse, and was told that for years this symptom had invariably accompanied a sore throat. I ordered a milk diet, one ounce of gin, and a dose of tincture ferri chloridi every three hours, and recommended him to go to bed.

On the 25th he said he felt better. The pulse was 124, and the temperature 98.6° F. The throat had not materially changed in appearance. He took an abundance of milk, and the gin and iron as ordered.

On the 26th the swelling and œdema of the left side of the throat had nearly disappeared; the right tonsil was now somewhat swollen, and there were several aphthous spots upon the mucous membrane of the gums and cheeks. He remarked that his mouth was dry, and repeatedly rinsed it with water and took frequent sips of milk or lemonade. He was rather restless, and asked for a half dozen things while I sat by him. He sat up in bed and was lively and talkative, and much interested in showing me a beautiful musical toy. He said that he felt better, but he did not look so. His features were drawn and the countenance grayish, and he seemed to have wasted since the evening of the 24th.

Though his appearance disquieted me, I could not bring myself to believe that he was seriously ill. Later in the day I sent for a specimen of his urine, though I had not the slightest suspicion of the nature of his illness. The urine was of a specific gravity of 1.035, and contained eighteen grains of sugar to the ounce, and a trace of albumen.

I was informed by his attendants that he had during the past few nights — exactly how many they could not say — filled a chamber-pot with urine; also that he had urinated frequently and largely during the day. He evidently was passing a gallon of urine a day. He made about half his usual quantity of urine and was somewhat restless during the night, and complained of slight pain in his abdomen. His bowels were regular, though slightly constipated.

At five A. M. of the 27th he appeared to be dazed, was incoherent and indistinct in speech, and shortly afterward began to breathe heavily. At seven A. M. he knew and spoke to me, but soon became completely comatose, breathing deeply and loudly but not snoring. The pulse was 140 and weak. He now passed urine for the last time. This gave the so-called acetone reaction with the tincture of chloride of iron.

At ten A. M. Dr. D. W. Cheever, who had attended him in the city, saw him in consultation. He was then absolutely unconscious, and the pulse barely perceptible at the wrist. The breath had a sweetish, hay-tea odor; later on it smelt like fresh ensilage. During the whole day he lay unconscious, never moving, his face pale and skin moist and cool, breathing deeply and regularly and with great force, while the heart beats grew feebler and more frequent.

About a half an hour before death the intervals between the respirations became longer, and finally there was irregularity. Then for the first time cyanosis was observed.

Death occurred at five P. M., just three days after he came under treatment, and rather less than six days from the time of the exposure to cold.

The question of duration of the disease in this case is one of much interest. I believe it was a matter of days and not of weeks. He believed himself to be perfectly well on the 21st December, but there is evidence that he had been passing an unusual quantity of urine for a few days before that date. Three days before his death he had not perceptibly lost flesh, there was but slight diminution of strength, and it was not till the day before his death that his appearance indicated that he was seriously ill. Cases of acute diabetes presenting a history similar to this are very rare indeed.

A knowledge of the early symptoms and the predisposing and exciting causes of coma in diabetes is of prime importance to the practitioner. It is most apt to occur in young subjects and in acute cases. Nervous excitement, exposure to cold, muscular exertion, and constipation are predisposing causes. Frequency of the pulse, restlessness, abdominal pain, and deep respiration are the earliest premonitory symptoms of coma (Foster and Saundby). Sometimes a sudden diminution in the quantity of the urine and fall of the specific gravity have been noticed before the attack. The sudden appearance of albumen is of grave import, though it is by no means necessarily followed by coma.

Pharyngitis and red, spongy gums, associated or not with aphthæ, are sufficiently frequent in the later stages of diabetes to warrant the conclusion that they are a manifestation of the diabetic dyscrasias. Therefore I venture the remark that when these symptoms are observed, and especially if they are attended by a weak and rapid pulse, an examination of the urine is indicated just as it is indicated by carbuncle, and perhaps to a greater degree.

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[1] Communicated to the Dorchester Medical Club, July 21, 1884.

The coma in this case was not treated, because I believe the condition has as yet no therapeutics.

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A CASE OF MENSTRUATION RECURRING EVERY THREE MONTHS,

ATTENDED WITH SEVERE DYSMENORRHŒA, FOR TWENTY-SEVEN YEARS, COMPLICATED BY HYSTERIA AND NEURASTHENIA. RECOVERY.[1]

BY GEORGE H. BIXBY, M. D., BOSTON

Mrs. F., widow, aged thirty-eight, native of New Hampshire, was admitted to the Carney Hospital September 25, 1882. She had traveled eighty miles by rail, reclining upon a mattress. She was allowed to rest four days.

Family History. On father's side long-lived and intellectually endowed. Several deaths from phthisis had taken place on the mother's side.

Catamenia first appeared at the eleventh year; continued irregular, scanty, and of short duration. In early childhood, up to the time of the appearance of the menses, she suffered from habitual constipation. She became a teacher in her sixteenth year. Later she entered a normal school as a pupil, but before the close of the first term from sheer debility was obliged to leave. During the vacation she was suddenly seized with a fit of spasmodic coughing, which persisted three hours without interruption. This attack was not regarded as anything serious at first, but later proved to have made a profound impression upon her general health. A cough of a similar character occurred later, but of shorter duration. A few months of absolute mental and physical rest seemed to have restored her health. In 1870 she was married. She was now able to attend to all her domestic duties, if not overtaxed. Any great excitement, however, would induce a peculiar muscular contraction in the dorsal portion of the spinal region, subsiding after a short season of complete rest.

In 1871 these spasms were of frequent occurrence and of longer duration. Spinal anæmia was suspected by the family physician and treated without result.

At this time the most delicate contact with certain portions of the spine would call forth the most violent convulsive movements of the entire body, lasting at least a half hour. For three months she was confined to her bed, unable to move without assistance, always in the supine position. After that time she managed to place her feet on the floor, and a month later to walk on a level surface. The act of ascending stairs could only be accomplished by creeping. The spasms never entirely left her. Menstruation appeared at intervals of three months and always attended with sufferings not unlike the pains of labor. She seemed to lose at this period all that she had gained by the long interval of rest.

Between the years of 1871 and 1872 she had two miscarriages. In 1873 she gave birth to a full-grown male child with tedious labor. The child was nursed. After her confinement she gained rapidly; menstruation recurred fourteen months later, scanty and of short duration as of old, but less painful. A month later the death of her husband, after a short illness, threatened at one time a complete relapse. Owing to the decided improvement in her general health she rallied from the blow and continued in tolerably good condition. Two years later she ventured to resume teaching, but was interrupted by another emotional influence, namely, the death of her mother and sister, through whose entire illnesses she had been for months an untiring and devoted attendant. She began to experience loss of power in the spinal region, which caused her without any warning to slide from her chair, regaining strength to raise herself in the course of five minutes. Other members of the family fell ill, taxing her mentally and physically anew.

Early in 1881 cardiac and facial neuralgia ensued, and later sciatica of a most severe form, which necessitated the use of subcutaneous injections of morphia several times daily.

January 25, 1881, she discovered a tendency to contraction in the left knee-joint, already flexing the leg considerably, and which no amount of passive motion could overcome. A month later in standing she rested the affected limb entirely upon the ball of the toe.

Her surroundings and habits during the latter part of this long season of invalidism were as follows: She had received subcutaneous injection of morphia two or three times daily for a year and eight months. A failure to respond to her demands promptly would call forth fits of wild impatience. Mostly confined to her bed, the entire community ministered to her caprices. She received callers in and out of season, and interested herself in all passing events of the neighborhood. She sewed, knit, wrote, and read incessantly. In addition to emotional causes due to domestic troubles there came into the peaceful community a bitter religious war, and unfortunately the leader of this resided under the same roof. It is needless to say that the subject occupied her mind incessantly.

Examination of the Patient. Inspection. The patient is above the average stature, large frame, light complexion, large prominent eyes, hair slightly gray and cut short. A number of decayed teeth are conspicuous in the upper jaw. Face more or less emaciated, all giving her a haggard and careworn expression.

Palpation. Left limb a third smaller than the right, muscles flabby, decidedly atrophied above and below the knee. When she stands erect with back toward one, the left limb rests upon the left great toe. The peculiar raised condition, apparently of the pelvis, forms a picture suggestive of lateral curvature of the spine.

Diagnosis. Neurasthenia, dependent upon functional derangement of the sexual organs, ostensibly ovarian, in the form of amenorrhœa, intensified by repeated and powerful emotional causes.

Prognosis doubtful.

Plan of treatment. Removal from home. Immediate and total suspension of opium. Examination of the sexual organs under ether. Removal of decayed teeth. Preparation of the system for the use of iron. Later, iron treatment. Physical rest; mental rest. Passive exercise. Extra feeding. Straightening of the limb.

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[1] Read before the Boston Society for Medical Observation, March 3, 1884.

The patient took her last hypodermic on the day of her arrival. Was allowed a suppository of opium and belladonna five nights in succession. By this sudden removal of the opium some reaction was, naturally, expected. To our great astonishment none whatever took place.

While the patient was under ether for extracting the teeth the sexual organs were carefully examined. There was no evidence of uterine disease except a slight erosion of the cervix.

Milk diet, one quart extra daily to begin with, was given in addition to full diet. Massage and electricity to be applied on alternate days. All mental exercise, such as reading, writing, and conversation, to be avoided. Rest in bed.

With regard to the medicinal treatment, I cannot resist quoting the valuable suggestions of Mr. Robert Barnes[1]: —

"It is accepted as an axiom in medicine that the blood, being deficient in red globules, iron is the remedy *par excellence.* This is true, but it requires more judgment in administering it than is usually shown. Long clinical experience has taught me the general law, that in all states of blood degeneration, whether resulting from malnutrition or wasting disease, as from hæmorrhage, iron is ill tolerated at the beginning. In all extreme anæmic states the febrile irritability I have adverted to is liable to be aggravated by the iron, if rudely and precipitately thrown in, as the phrase is. The tongue gets parched and brown, indicating a like state throughout the alimentary canal, inducing constipation, and generally impeding nutrition. Pulse rises in frequency. The true medication is first to allay vascular irritability, so as to prepare the system to assimilate iron. This is best done by salines, of which the best, I think, is the spir. mindereri. If freshly made, so marked is the benefit ensuing from the use of salines one cannot resist the conclusion that the blood is in want of salines as well as iron, and the salines is the first want. When the vascularity is subdued, when the secretory organs have been brought about, iron may cautiously be essayed."

In accordance with these suggestions the following treatment, preparatory to the use of iron, was ordered: Half an ounce of freshly-prepared liquor ammon. acetat., three times daily, for eight days. To be followed, a week later, by a saturated solution of chlorate of potash, one drachm in a wineglass of water, after meals. Six days later, drachm doses of the elixir of iron, quinine, and strychnia.

This *régime* was carried out ninety-nine days daily without a single omission. Diet of all kinds and medicine gradually increased. November 10th artificial teeth were inserted, making, in a short time, a marked difference for the better in her digestion and assimilation. During the ensuing weeks she improved rapidly. Menstruation, which had been irregular for twenty-seven years, now became regular. The opportune moment now seemed to have arrived for straightening the limb. By the kindness of Dr. E. H. Bradford the operation was undertaken on the 17th of January, in the following manner: —

The patient being deeply etherized the inner and outer hamstrings and tendo Achilles were cut, and the adhesions in the joint forcibly broken. The anchylosis proved to have been false. The limb was fully extended and placed in a plaster bandage.

On the 24th, the plaster being perfectly dry, the patient was ordered to stand erect for a few minutes every day. On the 25th she walked twenty feet. On the 30th the plaster apparatus was removed; straight splint substituted; worn night and day. On the 31st required to flex and extend the knee ten times daily. February 9th, walked a few steps without crutches. February 12th, went down stairs ten steps. On the 15th, two flights of twelve steps each. Henceforth massage and electricity irregularly applied, but active exercise, walking about the apartment with the aid of crutches, up and down stairs, was systematically carried out; mental rest still continued. The improvement continued uninterrupted.

It is a remarkable fact that the next day after straightening the limb there was an entire absence of convulsions, however roughly the spine was manipulated. She was taking, in addition to full diet, at least three quarts of milk daily.

April 5th, after having been in the hospital seven months, still relying on her crutches, she went home, occupying a seat in an ordinary passenger car, and sitting erect. The journey ended by a drive of four and one half miles, by stage, over a very rough road.

As soon as the season would permit, out-of-door exercise was advised. The entire summer was spent in driving and walking. Increasing in health and strength, already before midsummer one crutch was thrown away. October 1st a cane took the place of the crutches. She occasionally complains of neuralgia when the wind is east. Menstruation perfectly regular. Walks any distance by the aid of a cane.

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REPORT ON PROGRESS IN THERAPEUTICS.

BY FRANCIS H. WILLIAMS, M. D.

KAIRINE AND ANTIPYRINE.

BOTH of these antipyretics are quite new; the former, kairine, was noticed at some length in last year's report, in which it was suggested that "it will be found to have too many disadvantages to ever become very popular, although as the forerunner of a more perfect antipyretic which we may look for in the near future it is of interest." The more perfect antipyretic has already been discovered, and appears under the name antipyrine; it is undoubtedly superior to kairine, and although it will in its turn give place to some new rival, it merits attention. But first a word about the action of kairine on the blood may be permitted.

M. Loyd[2] has recently published the results of his experiments in this direction, which are of interest in suggesting an explanation of its antipyretic action as well as of certain toxic symptoms which were observed in some cases where kairine was given in large doses. Under its influence he finds that the blood absorbs oxygen less readily, and this suggests the reason for the cyanosis and other similar phenomena which sometimes occur after the administration of this remedy.

Dr. Filehne[3] has introduced to the profession an alkaloid prepared by Dr. Ludwig Knorr, and named antipyrine on account of its antithermal properties. It is a white crystalline powder, readily soluble in water, without disagreeable taste, and, as a rule, is easily borne by the stomach, notwithstanding the fact that rather large doses must be given. The administration of five or six grammes, given at intervals of an hour in two-gramme doses, can reduce the temperature from that of a high fever to about the normal, and without any untoward symptoms except occasional vomiting. It may also be used subcutaneously. The duration of its action varies with different individuals; generally in from seven to nine hours, often eighteen or even twenty hours, after the beginning of its action, the temperature gradually rises. The rise in temperature is never accompanied by a chill, as is the case with kairine, and is generally without perspiration. The maximum antithermal effect is reached in from three to five hours. With children one half to two thirds of the above dose will suffice; patients with phthisis and such as are much emaciated should also have a smaller dose.

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[1] Barnes on the Diseases of Women, pp. 167, 168.

[2] Practitioner, July, 1884; Progrès Médicale, May 10, 1884.

[3] Zeitschrift für klinische Medicine, Siebenter, Band 641.

The frequency of the pulse drops in proportion to the fall of temperature, except in the later stages. The urine is free from albumen.

On page 162 of this journal may be found an account of the experience of several eminent clinicians with this substance, and still further favorable reports are given by Von Noorden.[1] He has observed that when the perspiration which accompanies the fall of temperature is prevented, by a dose of agaricine, no disturbance of the antithermal action of antipyrine is caused, so that this group of antipyretics probably do not act by causing a loss of heat through evaporation from the surface of the body. In his trials of the drug vomiting has seldom been caused; this may be avoided by using it subcutaneously in rather smaller doses. He makes the important suggestion that the heart and pulse should be carefully watched, particularly when large doses are given.

In children it has been used by Penzoldt and Sartorius[2] in twenty-one cases, twelve of which were sick with pneumonia, and the others with catarrhal pneumonia, erysipelas, scarlatina, and diphtheria. The children took the drug readily in orange syrup, vomiting was caused in only a few cases, and in two it was necessary to give up its use by the mouth and administer it per rectum.

No especial change in the pulse was observed, although it seems to have been somewhat less frequent with the fall in temperature. Their verdict is that antipyrine is a very suitable drug with which to lower the temperature in children, and by appropriate doses it is diminished several degrees in a few hours. The patients were more cheerful or slept quietly, and they were better at night under its influence.

The proper beginning dose is as many decigrammes as the child is years old, given an hour apart for three hours; per rectum from three to six times as much may be used.

After it has been continued some time the system seems to become somewhat accustomed to it.

ANTIPYRETICS.

An account of what seem to have been elaborate experiments on the antipyretic treatment published in *Virchow's Archiv* by Dr. Sassetzky, of St. Petersburg, is given in the *Lancet* of January 5th, and will be of interest in this connection. They consist chiefly of a study of the assimilative functions and tissue changes occurring in fevers, especially as shown by the elimination of nitrogen.

The research was undertaken with the view of testing the effects of treatment directed to control the fever, and more particularly the cold bath treatment. Care was taken not only to analyze the urine but also the fæces in order to be able to estimate the elimination of nitrogen; at the same time the amount of nitrogenous food taken was carefully noted. In this way it was hoped to determine how far assimilation is interfered with, and what proportion of the nitrogen eliminated could be attributed to tissue metabolism.

Observations were made upon cases of typhus fever, relapsing fever, and pneumonia, typhoid fever being excluded. Analyses were made during three definite periods — during the antipyretic treatment, while the fever was left uncontrolled, and after the febrile disturbance had passed away.

In nine cases the antipyretic agent was the cold bath (72.5° F.) for fifteen minutes four times a day; in four it was quinine (two doses of ten grains each given in the evening); and in two it was salicylate of soda.

It was found that the cold bath invariably diminished the elimination of nitrogen, and that a similar but far less marked decrease occurred in cases treated by quinine and salicylate.

The writer would suggest that antipyrine offers an excellent opportunity to study the action of antipyretics, particularly as regards the elimination of nitrogen.

PARALDEHYD.

This new hypnotic is a modification of aldehyd, and presents itself in the form of a colorless, volatile liquid, which is soluble in eight parts of water. Its taste is less disagreeable than that of chloral. It may be given with syrup of orange or in the form of an emulsion.

Cervello,[3] after a careful study of its physiological action on animals, and after comparing its effects with those produced by chloral, has recommended it as a hypnotic. He observed that it produced a quiet sleep, unaccompanied by excitement or unpleasant after-effects, and with no disturbing action on the heart or respiration.

Clinically it has been used by several observers on quite a large number of patients.

Langreuter[4] has found it successful in eighty-two per cent. of more than two hundred trials in cases of mental or nervous diseases. An average dose of five or six grammes brought on sleep in from five to ten minutes, which continued at least two, and, as a rule, from five to seven hours.

Dr. Carl von Noorden[5] has given it to patients, having a variety of diseases, more than one hundred times with excellent results; in only two did it cause vomiting. He considers disease of the stomach a contra-indication for its use.

Two grammes of it cost one cent, according to Merck's price list; a dose would, therefore, be three cents, but in America the price is much higher.

In France[6] the accounts of its action are also very flattering.

Dr. C. Rank,[7] on the contrary, does not agree with many others who have used this substance. He complains of its extremely disagreeable taste and odor, and that it caused severe headache in many cases. In nervous sleeplessness and in delirium tremens it gave, in his hands, satisfactory results, but in such cases as emphysema, bronchitis, cardiac diseases, acute rheumatism, and in various stages of tuberculosis the results were unfavorable or negative. As the drug is excreted largely by the lungs, the air in the vicinity of those who have taken it is strongly impregnated with its odor.

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[1] Berliner klinische Wochenschrift, No 30, 1884.

[2] Berliner klinische Wochenschrift, No. 32.

[3] Arch. f. exp. Path. u. Pharmak., Bd. xvi.

[4] Centralblatt f. klin. Medicine, No. 22, 1884.

[5] Centralblatt f. klin. Medicine, No. 12.

[6] L'Union Medicale, 1884, No. 8.

[7] Allgem. med. Central-Zeitung, July 26, 1884.

Notwithstanding some inconveniences it seems probable that this drug will be found to have sufficient advantages to make it a useful substitute for chloral when it is desired simply to overcome sleeplessness. It would seem to be a milder and safer hypnotic than chloral; and may prove a desirable addition to our limited number of hypnotics.

VINEGAR IN POST-PARTUM HÆMORRHAGE.

Some ten years ago Dr. Grigg[1] gave, by accident, a wineglassful of vinegar in a case of severe post-partum hæmorrhage. The uterus, which had previously been flaccid, contracted instantly, and the bleeding ceased. Since then he has used it successfully in another case, and has received favorable reports of its efficacy from his house-surgeons, and also from a number of midwives to whom he had recommended its trial. It is a remedy which may be readily procured, and is simple and harmless. He believes it to be better and more prompt in its action than ergot.

THE USES OF PEROXIDE OF HYDROGEN.[2]

This agent has been known and used in the arts for some time, and has also been used in medicine chiefly for its antiseptic properties, as it is one of the most potent destroyers of bacterial life. Its action on pus is rather remarkable. If a few drops of a ten per cent. solution be brought into contact with pus a brisk effervescence begins and continues until all the pus is completely destroyed. Its chief therapeutic value lies in its cleansing, antiseptic, and painless action upon foul ulcers. It is also useful in purulent ophthalmia, otorrhœa, gonorrhœa, etc., and as a mouth wash or gargle; it may also be mixed with glycerine and applied on absorbent cotton to the ulcerated cervix uteri. The account given of it is most flattering. It is colorless, odorless, and is not poisonous.

Dr. Steger[3] recognizes it as a valuable application for venereal sores, as it answers every purpose of the caustics and escharotics sometimes used in the treatment of these diseases, and at the same time it is painless. He has used this remedy in more than twenty cases of chancroid with success, and without using caustics or iodoform.

Reports of Societies.

CHICAGO MEDICAL SOCIETY.[4]

LISTON H. MONTGOMERY, M. D., SECRETARY.

THE TREATMENT OF ASIATIC CHOLERA IN SOUTHERN INDIA. — DISCUSSION.

Dr. G. C. Paoli had seen four cholera epidemics from 1834 to 1866, and since the latter he had passed through all the epidemics that had visited Chicago. Regarding the treatment he would add but a word or two, for all were familiar with it. Of all known remedies the best he knew was sugar of lead combined with opium to check the diarrhœa, in the proportion of two grains of the former to one fourth grain of the latter, given as one's judgment might dictate. In the stage of collapse it was useless to administer internal remedies, because the stomach would not absorb them. The blood is at this stage inspissated and would not flow, perhaps, and then the best external application was dry heat in the shape of warmed blankets. He did not believe in the germ theory as a cause of the disease. If germs existed he believed them to be innocent as causes of the disease.

Dr. R. H. Engert asked the writer of the paper what his percentage of recoveries were in the cases he had treated.

Dr. John Bartlett gave his experience briefly in treating 250 cases of cholera brought to a hospital in which he was attending physician; the per cent. of mortality was extraordinarily large. He expected he would be able to save the lives of one out of every two patients, but only one out of every six recovered. However, when they were brought to the hospital they were in the blue stage, or semi-collapsed, or partially cyanosed.

Dr. J. H. Etheridge stated that he believed the nervous system would in the future be proven to have more to do with the ultimate pathology of cholera than bacilli, which he regarded as an illusionary aspect of the disease, and that by using neurotic remedies at the first we will get at the gist of the trouble, — such remedies as relax the vaso-motor spasm of the abdominal circulation, preventing congestion of the venous system, and assist the vessels to correctly perform their physiological action, thus preventing their pouring watery portions of the blood into the intestinal canal. Dr. Chapman, of London, years ago applied ice bags to the spine for diarrhœa to enable the abdominal vaso-motor nerves to control the proper distribution of the blood.

Dr. G. Newkirk asked if there was not some way by which the community could be educated through the newspapers so that the people could forestall epidemics? He had recently read in a Jewish newspaper that the Jews in France had not been afflicted with the cholera. If this were true he could not understand why they escaped its ravages, or how they were immune from it, unless it was because of their habits or better manner of dieting from instructions they obtained by reading Jewish journals.

Dr. Scudder, in closing the discussion, said that the per cent. of recoveries varied from ten per cent. to eighty per cent., or, in other words, death occurred in twenty per cent. to ninety per cent. of the cases. In severe epidemics eighty per cent. to ninety per cent. of the cases resulted fatally. It would depend upon how early a case was seen, as to the chances of recovery. In thirty cases that he treated at one time by fumigating the premises with sulphur in addition to the other treatment, forty per cent. of them recovered, while in another shed in the relief camp with exactly the same conditions and treatment, except the fumigation process, where twenty cases were treated, eighty per cent. died.

In India the natives would not drink well water. Their religion had much to do with the frequent visitations of the cholera, for it taught them to drink only that which descended from heaven. This is true near Calcutta and Madras, where the water tanks are located near their temples of worship, which they regard as being sacred; they consider the surface water to be nearly as sacred as that which is stored in the tanks. An examination of this water showed it to be impregnated with microbes, or the germs of cholera. In contrast to the natives of India were those of China and Japan, where garbage and human offal are used to fructify the fields, and because they drink well water they are comparatively free from cholera. The Indians do not remove excrement and offal, or they do not cover it up, and when rain descends, which sometimes amounts to eight or ten inches during a single night, the surface water which they use is polluted. The speaker did not think that any benefits would be derived by people running away for a short distance from a district in which cholera was epidemic. General panic and fright predispose to the disease, and had much to do with its fatality. In India the poisoning of persons afflicted with cholera was frequent. Arsenic is given to a great extent, and the crime is largely undetected.

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[1] British Medical Journal, January 12, 1884.

[2] C. E. [illegible], M. B., Practitioner, March, 1884.

[3] The Medical Record, January 19, 1884.

[4] Concluded from page 279.

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RHODE ISLAND MEDICAL SOCIETY.

THE usual quarterly meeting was held in Providence, September 18, 1884, the President, DR. OLIVER C. WIGGIN, in the chair.

PRESIDENT'S ADDRESS.

On opening the meeting the President regretted that he had been unable to procure any formal paper for the occasion. He hoped he was not assuming too much in reminding the Fellows that it was a duty they owed to each other, as implied in the covenant of their membership, to bring up the tithes out of their abundance, and thus cultivate a mutual respect and a broader fellowship. He thought it would be well if the Society would have a subject, or class of subjects, towards which to direct its thoughts, researches, and communications for the entire year. This would afford an opportunity for several essays and discussions upon the same subject. Such a course could but provoke much earnest and useful labor. As an initiatory experiment in this direction he would invite the presentation of essays on any of the zymotic diseases. It was hoped that essayists would confine themselves, in the treatment of their subjects, to the cause and prevention of the diseases under consideration, to the exclusion of their pathology and treatment. In other words, it was sought to direct the essays towards the somewhat prevailing tendency of medical research to "preventive medicine."

The President further alluded with satisfaction to the good work which the Society had accomplished in the last two years in effecting the enactment of the new medical examiner law. The law was drafted and ushered to the General Assembly by a committee appointed by the Society, and was enacted, with slight modifications, as it came from the committee. The success of this very important measure has been, on the whole, highly satisfactory. It was, moreover, flattering to the Fellows that out of twenty-four medical examiners in the State twenty of them were members of the Rhode Island Medical Society. It was believed, on the other hand, that the State had done itself an honor in launching the new law upon the public under the care of those who would direct it to the beneficent ends for which it was intended. It was believed, upon careful inquiry, that every appointment had fallen upon men who fully appreciated the importance and dignity of the office, and who would at once enter upon that special preparation so indispensable to the service. Attention was called to the fact that the library of the Society now afforded excellent facilities for medico-legal inquiry.

The President further urged the importance of establishing a pathological and anatomical cabinet, under the care of a special committee.

DR. S. OSCAR MYERS reported a case of

RUBBER CATHETER BROKEN OFF IN THE URETHRA,

and exhibited the specimens.

A man, aged sixty, had suffered several years with partial paralysis of the lower extremities. The sphincter of the bladder was also involved, and he was unable to retain urine more than an hour or two. Having found a rubber urinal unsatisfactory, he had recourse to self-catheterization at regular intervals, and had generally used a No. 10, American, soft rubber catheter, which was easily introduced but always withdrawn with some resistance. From long usage this instrument became brittle and cracked, — injuries which his frugal wife repaired with her needle. The catheter finally broke during withdrawal, leaving about five inches of its length in the bladder and urethra. The detached piece was seized and removed with straight uterine forceps.

Dr. Myers asked the best method of extracting a soft rubber catheter that had broken off or slipped entirely within the bladder.

DR. CASWELL recommended a small lithotrite to remove such bodies from the bladder. He had lately seen a case in which a soft catheter was sucked into the urethra. An ordinary dressing forceps caught it, and would be serviceable in such cases when the end of the catheter is anterior to the symphysis. Special urethral forceps, if deeper.

DR. BATCHELDER called attention to the frequency of these accidents with catheters, and thought they might be avoided somewhat by physicians more carefully specifying the instrument to be used and frequently inspecting it. He reported an analogous case. A middle-aged man who had been for some time accustomed to the use of a catheter consulted him for swelling and tenderness of the penis, a condition which was aggravated by unsuccessful attempts to pass the instrument. An obstruction was felt two inches from the meatus; the patient was put under ether, external urethrotomy performed, and a calculous mass weighing twenty-six grains removed.

DR. E. T. CASWELL read a paper on

PELVIC ABSCESS,

with special reference to a recent case.

Mrs. ——, aged forty-five, the mother of one child, seventeen years of age, came under treatment for persistent metrorrhagia. Dilatation of the cervix was undertaken for purposes of a more critical examination, and a sea-tangle tent was introduced one morning, followed by another in the evening, and larger carbolized sponge tents the next day, the process causing less discomfort than is usual. On examination nothing abnormal was found except two or three en larged Nabothian glands, which were brushed over lightly with nitric acid.

Towards the end of the first week symptoms of peritonitis appeared. Variations in temperature and a hectic flush soon after indicated a forming abscess. Five weeks later a hard lump appeared in the left iliac region. This extended itself upwards, and could be traced to some depth in the pelvis, although a vaginal examination failed to reach it. Finally, ten weeks after the dilatation, fluctuation showed itself, and the abscess was opened under antiseptic precautions through the abdominal wall, about two inches above Poupart's ligament, and more than half a pint of healthy pus evacuated. A drainage tube was inserted, and the cavity syringed out with a solution of bichloride of mercury, one to 2000, and dressings saturated with the same solution applied. At each dressing for several days the cavity of the abscess was washed out. The washings were gradually diminished, and the tube removed in ten days. Convalescence was rapid.

It is fortunately seldom that the introduction of a tent is followed by such consequences, but these, and even worse, are within the experience of every man who has had much to do with uterine surgery. What determines the complete innocuousness of tents in one case and their potency for evil in another is a problem yet unsolved. In this case there had been no history of an antecedent cellulitis, or of anything that might contraindicate their use.

If from any cause an abscess forms in the pelvic cavity, the question arises, shall it be interfered with or shall it be allowed to take its course? If left to itself, the pus may find its exit either through the abdominal wall, through an opening into the intestines, into the ureters or bladder, possibly through the uterus itself, or, worst of all, and most to be dreaded, it may break and discharge into the peritoneal cavity. This last termination has been the strongest argument for surgical interference. To open the abdomen for the removal of a tumor, which can be disposed of in no other way, is, of course, the wisest and best course; but to open the abdomen to evacuate an abscess which, if left to itself, may find a perfectly safe exit is, at best, a hazardous proceeding. Every such case must be studied and decided by individual features.

DR. G. W. PORTER remarked, that usually there is comparatively little danger from the use of the first sponge tent; danger may follow the second or third tent, as sepsis is from absorption, which is more likely to follow prolonged dilatation. He recalled a case seen in consultation, in which, after removing a small tent, a soft polypus was twisted off, leaving a spot of absorption, and a second tent introduced. The result was septicæmia and death. Sponge tents should never be used as part of office practice, but only when the patient is in bed. If there has been no previous cellulitis their use is comparatively safe. If used carelessly they are a source of immense danger.

One difficulty attending the use of the laminaria tent is, that being of uniform diameter it may expand most where there is least pressure, that is, in the uterine cavity above the internal os, making its removal troublesome.

It is a good plan to make our own sponge tents. We thus have them of just the size wanted, are sure of proper antiseptic precautions, and can leave the surface rough. Such tents remain in the cervical canal much more surely than the smooth ones found in the shops.

SANITARY PRECAUTIONS AGAINST CHOLERA.

The PRESIDENT asked what sanitary precautions should be taken in view of the possible introduction of cholera next year?

DR. C. V. CHAPIN, Superintendent of Health, of Providence, replied that whatever theory be adopted concerning the nature of the disease, we look first to quarantine as an important means in preventing or delaying its progress, and maritime is much more successful than inland quarantine.

We cannot prevent the entrance of cholera, but we can prepare for it by securing pure soil, pure air, and pure water.

To prevent pollution of the soil a good system of sewerage is one of the essential conditions. The sewers in Providence are well built and in excellent condition, but there are two vital defects in the system: the houses are not all connected with them, and their outlet is not far enough from the heart of the city.

Where there are no sewers we have to deal with cess-pools and privy vaults, and the difficulty increases if there is an abundant water supply. In country places the disposal of sewage on the surface is less dangerous than cess-pools.

In Providence, in 1854, the hog-pens were found to be a nidus of cholera poison. All such nuisances should be abated. Streets and thoroughfares should be kept clean. All the conditions which pollute the soil will also pollute the air. Houses should be inspected, disinfected, and cleaned, and overcrowding prevented if possible.

The water supply should be from a source under control. Wells in thickly-settled places should be abandoned. Privy vaults should be systematically disinfected.

The bichloride of mercury, one to one thousand, is more efficacious as a disinfectant than any other practicable on a large scale.

DR. E. M. SNOW gave some interesting reminiscences of the outbreak of cholera in Providence in 1854. There were 159 deaths; 140 in two localities on the east side of the city, and nineteen on the west side. He noticed particularly the danger to washerwomen who washed clothing soiled by cholera patients. Such soiled clothes or bedding should be burned or thoroughly disinfected before washing.

As recommended by the Board of Censors, Drs. G. Edward Buxton, of Pawtucket, and Frank A. Payan, of Olneyville, were elected Fellows.

— Robert Barnes, writing from London to the *American Journal of Obstetrics* of some of the peculiarities in the professional relations of that metropolis, speaks of the contempt in which the practitioners of midwifery have been held by physicians and surgeons, and tells of a neat repartee once made thereupon by Robert Lee. At a full meeting of the Medical and Chirurgical Society the late Mr. Skey, bursting with an exultant sense of his surgical dignity, exclaimed, "Thank God, I know nothing of midwifery!" The rejoinder was prompt and crushing. "If," said the veteran obstetrist, "the gentleman who has just spoken is thankful for his ignorance, he has much to be thankful for!"

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THE EXTENSION OF CHOLERA.

The two countries in Europe whose government officials, central and local, were the most prompt in proclaiming quarantine after the epidemic character of cholera in Southern France was realized were Italy and Spain, and not only was quarantine proclaimed in those countries but it was enforced, with all the vexatious and minute restrictions of a mediæval infatuation, and that not merely against ships or travelers from infected places but against all comers from whatsoever quarter.

It was not to be marveled at that Italy should take certain reasonable precautions against fugitives arriving direct by water or crowding over the Mt. Cenis railway and her French frontier from Marseilles and Toulon, especially as many of her own citizens of the poorer and less provident classes were at work in those towns. Nothing short of blind fear, however, could have suggested the extension of the same measures indiscriminately to all the routes of travel entering her northern frontier, to the St. Gothard and Brenner equally with the more western road.

Here is a description of the process from the reliable correspondent of a daily contemporary writing from Switzerland about August 1st: "At Chiasso on the St. Gothard road travelers are all cooped up together in a vile barrack, so closely packed, regardless of age, sex, and condition that the most common decencies of toilet are impossible. The food served out to them, and for which they have to pay dearly, is of the worst description, and for this there is no redress. Exercise is not permitted except for an hour a day in a paved court, under the superintendence of an official who watches the traveler carefully lest he should attempt an escape. The same thing prevails at Luino on Lago Maggiore, at Bardonneche, at Ventimiglia, and is carried on so entirely without discrimination or judgment that a man who has perhaps crossed the frontier half an hour, say, is detained on his return, cooped up with fugitives from cholera districts, thus perhaps making him a source of danger, which he certainly was not before."

Notwithstanding all this, the very first countries, after France, to develop cholera were Italy and Spain. In the former the first cases made their appearance in the last days of July, a man dying at Leghorn July 28th who had arrived from Marseilles and had fulfilled all the quarantine regulations; the latter country was invaded a little later. In Italy, Naples and Spezia have been especial sufferers, and in each place the especial reasons were not far to seek.

The first suspicious cases were reported from Naples August 24th, since which time more than 5000 people have died of cholera in that city alone, the highest daily mortality, 365 deaths, occurring on the 9th inst. Since this date there have been daily fluctuations, but the mortality is still very large, though declining, and the last daily toll of deaths reported as we write was 161, for September 22d. If one remembers that Naples has a population but little exceeding that of Boston, the weekly mortality-rate of which, from all causes, at the same season, may be set down at from 200 to 220, a realizing sense of what the daily deaths from cholera at Naples really mean may be arrived at.

The total number of deaths, something over 5000, is at least equal to that of all who have died in the whole of France up to the present time since the first case at Toulon, about June 17th, and that in one month. The deaths seem to have been about forty per cent. of those attacked, and it may with safety be reckoned that there have been about 13,000 cases.

This is, indeed, an experiment on a large scale, but whether anything more will be learned from it than was known before, to wit, that Naples has an insufficient water supply, bad drainage, and a very large, underfed, overcrowded population, packed in high tenements, abutting on narrow, dirty lanes, remains to be seen. The government at Rome is reported as having resolved to attack some of these conditions, but Naples has had many similar lessons before from plague, fever, and cholera, and we are reminded that the chapel vowed to their patron saint, Gennaro, by the stricken inhabitants, in 1527, was not begun until after a delay of eighty, and not finished for more than one hundred, years. It is to be feared that the Neapolitan ardor in hygiene will brook delay even more easily than their ardor in superstition.

Italy and Spain were the countries most strongly objecting to the adoption of the resolutions by the Vienna Cholera Conference of 1874 condemnatory of the old-fashioned perfunctory quarantine, but they can hardly hold that a detention of forty days would have availed them more than has one of twenty or ten, or would have stopped up any more of the holes in their sieve-like barricade. The countries which cry the loudest for the strictest quarantines are like those individuals who spasmodically and tempestuously tell their beads, most conscious of secret sins.

The royal visit of King Humbert to Naples has shown us that a king can be at once courageous and intelligent, and emphasizes the theory, based upon many observations, that the contagium of cholera may be safely faced, as a rule, if excluded from the digestive tract. It is reported that the food and drink consumed by the king during his sojourn in Naples were all forwarded from Rome. The priest and one of the guards accompanying the king are reported to have died. The royal exposure, however, was none the less admirable because arranged for on a scientific basis.

MILITIA AMBULANCE BEARER COMPANIES.

WAR is the intelligent but barbarous use of force in the settlement of national disputes, and while the humanitarian deplores its necessity he recognizes its occasional good results and attempts to mitigate resulting horrors. The first end to be gained is victory; that being accomplished, the care of the injured combatants should next engage attention. Modern warfare has reached a stage of perfection in which results are rapidly accomplished, and this is undoubtedly due to the development of arms, which can be used with rapidity and precision, the mobilization of troops, and their rapid and machine-like movements. Modern warfare has brought into use the railroads, telegraphs, massive steel cruisers, and new explosives. When we consider that with the improved Gatling and Nordenfelt ten-barrel guns a thousand shots can be fired in each minute, as was actually done in the Soudan, we see that a large number of combatants can be rapidly disabled. This increase in destructive power creates an increased necessity for means of caring for the injured. Unfortunately, however, military commanders have generally considered the care of the wounded as a minor consideration, and only in recent years has it dawned upon such officers that the certainty of good care in the event of misfortune develops in men an "esprit de corps" second only to the accomplishment of victories. Again, the certainty of good care and attention, in case of injury, softens the anxiety of those who part with their loved ones for the national defense. This home feeling forms the foundation of the moral support on which commanders at times lean so heavily, and without which supplies of men and material to carry on their campaigns would be wanting. The lamentable failure of men to receive proper medical care in the Crimea early drew attention to the defects of the old system of caring for the disabled. It was only when Letterman in our civil war developed gradually an ambulance system (which at the close of the war was quite effective) that the necessity for sure, rapid, and effective treatment and transportation of injured combatants was properly appreciated. Many will remember the heart-rending tales of the needless suffering in transportation inflicted on our soldiers in the early part of the civil war. Needless, because this exigency of warfare should have been foreseen and provided for. As late in the war as February 24, 1863, a bill to organize an ambulance corps failed to pass the United States Senate, and it was rejected owing to its being considered by the committee "an impracticable measure at this time," "this time" being the especial moment at which its need was greatest.

It is rather surprising that a matter of such vital importance as the care and transportation of wounded combatants should have been delegated until within a few years to a body of untrained and hence unskilled, unqualified band men and stragglers.

That a military commander should leave his second greatest object to be achieved in the hands of an ill-defined body of men, a failure in whom to perform their duty brings disaster and defeat upon him and disgrace in the eyes of all civilized people from his failure to provide for the ordinary exigencies of warfare, is past comprehension. Major-General George B. McClellan appreciated the necessity for an ambulance corps. In a letter dated February 21, 1863, addressed to Henry I. Bowditch, M. D., in answer to the question, "Should the men in the ambulance corps be detailed soldiers, taken from time to time from the ranks, or should they be men enlisted for the purpose and taught their especial duties?" General McClellan answered as follows: "There are many self-evident objections to the system of taking men temporarily from the ranks for this duty; they need instructions in their peculiar functions as well as the ordinary discipline, and should have distinctive uniforms. I am of the opinion that men should be enlisted especially for duty in the ambulance corps." Dr. Bowditch asked also the following question: "Do you think the establishment of such a corps would increase the number of non-combatants?" McClellan's answer is: "I think it would decrease the number of non-combatants, especially during battles."

In recent campaigns no such flagrant neglect can be recorded. The rapid advance which Wolseley made into the interior of Egypt, owing to the retreat of Arabi Pasha, demonstrated that had he been encumbered with sick and wounded, or had not his medical department been completely organized, his campaign would have been seriously impeded and possibly failed. Even as it was, a long investigation of the "break-down" of the medical department ensued on his return. This so-called break-down was probably due to the non-elasticity of the department in its inability to conform itself to the strained situation from lack of proper training. Although the histories of campaigns will always essentially differ, by reason of the ever-varying circumstances which surround them, a lesson has been taught that in future a successful army must be one that can move rapidly and strike quick and decisive blows, and an army whose fighting men must wait to care for the wounded does not meet the requirement.

One hundred and thirty-three thousand dollars were expended in 1883 by the Commonwealth of Massachusetts for her volunteer militia; this amount keeps in existence and instructs a body of men who would in case of need quell insurrections and repel invasions. Infantry, artillery, and cavalry are the three branches developed, and of late years special attention has been paid to heavy artillery, rifle practice, and signaling, but owing to a variety of causes no ambulance corps has ever been established. It is generally considered that a militia should be a school of instruction for the men, and the public expect the development of a nucleus from which can grow, in case of necessity, an effective body of soldiers. Now it is a well-worn axiom that familiarity and experience with any work are necessary for its best accomplishment. Therefore the training of an ambulance bearer corps should form part of the duty of the volunteer militia. Of small numbers, but properly instructed and drilled, this body would form a unit from which might spring in time of need a service of the greatest importance. Volunteer ambulance bearer corps have recently been instituted at the various hospitals throughout England, and the corps as they now exist are formed of medical students. These corps occupy the same position to the volunteer militia that the hospital bearer corps do to the regular army. At Aldershot, a few weeks since, a detail of a hundred men, acting as wounded soldiers, were searched for at night, after a supposed battle, by the aid of an electric light carried by a bearer company of the army hospital corps, with all the paraphernalia of transports complete. The application of the electric light was a distinct success, the necessary dressings of the wounded being performed with accuracy and dispatch.

An attempt was made at one of the recent annual encampments of the Massachusetts militia to instruct the men in the treatment of emergencies; owing, however, to a variety of causes the trial was a failure. This was due, in a great measure, to the amount of tactical instruction and drill required of the men. The topics considered were of general interest, but the men showed a lack of appreciation by reason of these conflicting duties.

It was also found impracticable after "retreat," the men requiring amusement at that time rather than instruction and hard work. Now, while a general knowledge of the principles of sanitary science, as taught German officers, is of importance, we feel that in time of war the rapid treatment of wounded combatants demands the training of brave and intelligent men for this important work. We hope that there will soon be an ambulance bearer corps connected with the various State militias, under the control of the surgeon-general of the State. A company should be connected with each brigade, under the direction of the medical director, and this company should be composed of enlisted men, having the proper number of sergeants, corporals, and privates. A number of such a bearer corps should be medical students, as it is self-evident that by the discipline of such a service they would be better fitted to act after graduation as medical officers of the volunteer militia.

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ALCOHOLIC DISEASE IN CHILDREN.

One of the most painfully interesting communications at the recent meeting of the British Medical Association, says the *Lancet* (September 6th), was by Dr. T. M. Madden, Physician to the Hospital for Sick Children, Dublin, on Alcoholism in Childhood and Youth. Dr. Madden testified that many such cases came under his view. He gave particulars of a case of marked delirium tremens in a boy aged eight. His mother was a drunkard, and he, at the age of six, on discovering a secreted bottle of whiskey, showed the hereditary tendency to follow her example. Before admission into the hospital with delirium tremens he had obtained access to a bottle of port wine and almost emptied it. He nearly died from coma, and, delirium tremens supervening, he was taken to the hospital. Boils followed, and he remained weak in mind and body for nearly a month. He was then sent to a reformatory and recovered. A second case of juvenile alcoholism in a newsboy, aged eight, was the son of a drunken mother. He was sent for his mother's whiskey, and was rewarded with a sip. Dr. Barlow, of London, followed with some startling facts as to infantile alcoholism, gathered from his experience in the Children's Hospital, Ormond Street. He had seen the evil effects of small doses of gin given to babies at the breast for flatulence. He had also found it customary to give quite young children among the poorer classes a daily quantity of beer. He had seen two or three cases of well-marked typical cirrhosis, with a little ascites, from this cause. He detailed one very striking case — the child of an apparently healthy mother, able to suckle it, and in fair circumstances. From six months old the child was given a tablespoonful of beer twice daily, and from nine months old a teaspoonful of gin in as much water daily. The child died, and was found to have one of the most typically hob-nailed livers Dr. Barlow had seen. Dr. Barlow properly added that he had seen hob-nailed liver in children where it was not possible to have alcohol. Dr. B. O'Connor bore similar testimony. These are appalling facts, which give great force to the warning of Dr. Madden and Dr. Barlow as to the responsibility of prescribing alcohol to children.

On the other hand the unperverted taste of children is often the physician's surest guide for the administration or cutting off of alcohol in wasting or debilitating diseases. Few practitioners, probably, have not had occasion to wonder at the strange instinct which leads children to refuse stimulants which they had previously been taking in large amounts, and with evident relish; in such cases the result of immediate discontinuance almost invariably justifies the obedience to the instinct.

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MEDICAL NOTES.

— In the latest number of the *Centralblatt für die medicinischen Wissenschaften* to reach us, under date of September 6th, the editors, Professors Kronecker and Senator, write these appreciative words of their deceased associate, Julius Cohnheim: —

"On the 15th of August, at midnight, Dr. Julius Cohnheim, the regular professor of general pathology and pathological anatomy in the University of Leipzig, quietly and painlessly passed away, in consequence of an attack of palpitation, after long sufferings, in the forty-fifth year of his age. Attacks of gout, the first of which visited him fifteen years ago, gave rise to progressively increasing disease of the kidneys, in consequence of which his heart had become hypertrophied to a very unusual degree. His great vitality and the devoted care of his noble wife and affectionate physician had averted for two years the constantly impending danger of dissolution. Now that the care is over the remembrance of our great loss remains. His intellectual powers were still at their height when sickness disabled his body. This is not the place to express an estimate of Cohnheim as a student. He has, in his manual of general pathology, erected a monument which shall long be an inspiration to the investigator striving for his high aims. Simple and vigorous as was his truth-loving character is his style of expression. His joyousness of nature was never disturbed by harsh or even malicious criticism of his investigations in untrodden fields. He openly acknowledged errors into which he had been led. He gladly accepted the coöperation of others. He communicated his clear views without reserve to his fellow-workers. Hence he collected a large circle of pupils, in whom his thoughts and his methods will continue to live. His rich mind took intelligent part in every intellectual movement, and enjoyed intercourse with friends of the most different professional circles. He has been associated with this periodical from its origin, as founder, collaborator, and in the years 1866–1868 as editor. A true friend has gone from us. His spirit still lives with us."

— The correspondent of the *Lancet* (September 6th), writing from Italy, has a good word to say of the tour of King Humbert II. through the cholera-stricken communes. "Two years ago," remarks the writer, "during the disastrous floods in the Venetian territory; last year, after the calamitous earthquake in the island of Ischia; this year, in the choleraic centres of Piedmont — the King has endeared himself to his subjects by his faithful reproduction of that heroic self-abnegation and paternal solicitude on their behalf which they love to associate with his sire, the '*Re galantuomo*.' Modestly attired in a low, round hat, with walking-stick in hand, accompanied by the Prime Minister Depritis, by his adjutant, and by the local physicians, he has been visiting every hospital where the cholera patients are housed, going from bed to bed, inquiring into each individual case, taking note of the treatment and its results, addressing genial words of encouragement to the more desponding sufferers, and leaving substantial donations to each institution on his departure. Praiseworthy as such conduct would be in a country like ours, it is trebly so in Italy, where ignorance, superstition, and centuries of insanitary prejudice have added tenfold to the miseries and the dangers of the cholera epidemic."

— The Bearing of Electric Lighting on Health was the subject of an essay by Mr. R. E. Crompton and a conference at the recent Health Exhibition, as we learn from the *Popular Science Monthly*. Mr. Crompton held that the conditions of health were not so good in any kind of artificial light as in daylight. Even the electric light, diffused, is deficient in intensity and inferior to daylight. All artificial lights except the electric contaminate the air. At the twelve-candle standard, coal-gas vitiates 348, paraffine oil 484, composite candles about 650, and tallow candles 933 cubic feet of air per hour, but the electric light none. The amount of heat produced in the same time by the same lights is represented respectively by the numbers 279, 362, 383, 505, and 14. The criticism of the glare of the electric light is not just; we are not supposed to look at it. The real test is the intensity of the diffused light. The steadiness of the incandescent electric light gives it a great advantage over all others, and the arc-lights are also being made more steady. The eyesight of the men in the British General Post Office has been greatly improved since the electric lights were introduced. Other advantages of the electric light are the greater pleasure it gives, its greater convenience, and its absolute safety.

— Dr. Mercier, of the West Pennsylvania Hospital, Pittsburg, relates (*Philadelphia Medical Reporter*, May 31st) the case of a black poodle, a year old, and weighing about fifteen pounds, from which the spleen was removed in 1875. It was gently detached from surrounding parts, leaving only a narrow pedicle, which was divided after being tied with silk ligatures. These were cut off short and allowed to remain in the wound. The incision of the abdomen was closed by six silver sutures. These were removed after two weeks, and the dog continued a house pet for nine years, exhibiting no change in disposition, and acquiring about double its former weight. He was a good house dog, and in every way a healthy animal. He died suddenly after exposure to severe cold, January, 1884, the only lesion discernible being severe enteritis affecting the lower part of the small intestine. There was not the slightest trace of the spleen, nothing to denote its former locality, no remains of the pedicle, nor anything to show that nature had made the slightest attempt at restitution.

— The *Medical Times*, speaking of a recent discussion at the meeting of the British Dental Association at Edinburgh on the fee for operations, and the absurd system of giving advice, where no operation was indicated, for nothing, says: "The question thus raised is, however, capable of wider application than to dentists only. In all the departments of our profession the public are willing to pay, or at any rate do pay, at a very much higher rate for manual dexterity than for advice pure and simple. Indeed, the inconsistency and absurdity is much more obvious in the case of medicine and surgery than it is in dentistry. Thus a man will pay two guineas for a consultation on which the whole future of his life depends, for instance, whether he is to leave the country on account of a supposed or real delicacy at his chest, and a hundred guineas for the removal of an eye that is hopelessly lost. So long as the profession by its silence virtually expresses its approval of the doctrine implied by this scale of fees as to the relative value of scientific discrimination in the one case, and the extremely slender manipulative dexterity required in the other, we must not be surprised if the public fail to take a more enlightened view."

— Baron Tennyson has received a well-deserved rebuke by Dr. Moxon in a paper recently read by him on the late Dr. Hilton Fagge, and published in the English journals. The poet, in a volume of ballads published in 1880, gave expression to libelous remarks regarding the medical profession, whereupon Dr. Moxon comments as follows: —

"Fagge's greatness as a physician appeared in his always kind and sympathetic and Christian treatment of the sick poor. It is easy for poets to put their own denials of Christ into other people's mouths, and then as fashionable authors to spread them about on drawing-room tables. It is convenient to be able to work off your baser sentiments in a false character; you yourself then appear pure by contrast with your own creations. But if one's solemn every-day duty is spent face to face and eye to eye with the sorrowing and suffering poor, one wonders how even a poet-laureate could be capable of thinking the matter of those loathsome lines of this new peer. I wonder is he yet ashamed of them? What footing has this poet aristocrat on any grounds of charity that justifies him in putting his blasphemous sentences into the mouth of the child he supposes? Let him go into a children's hospital, and see how far the poor sick little ones think as vilely as he of the kind-hearted doctor, whose only sorrow is that his best help to his little patients too often proves ineffectual. Fagge was physician to the Evelina Hospital for Sick Children. His sympathies were not with grandeur and the House of Lords."

— Professor Mallet, M. D., LL. D., Ph. D., has been appointed to the chair of chemistry in Jefferson College as successor to the late Professor Rogers.

— Among the new methods recommended for the use of iodoform we note a plaster made by incorporating with the ingredients employed in making ordinary adhesive plaster twenty per cent. of iodoform. This plaster, if applied directly to the previously cleaned surface, and in the case of slight burns and small wounds, is said to be very healing.

Correspondence.

SUCCESSFUL TREATMENT OF SNAKE-BITE BY THE EXPLOSIVE CAUTERY.

MR. EDITOR, — The recent reports of fatal cases of snake-bite induce me to invite attention to a method adopted and found successful in the case of a soldier of troop I, Fourth Cavalry, at Camp Supply, Indian Territory, in the fall of 1878.

The patient was struck upon the dorsum of third phalanx of the forefinger while engaged in gathering wild grapes.

He reached me very soon after the occurrence, probably not more than ten minutes. The surface about the fang puncture was slightly moistened and as much gunpowder as could be retained placed on it. The powder was then ignited, the wound scarified, and powder again ignited upon it; then a light linseed poultice sprinkled with tinct. opii. completed the dressing. Brandy was administered freely, and the patient soon fell asleep. The finger and hand were considerably swollen and discolored. There was slight nausea and depression, all of which soon passed off, and the man recovered.

I had learned of a case occurring among the Indians a short time before this, which was successfully treated by the explosive cautery, followed by a poultice of the chewed root of a species of chenopodium. No stimulants. In this case, that of a young squaw, the wound was on the leg.

This cautery is rapid, painless, and thorough, and if quickly applied appears to afford the best chances for recovery. Very truly yours,

T. G. WILCOX, U. S. A.

WASHINGTON BARRACKS, D. C.,
September 19, 1884.

Miscellany.

THE PHYSIOLOGICAL ASPECT OF MESMERISM.

THE *Popular Science Monthly* for October contains an article by J. N. Langley, F. R. S., on the above subject. The writings of Dr. Braid and others from the time of the original achievements of Mesmer down to the present time are drawn upon, and an attempt is made to account on physiological grounds for the phenomena of hypnotism. The results of hypnotism in the lower animals are compared with those in man, and it is shown that in the former the possibility of exciting certain parts of the nervous system while the others remain oblivious is less than in man. Regarding the therapeutic possibilities of hypnotism the author says: —

"There can, I think, be no doubt that mesmerism may help, and sometimes cure, persons suffering from certain diseases of the nervous system. It is not in our power to make any accurate statement of the way in which this is brought about; but, since disease may be the result of either an over activity of or an under activity of any part of the central nervous system, it is reasonable to suppose that a beneficial effect will follow the employment of a method which allows us to diminish or increase these activities as we will. This is a side of the question which is of the greatest interest both to physicians and to physiologists — to physiologists, since it bears directly upon the problem of the influence of the nervous system on nutrition. There is good reason to believe that, by directing attention strongly to any particular part of the body, the nutritive state of that part of the body may be altered. The determination of the actual way in which this is brought about is full of difficulties, but the following way is at least theoretically possible: It may be that the nerve-centres connected with the tissue in question are made unusually active, and that they send out nerve-impulses of a trophic nature, that is, impulses which directly control the nutrition of the tissue. The alteration in the tissue caused by its changed nutritive state — its changed *metabolism* — may conceivably be either beneficial or detrimental to the whole organism; it may give rise to a diseased state, or get rid of an existing one.

"The modern miracles of healing, wrought in persons in a state of religious enthusiasm, offer a field for investigating this problem; the field, however, is a particularly bad one, and chiefly because so many people concerned regard any careful examination of the subject as impious. But in mesmerized persons it seems probable that such investigations could be made on a fairly satisfactory basis. Men when mesmerized gradually lose remembrance of those things which they remember when they are awake, but not infrequently other things are remembered which are forgotten in the waking state.[1] This is normally the case with a person who has been previously and recently mesmerized. He may then remember little else than what took place in the corresponding stage of his previous mesmerization. In a certain state, then, an event or a command will produce in the central nervous system those changes which are necessary for the event or the command to be remembered later, without ever rising to consciousness in the waking condition. Thus, a command to do a particular thing, given to a subject in this mesmeric stage, may be carried out when he awakes, although he is quite unconscious why he does it. We may say that such an act is one of unconscious memory. But it is, I think, something more than this. The subject is usually uneasy and preoccupied until the thing is done; he is, to a greater or less extent, unable to fix his attention on other things; he is, in fact, in a state of unconscious attention to an unconscious memory. This brings us to our point. It suggests that if a subject, in a certain stage of mesmerization, be told that in a few days a sore will appear upon his hand, or, conversely, that a sore already there will disappear, the conditions which accompany conscious expectation and attention will, to a certain degree, be established, and the tropic influence of the nervous system on the tissues may be tested in a manner which puts the experiment fairly within the control of the observer, and, to a certain degree, excludes imposture. Such an experiment has obviously some drawbacks: it would probably only succeed, if it succeeded at all, with a person whose nervous system was in a state of unstable equilibrium; and it can hardly be expected that the effects would be so striking as when conscious expectation is also concerned. Still, observations of this kind are well worth attention, on account of the medical, the physiological, and the psychological issues involved in the results."

The author sums up the results of his observations into the following outline of a theory, which he says is only provisional: —

"The primary condition of mesmerism is an inhibition of a particular mode of activity of the cortex of the brain, in consequence of which the will can no longer be made effective.

"This inhibition may be brought about by nervous impulses coming from certain sensory nerves, as those of sight, touch, hearing.

"It may also be brought about by impulses or changes arising in the cortex itself.

"The inhibited cortex, and probably also inhibited lower centres of the brain, send out inhibitory impulses to all other parts of the central nervous system, so that the mesmerized man or animal gradually passes into a state of torpor, or even of complete anæsthesia.

"The phenomena of the excitable stage of mesmerism are proximately determined by the possibility of exciting any particular centre alone, without exciting at the same time other centres by which its activity is normally controlled. In lower animals this stage is less marked in consequence of a greater interdependence of the various parts of the central nervous system."

REPORT OF A REMARKABLE CASE OF COUGH.

DR. MACCOY reports in the *Medical News* (August 30th) an unusual case of irritative cough, as follows: —

"Mrs. S., aged forty, resident of Philadelphia, the mother of one healthy child, was first seen in December, 1882. At this time she was suffering from an almost continuous, exhausting, irritative cough, accompanied by violent fits of gagging, which had defied all treatment, and which had continued for several years. The patient was very thin of flesh, and her face much care-worn. She stated that her attacks of cough often lasted for hours, and were frequently accompanied by the fits of gagging, which came on after the cough had continued for a short time. Sometimes, after ascending the stairs, gagging would follow, and soon render her helpless. Her debility was so marked after one of these paroxysms that she frequently had to go to bed, and was compelled to remain there for some hours. Between the attacks of coughing and gagging she was rendered most miserable, and was completely debarred from social engagements.

"Examination showed no pulmonary disease. Inspection of fauces revealed marked cicatrices involving most of the posterior pharyngeal wall; extending well down the throat. Laryngoscopic examination at once made manifest the cause of her attacks. On a line with the superior margin of the arytenoidal portion of the larynx, on the posterior wall of the pharynx, was a horizontal cicatricial band extending well across the pharynx, about one eighth of an inch in diameter, the ends of which spread out in a fan-shaped manner, the fibres being lost in the tissues on each side. This band was so placed that the free edge of the epiglottis was touched by it while rising and falling, and readily explained the cause of the cough. The gagging was brought about by interference with the free action of the vertical and circular muscular fibres of the pharynx, as well as by impingement of the free edge of the epiglottis.

"The *specific* action (undoubtedly the cause of the destructive change) had long since ceased. While there was no direct history of syphilis, there was a history of a severe attack of ulcerative disease many years before, which she states her physician called diphtheria. No lesions of syphilis excepting those found in the throat were visible.

"The treatment consisted in dividing the cicatricial band with the galvano-cautery knife *vertically*, and dilatation. The first operation was not attended by perfect success owing to the incision being too near the median line. A few weeks after the first operation a second incision was made on the left side much longer and deeper than the first one. This effort was eminently successful. For six months there was absolutely no return of cough and gagging. Quite recently there has been some return of her attacks from neglect to keep up the dilatation. Another operation of multiple incisions was made a few months ago, which again completely relieved her. With occasional dilatation it is probable that the result will be perfect, but without it contraction will certainly occur in time (as is so well known), and the result will not be so satisfactory as it now is."

The author speaks favorably of the adaptability of the galvano-cautery knife for the relief of this condition, in fact is unable to see how the operation could have been performed so safely and so well by any other method.

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[1] A case is recorded by Braid of a woman who, during natural somnambulism — which is almost identical with a state that can be produced by mesmerism — could repeat correctly long passages from the Hebrew Bible, and from books in other languages, although she had never studied any of these languages, and was quite ignorant of them when she was awake. At length, however, it was discovered that she had learned the passages when she was a girl by hearing a clergyman with whom she lived read them out aloud.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 6, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	665	345	34.88	15.48	23.46	2.70	1.20
Philadelphia	927,995	386	152	22.10	13.60	6.50	3.90	5.20
Brooklyn	644.526	353	201	32.98	16.31	26.23	.35	.70
Chicago	632,100	251	147	40.56	5.46	25.35	3.90	4.68
Boston	423,800	228	121	40.04	15.40	29.04	2.20	2·64
Baltimore	408,520	146	72	28.70	10.50	14.70	2.10	6.30
St. Louis	400,000	151	58	28.29	11.73	13.80	4.23	3.06
Cincinnati	272,400	116	47	18.92	12.04	11.18	2.85	3.44
New Orleans	234,000	131	41	33.44	9.12	9.12	3.04	1.52
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	93	48	23.54	14.98	14.98	3.21	1.07
Pittsburg	180,000	78	45	51.20	7.68	32.00	8.96	6.40
Milwaukee	142,400	74	54	45.90	4.05	36.45	2.70	—
Providence	119,405	46	28	41.23	8.68	36.89	2.17	—
New Haven	62,882	23	8	26.10	8.70	8.70	8.70	8.70
Nashville	54,400	14	5	50.00	7.14	21.42	14.28	14.28
Charleston	52,286	28	9	32.13	14.28	10.71	3.57	7.14
Lowell	71,447	35	16	31.46	14.30	20.02	2.86	2.86
Worcester	69,442	33	20	42.42	15.15	36.36	—	3.03
Fall River	62,674	40	27	45.00	22.50	42.50	—	—
Cambridge	60,995	32	14	40.69	15.65	28.17	—	6.26
Lawrence	45,516	18	10	27.77	—	22.22	—	—
Lynn	44,895	8	1	25.00	12.50	12.50	—	—
Springfield	38,090	—	—	—	—	—	—	—
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	15	10	46.66	—	33.33	—	—
New Bedford	30,144	15	8	53.33	13.33	46.66	6.66	—
Salem	29,503	13	7	38.45	15.38	38.45	—	—
Chelsea	24,347	6	4	66.66	—	66.66	—	—
Taunton	22,693	6	0	—	—	—	—	—
Gloucester	21,400	11	6	—	9.09	—	—	—
Haverhill	20,905	7	2	14.28	14.28	14.28	—	—
Newton	19,421	1	1	—	—	—	—	—
Brockton	18,323	1	1	—	—	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	8	3	25.00	25.00	25.00	—	—
Fitchburg	13,433	3	1	66.66	—	66.66	—	—
Ninety-five Massachusetts towns	373,498	92	37	32.70	13.08	26.16	3.27	2.18

Deaths reported 3127 (no report from Buffalo): under five years of age, 1549; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 927, diarrhœal diseases 535, consumption 351, lung diseases 158, diphtheria and croup 103, typhoid fever 91, whooping-cough 59, malarial fevers 45, scarlet fever 31, cerebro-spinal meningitis 27, measles 21, puerperal fever six, erysipelas five, small-pox three, yellow fever one. From *whooping-cough*, New York 16, Brooklyn 14, Boston 12, Chicago five, Philadelphia four, Baltimore three, St. Louis, New Orleans, Pittsburg, Milwaukee, and Cambridge one each. From *malarial fevers*, New Orleans 22, Brooklyn 10, St. Louis five, New York four, Baltimore two, Philadelphia and Charleston one each. From *scarlet fever*, New York eight, Philadelphia four, Chicago, District of Columbia, and Milwaukee three each, Boston and Baltimore two each, St. Louis, Cincinnati, New Orleans, Pittsburg, Lowell, and Lawrence one each. From *cerebro-spinal meningitis*, Philadelphia 15, St. Louis three, New York two, Chicago, Cincinnati, District of Columbia, Charleston, Lowell, Worcester, and Holyoke one each. From *measles*, New York and Chicago eight each, Brooklyn two, Pittsburg, Milwaukee, and Fall River one each. From *puerperal fever*, New York, Brooklyn, St. Louis, Providence, Cambridge, and Holyoke one each. From *erysipelas*, Brooklyn two, Baltimore, Charleston, and Brookline one each. From *small-pox*, New Orleans two, Philadelphia one.

Cases reported in Boston: scarlet fever 26, typhoid fever 14, and diphtheria 12.

In 112 cities and towns of Massachusetts, with an estimated population of 1,356,032 (estimated population of the State 1,955,104), the total death-rate for the week was 22.10 against 19.75 and 22.24 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending August 23d, the death-rate was 25.6. Deaths reported 4293: infants under one year 1670. Deaths in London 1579: acute diseases of the respiratory organs (London) 157, diarrhœal diseases 995, whooping-cough 77, measles 71, scarlet fever 67, fever 53, diphtheria 24, small-pox (London 21, Sunderland three, Liverpool, Sheffield, and Birkenhead one each) 27. The death-rates ranged from 17.4 in Bristol to 39.3 in Preston; Birmingham 32.5; Bradford 21.9; Leeds 32.8; Liverpool 30.5; Manchester 31.5; London 20.5; Nottingham 32.5; Sheffield 34.2. In Edinburgh 14.6; Glasgow 26.6; Dublin 30.3.

For the week ending August 16th, in Berlin there were 845 deaths. Diarrhœal diseases 103, consumption 82, diphtheria 32, whooping-cough 17, measles four, scarlet fever four. Death-rate for the week, 35.3.

For the week ending August 23d, in the Swiss cities there were 56 deaths from diarrhœal diseases, consumption 41, typhoid fever nine, lung diseases five, diphtheria five, whooping-cough three, small-pox, measles, and puerperal fever each one. The death-rates were, at Geneva 17.3; Zurich 17.7; Basle 17; Berne 20.

For the week ending August 14th, in Paris, there were 42 deaths from typhoid fever, diphtheria and croup 36, diarrhœal diseases 272, whooping-cough 13. The death-rate was 27.8.

The meteorological record for the week ending September 6th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
August–Sept., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 31	29.771	68	77	64	97	95	74	89	SW	E	NW	5	4	10	O	O	C	—	—
Mon., 1	29.951	65	76	55	75	65	74	71	W	W	W	8	15	8	C	C	C	—	—
Tues., 2	30.133	66	77	53	50	54	79	61	SW	SW	SW	4	5	5	C	C	C	—	—
Wed., 3	30.077	73	86	58	84	59	88	77	SW	SW	W	11	15	9	C	C	C	—	—
Thurs., 4	30.112	77	94	69	83	65	87	78	SW	SE	W	6	6	7	C	C	C	—	—
Fri., 5	30.077	80	90	71	74	51	58	61	SW	W	W	10	12	4	C	C	F	—	—
Sat., 6	29.971	77	88	66	65	39	80	61	W	SW	W	2	11	9	C	O	C	—	—
Mean, the Week.	30.013	72	84	62				71										0.45	0.37

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM SEPTEMBER 13, 1884, TO SEPTEMBER 19, 1884.

Caldwell, D. G., major and surgeon. Granted leave of absence for one month and twenty days, to commence about October 15, 1884. S. O. 95, headquarters Division of the Missouri, August 16, 1884.

Cronkhite, Henry M., captain and assistant surgeon. From Department of the Platte to Department of the Missouri.

Taylor, Arthur W., first lieutenant and assistant surgeon. From Department of the Missouri to Department of the Platte. Paragraph 1, S. O. 215, A. G. O., September 13, 1884.

Macauley, C. N. B., first lieutenant and assistant surgeon. Assigned to duty at Fort Sisseton, D. T. S. O. 99, Department of Dakota, September 6, 1884.

OBITUARY.

Died, — In Boston, September 17, 1884, Howard Franklin Damon, M. D., M. M. S. S., aged fifty-two years five months.

American Gynecological Society. — Programme of the Ninth Annual Meeting, to be held at the Palmer House, Chicago, Tuesday, Wednesday, and Thursday, September 30, and October 1, and 2, 1884. Physicians are cordially invited to attend the sessions.

First Day, Tuesday, September 30th. Morning Session at ten o'clock. Roll Call, Reception of Guests, etc. Papers: (1.) Moot Points in Regard to Inversion of the Uterus, by Dr. John C. Reeve, of Dayton, O. (2.) Foreign Bodies in the Abdomen after Laparotomy, by Dr. Henry P. C. Wilson, of Baltimore. (3.) Abdominal Section: its Value and Range of Application, by Dr. C. D. Palmer, of Cincinnati. Adjournment at one P. M.

Afternoon Session at three o'clock. (4.) The Hygiene of Pregnancy, by Dr. Samuel C. Busey, of Washington. (5.) Rapid Dilatation of the Cervical Canal, by Dr. William Goodell, of Philadelphia. (6.) Cervical Fibroids as a Cause of Dystocia, and their Removal by Vaginal Enucleation, by Dr. Paul F. Mundé, of New York. Adjournment at five P. M.

Second Day, Wednesday, October 1st. Morning Session at ten o'clock. (7.) The President's Address. The Present Aspect of the Puerperal Diseases, by Dr. Albert H. Smith, of Philadelphia. (8.) A Further Report upon Extra-uterine Pregnancy, embodying Six Cases, by Dr. T. Gaillard Thomas, of New York. (9.) A Case of Tubal Pregnancy, with Rupture of the Sac, by Dr. R. B. Maury, of Memphis. Adjournment at one P. M.

Afternoon Session at three o'clock. (10.) The Limits of Vaginal Hysterectomy for Cancer, by Dr. Paul F. Mundé, of New York. (11.) Some Remarks on the Occipito-posterior Position in Vertex Labors, with an Analysis of Thirty-five Cases, by Dr. Edward Warren Sawyer, of Chicago. (12.) A Rare and Fatal Form of [illegible] Symptoms, by Dr. George J. Engelmann, of St. Louis. Adjournment at five P. M.

Business Meeting at 8.30 o'clock, with closed doors. Report of the Treasurer and Auditing Committee. Action on proposed amendments to the Constitution and By-laws. Election of officers for 1884–85. Nominations for honorary and active fellowship by the Council, and balloting on the same. Report of the Committee on Publication. Adjournment of the Business Meeting.

Third Day, Thursday, October 2d. Morning Session at ten o'clock. (13.) The Physiognomy of the Vulva as a Sequence of Anal Disease, and the Cause or Sustaining Cause of Uterine Disease, by Dr. Isaac E. Taylor, of New York. (14.) The Early History of the Treatment of Vesico-vaginal Fistule in the United States, and the Statistics of the Several Modes of Operating, by Dr. Nathan Bozeman, of New York. (15.) Periodical Symptoms in Uterine Disease, by Dr. George J. Engelmann, of St. Louis. Adjournment at one P. M.

Afternoon Session at three o'clock. (16.) Contributions to the Topographical and Sectional Anatomy of the Female Pelvis, by Dr. David Berry Hart, of Edinburgh. To be read by Dr. Alexander J. C. Skene, of Brooklyn. (17.) Fibro-myomata and Fibro-cystic Myomata of the Uterus: their Diagnosis, Prognosis, Pathology, and Treatment, with Cases and Specimens, by Dr. R. Stansbury Sutton, of Pittsburg. (18.) On the Ring of Bandl, by Dr. William T. Lusk, of New York. Adjournment at five P. M.

Books and Pamphlets Received. — Pathologie und Therapie der Frauen-Krankheiten, nach den in den Feriencursen gehaltenen Verträgen bearbeitet von Dr. August Martin, Docent fur Gynäcologie an der Universität Berlin. Mit 164 Halzschnitten. Wien und Leipzig. Urban & Schwarzenberg. 1885.

Osteotomy and Osteoclasis for Deformities of the Lower Extremities. By Charles T. Poore, M. D. New York: D. Appleton & Co. 1884.

Atlas of Female Pelvic Anatomy. By D. Berry Hart, M. D., F. R. C. P. E. New York: D. Appleton & Co. 1884.

Catalogue of the National University, Law Department, Medical Department, Dental Department: Washington, D. C. 1884–85.

Later Antiseptics in Private Surgical Practice. By Dr. Powell, Edgar, Ont. Read before the Ontario Medical Association. (Reprint.)

Removal of a Piece of Iron from the Vitreous Chamber by means of the Magnetic Needle. By Julian J. Chisholm, M. D. (Reprint.) Baltimore. 1884.

A System of Human Anatomy, including its Medical and Surgical Relations. By Harrison Allen, M. D. Section VI. Organs of Sense, of Digestion, and Genito-Urinary Organs. Philadelphia: Henry C. Lea's Son & Co. 1884.

Grundriss der Operativen Geburtshilfe für praktische Arzte und Studirende. Von Dr. Friedrich Schauta, O. O. Professor der Geburtshilfe und Gynecologie an der Universität Innsbruk. Mit 20 Holzschnitten. Wien und Leipzig. Urban & Schwarzenberg. 1885.

Henke's Atlas of Surgical Anatomy. A Series of Plates Illustrating the Application of Anatomy to Medicine and Surgery. Translated and edited by W. A. Rothacker, M. D. Cincinnati: A. E. Wilde & Co.

Original Articles.

THE EXTERNAL APPEARANCES OF PISTOL-SHOT WOUNDS.

BY D. B. N. FISH, M. D., OF AMHERST.

As by far the greater number of gun-shot wounds that come to the notice of the medical examiner are those caused by pistols or revolvers, I shall confine myself almost exclusively to a consideration of the wounds made by these "weapons of luxury," as they have been so fitly termed.

I have drawn freely from the works of Casper, Ogston, Taylor, Woodman and Tidy, Hofmann, Briand and Chaudé, and others, at times even using their language without always indicating the source from which it is drawn.

When called to view the dead body of a person supposed to have come to his death from gun-shot wounds many questions will present themselves to the medical examiner that may depend for their solution entirely upon the evidence found upon the body itself. He will have to decide whether the death has been accidental, homicidal, or suicidal. If homicidal, it may be important to determine at what distance, with what weapon, and from what direction the fatal shot has been fired.

The trajectory of the bullet through the organic tissues is subject to many and unforeseen variations; it may happen — as it has to so astute an observer as Casper — that the ball cannot be found even at the autopsy, and one may be forced to form an opinion from the external appearances alone of these pistol-shot wounds.

Let us remember at the outset that "death makes disappear many of the phenomena of color, and brings about a relaxation of the parts which may change the dimensions of the wounds, or the situation of the wounded organs."

These wounds, under the force of ever varying conditions, are very different in appearance and extent; their appearances are far from having an absolute value, and "their significance is largely dependent upon the experience and acuteness of the observer."

The resistance of the air, modified, perhaps, by prevailing winds, the difference in length and calibre of the barrel of the weapon, the difference in the quality of its workmanship and even in its condition by reason of proper care or the want of it, the quantity and quality of the powder used, the shape and weight of the missile, all tend to make the problems more difficult of solution.

The wound made by a ball penetrating the body may present an appearance like that of Braun's "cuts of a lancet," or his "mere scratch," which had healed by first intention; or like Hofmann's wound of the scalp, "so slight, that having escaped detection at the first examination, it was only revealed at the autopsy;" it may be a smooth, round opening, — large or small, — an oval wound, or a valvular one; it may have a starred or a serrated outline, or may be irregular and torn giving to an otherwise simple wound a frightful appearance.

"In general, a bullet preserving its integrity, impinging at ordinary range and at a right angle upon any portion of the body well covered with soft tissues and not unnaturally put upon the stretch, leaves, as it passes through the skin, an opening more or less regularly rounded in form, often, perhaps, a little less in diameter than the missile, with its edges inverted and livid in hue, due to the contusion and to the discoloration from the burned powder carried upon the missile. A cylindro-conoidal ball will probably cause an irregularly outlined opening either stellate or slit like with serrated edges. If the ball has traversed the body, the wound of exit may closely resemble that of entrance, but is usually larger and more irregular, with everted edges, bearing few evidences of contusion, but often showing greater loss of substance." [2]

"The wound of entrance is large and irregular when a ball strikes near the extremity of its range."

When a spherical bullet is fired from some distance and has lost but little of its momentum it usually makes a round, well-defined opening, while a conical ball frequently causes a linear incision; this is true especially of revolver-shots, which may produce wounds, very insignificant, similar to knife-cuts. The aperture is made with comparatively little bruising or tearing, and the resilient tissues close upon its track.

As a rule the entrance will be round only when the ball strikes at right angles; it will be oval or valvular when it strikes obliquely, but it sometimes happens that a conical ball from an inferior weapon, even when fired at right angles to the body, strikes wholly or partly upon its side according to the distance from which it is fired, thus always making an oval wound. A revolver in my possession at any distance beyond eighteen inches throws a ball flat-wise; within this distance it strikes partly upon its side, never upon its apex.

"Fired at a moderate distance but so near as to traverse the body, the orifice of entrance will be well-defined, round, or oval according to circumstances, — the skin slightly depressed, — the edges presenting a faintly bruised appearance; but the surrounding parts are neither blackened nor burnt, and they do not present any marks of bleeding. In these cases the orifice of exit is large and irregular, the skin lacerated but free from any appearance of blackening or burning; it is generally three or four times as large as the entrance orifice." [3]

In regard to the comparative size of these wounds of entrance and exit various and contrary opinions have been held by both surgical and medico-legal writers. On the one hand we have Woodman and Tidy claiming that "the exit wound is invariably the larger," while Casper as positively asserts that "the *wound of exit* is always smaller than the *wound of entrance*." It is probably safer to follow the middle path with those writers who teach that, in general: —

In shots fired from a distance the aperture of entrance will be the smaller. [As most gun-shot wounds observed by army surgeons are of this class, this may account for their unanimity of opinion that the orifice of entrance is the smaller.]

In shots from a short distance the two apertures will be alike.

When fired close to the body the wound of entrance will be the larger.

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[1] Read at the meeting of the Massachusetts Medico-Legal Society, February 6, 1884.

[2] Otis, Med. and Surg. Hist. War of Rebellion, Surg., vol. iii., p. 711.

[3] Taylor's Principles and Practice of Medical Jurisprudence, i., p. 685.

It must be remembered that these are general rules, subject to many modifications.

Wounds of entrance made by revolvers and pistols will be smaller than those made by weapons of larger calibre; they will also probably be smaller when made by the cylindro-conoidal bullet, now so commonly used, than when made by a spherical ball. Small pocket revolvers, says Hofmann, give rise when they wound the skull only to a small opening whence radiate cracks in different directions.

The bleeding is usually slight, and when it occurs it is more commonly observed from the orifice of exit than from that of entrance.

As a rule the edges of the aperture of entrance will be inverted and those of exit everted, but Casper shows that this is not invariably so. He says: "If the part struck be very fat, the fat soon protrudes from the wound and it — the aperture of entrance — is found to have its edges swollen and anything but inverted. In other cases the putrefactive process causes the edges of both wounds — where two are present — to protrude, and so prevents their being recognized either as apertures of entrance or exit."

Hofmann says: "The assertion that the edges of the aperture of entrance are inverted and those of exit everted is correct in many cases, but not in all. In wounds from shots fired near by, the edges of the aperture of entrance are almost always everted when there happens to be bone beneath the wounded surface, because the gases of explosion are diffused between the skin and the bone beneath; the edges of the wound are crowded outward and may even be lacerated in this manner." [A statement which does not accord with my limited experience in such wounds.] "What proves this method of production of the ragged edges and rents," Hofmann goes on to say, "is this fact: that the edges of the aperture of entrance, whether this be irregular or rounded, are almost always undermined, and the subcutaneous tissues are blackened by powder to an extent corresponding to the parts undermined."

I hope to demonstrate further on that in pistol and revolver shots these gases of explosion, instead of passing with the ball through the skin, expend the greater part of their force upon the tissues at a point outside of the opening made by the ball. I can see that some particles of powder may cling to the ball and explode after passing through the skin. For, in firing a Colt's revolver at twenty-eight inches, several grains of powder passed, probably with the ball, through blotting paper and sprinkled the ash left after burning around the hole made by the ball in a second sheet of paper which was placed four inches behind the first one.

Medical Examiner S. D. Presbrey has furnished me the following notes of an interesting case which appear to demonstrate this possibility more clearly than do my own experiments: "An old man loaded a 'cut-off' musket with powder and shot, — both in large quantities, — put the muzzle to his stomach and fired. The cotton shirt had a hole, with burned edges, irregularly circular, four inches in diameter. Next, a thick woolen shirt had a ragged hole about one inch in diameter. Some few shot-holes to be noticed about the edges of this hole; edges scorched but not burned like cotton shirt. Next, a cotton wool undershirt with a ragged hole similar to the one last described. Skin blackened with powder for a space of three inches square. In this blackened space were two *tears* through the skin, making together an opening somewhat like the letter T, its horizontal measuring two inches, its perpendicular, or rather, oblique, measuring one inch. The stomach with its appendages was hanging through a large hole in his back, blown out, apparently, by an explosion of powder within the body."

Here the burning powder had passed with the small shot through the cotton shirt, setting it on fire; through the other two shirts with little burning, — as woolen burns much less freely than cotton, — and then had exploded in part upon the body, leaving a blackened surface of larger dimensions than the opening made in the second and third shirts. It is probable that the remaining and by far the larger portion of the powder was carried within the body and caused the appearances of explosion.

Ogston says: "The edges of the entrance will be depressed and contused, the edges of the exit projecting and torn. The entrance will be dry and dark colored, the exit one raw and bloody. There will be loss of substance in the former case, but none in the latter."

The blackened and burned appearance of the edges of wounds of entrance has been variously explained. Otis, as already stated, ascribes it to the contusion and to the discoloration from the burned powder carried upon the missile. Taylor says it arises from the heat and flame of the gunpowder at the moment of explosion. Hofmann declares that it is due less to a burn than to a contusion and excoriation of the edges of the aperture of entrance, for it may be found, although less defined, in shots fired from a distance. Ogston asserts that it may result from a contusion of the wound causing an ecchymosis, or, when the piece is fired close by, from the burning of the powder.

On the other hand, Briand and Chaudé, alone of all the authorities consulted, speak of "the cauterization of the lips of the wound by the heated projectile." They quote Gosselin as describing "furrowed wounds, which present a surface, so to speak, cauterized by the projectile;" also, "cul-de-sac wounds — bleeding more freely, for the projectile, losing in proportion to its penetration of the tissues a notable amount of its momentum and heat, divides the tissues without cauterizing them." Such a heating of the projectile by the flame of the powder and by the friction of its passage seems impossible, as the time of exposure to such influences is too short. A rifle ball travels, on the average, about six hundred and sixty feet a second, and it takes only a few one hundredths of a second to burn over one hundred and fifty grains of powder. Capt. John E. Greer, now chief ordnance officer of the Department of Missouri, who was selected by the War Department, at the request of the Attorney General of New York, to make experiments in firing for use in the famous Billings murder trial in Saratoga County, has stated to me that at no range is the bullet heated sufficiently to burn the skin. His experiments were made with rifles, carbines, and revolvers on paper and on glass. [We probably shall not err greatly if we continue to speak of "a dose of cold lead."] Ogston has said that "as the blackened and scorched appearance of the edges of the entrance wound may be caused in more than one way, its presence or absence has to be accounted for by the history of the case, and is not found to be invariable in its occurrence. Where, as is frequently the fact, the blackening is due to ecchymosis being produced, the production or non-production of this ecchymosis will account for the extent or absence of the blackening."

Dr. F. H. Hamilton relates the case of a soldier shot in the chest by a sentinel, in which the wound of exit was larger by one half than the wound of entrance, its edges not everted but looking discolored as though blackened by powder. This discoloration he found to be due to a slight extravasation of blood into the tissues under the skin.

"Small shot, fired at a distance," says Dr. Lachese, "of not over ten or twelve inches, may produce a round opening somewhat resembling that made by a bullet; from twelve to eighteen inches the opening was irregular and the borders were much lacerated; at thirty-six inches the central opening was entirely lost and the surface much covered with shot." Briand Chaudé say small shot begin to scatter at thirteen inches, while Dr. Lowe is said to have fired a new gun with the result of a round aperture resembling that of a bullet at a much greater distance than that given by Dr. Lachese.

Grains of powder may act as projectiles when fired at short distances, even penetrating the organs which they reach.

The wadding of a gun, paper pellets, a ball of wax or cork, may make holes like shot or like a bullet when fired from a gun with a large charge of powder at a distance of two or three yards.

The explosion of powder alone, without ball or wadding, is capable of causing very serious wounds, especially when fired into the mouth. When wadding has been used in like circumstances, it is known to have caused extensive laceration of the soft parts with fracture of the bones of the face and the base of the skull. So a pistol fired close to the abdomen, without a ball, has produced a fatal wound from the entrance of wadding alone. A pistol, loaded with powder and ball, may be fired with the muzzle pressed closely against the flesh without the ball touching the body. The weapon will either burst or recoil, and the bullet drop to the ground leaving only a contusion or a slightly contused wound, caused, not by the ball, but by the air within the weapon.

The aperture in the clothing made by the projectile is worthy of consideration. Dupuytren says it is always smaller than the ball; Taylor, that it is smaller when the clothing is of an elastic material. In comparing the size of the aperture and that of the ball, it must be remembered that the bullet may have struck upon its side and not upon its apex, also that the powder may have burned a portion of the clothing around the opening. Ogston says: "At the entrance of the ball, the tissue of whatever kind exhibits a more or less ragged and irregular opening along with loss of substance, while the injury to the stuff caused by the exit of the projectile is not so much a hole as a rent, either straight or shreddy, which will admit the tissue to be so replaced as readily to show that there has been no part of its texture destroyed or carried away. The opening made by the ball in entering is always smaller in the clothes than in the skin."

In firing at several thicknesses of cloth placed against a hard or a soft backing one may often get as many varieties of openings as there are layers of cloth.

Although foreign to the subject, it may be of interest to note the statement of Briand and Chaudé that "when the ball presses the clothing into the wound, taking several superimposed layers of clothing, we frequently find the layers in the inverse order in which we should expect them; for example, we find a shred of the shirt before that of the coat, which can be explained only by a rotary motion, if not forward at least laterally, of the projectile."

Before passing to the appearance of the powder marks let me call your attention to the following facts: —

"Two wounds nearly in a line may both be wounds of entrance, made by two distinct balls, both of which have lodged."

"The wound of entrance and of exit may be side by side, as when the bullet has passed around the body, or there may be only one wound through which the bullet has entered and also escaped."

"A plurality of openings does not necessarily imply a plurality of bullets, for one bullet has been known to make five wounds, — two of entrance and three of exit."

When the weapon has been fired at a distance, for ordinary pistols or revolvers, of probably not more than twelve to fourteen inches, the hair and skin may be singed, burned, or blackened from the burning powder; and at a distance, even for the larger weapons of this class, of probably not over forty-eight inches, unburned and partly burned particles of powder may be imbedded in the flesh.

These powder marks may, within certain limits, aid in estimating the distance at which the pistol has been fired, and the position in which it has been held. In some cases they may even show, with some degree of certainty, whether the weapon has been fired by one's own hand or by the hand of another.

They arise from the smoke, from the heat and flame of the burning gases, from partly burned powder, from the residue or ash of the wholly burned powder, and from partly burned and unburned grains of powder driven into the tissues.

The larger the charge of powder, the longer the barrel of the weapon, and the more finished its workmanship, the more marked will be these appearances; but with a large calibre and short barrel the powder marks will cover a greater extent of surface. Pistols will show these markings, and brandings of powder at greater distances than revolvers of the same calibre, for, having a continuous barrel, there is not that escape of the gases of explosion and of the unburned powder that occurs between the cylinder and the barrel of the revolver.

The most of my experiments have been made with revolvers, because it seems, in these days, when very fair revolvers can be bought for eighteen dollars a dozen, that by far the greater part of the murders and suicides are committed with revolvers using metallic cartridges.

Before detailing my own experiments, let me call your attention to what has been said of these marks of powder by others.

"Dr. Dumesnil," I quote from Hofmann, "found, in firing at pieces of white kid, that at thirteen centimetres (five inches) the tattooing and even the burning produced by the powder will remain, easily to be shown even after washing. It is very probable it will most always be the same" — upon white kid I suppose him to mean — "at twenty centimetres (7.87 inches). At thirty centimetres (11.8 inches) the traces diminished considerably; they nearly disappear at fifty centimetres (19.7 inches); and at eighty centimetres (31.5 inches) hardly a trace is to be seen.

"What disappears in the first place — passing from near shots to those fired at a distance — is the immediate action of the gases of explosion, which, even at short distances, are absent, and this in proportion as the charge is smaller; sooner for revolvers than for pistols, sooner for pistols than for guns.

"Tourdes, with a holster pistol" [the French holster or cavalry pistol is said to be of .45 of an inch calibre], "set on fire a piece of paper at one half a metre (19.7 inches), and we have observed burning of hair from a revolver nine millimetres in diameter (.35 of an inch calibre) fired from a distance of ten to fifteen centimetres (four to six inches). He also found an incrustation of grains of powder from a holster pistol at two metres (78.5 inches); from a great American revolver at one and one half metres (fifty-nine inches); from an ordinary revolver at forty centimetres (15.7 inches)."

Briand and Chaudé say: "Powder blackens the surroundings of the wound to an extent of several centimetres, and grains of powder incrust themselves in the circumference of the wound. Powder driven from a barrel burns on leaving it at a distance equal to the length of the barrel of the weapon; the burning wad is carried much further."

My own experiments do not accord with this statement, as a cheap revolver, with a four-inch length of barrel and cylinder, calibre .32 long, will burn cotton-batting at a distance of seven and one half feet, the burned spots appearing at a little distance from the entrance of the ball. It will scorch cotton cloth at a distance of five feet; bibulous paper at six feet. In certain other experiments the paper was set on fire at three feet, and several grains of powder had penetrated six layers of the paper; at thirty inches two holes were burned through the six thicknesses.

A Colt's revolver, old style, .32 calibre, six-inch barrel, with thirteen grains of "Duck powder, No. 4," burned cotton-batting at a spot two and one half inches from the entrance of the ball at eight feet. At two feet the batting was all on fire. Fired at seven feet it burned two holes the size of the ball through tissue paper. These holes were at some distance from and above the opening made by the bullet.

Resuming the extract from Briand and Chaudé, — "Experiments made with a holster pistol fired at hair on a sheet of paper have shown, at one metre, the paper blackened by some grains of powder; some had penetrated the paper. The hair had no trace of burning. Contour of holes made by the balls not blackened. At sixty-five to forty-eight centimetres (25.5 to 19 inches) the hair had not been burned nor the paper blackened at the entrance of the ball, but the black points and little holes made by the grains of powder were numerous. Ten shots at sixteen centimetres (6.3 inches), edges of hole extensively blackened to width of thirty five to forty millimetres (1.38 to 1.57 inches). Several times the paper took fire. The hair always burned more or less completely."

Casper says: "These scorchings and brandings with powder only prove that the shot has not come from any great distance, that is. . . . from a distance not greater than from three to four feet."

The most explicit statement that I have seen appears in The New Dictionary of Medicine and Surgery, Paris, 1866, in which it is said that "The charring and burning of the vicinity of the wound, seen only at entrance, are always seen in shots at sixteen centimetres (6.3 inches); very nearly always from sixteen to thirty-two centimetres. Beyond this up to one metre there is no longer burning, but we may still find black grains incrusted around the wound. At sixteen centimetres paper takes fire frequently, hair always."

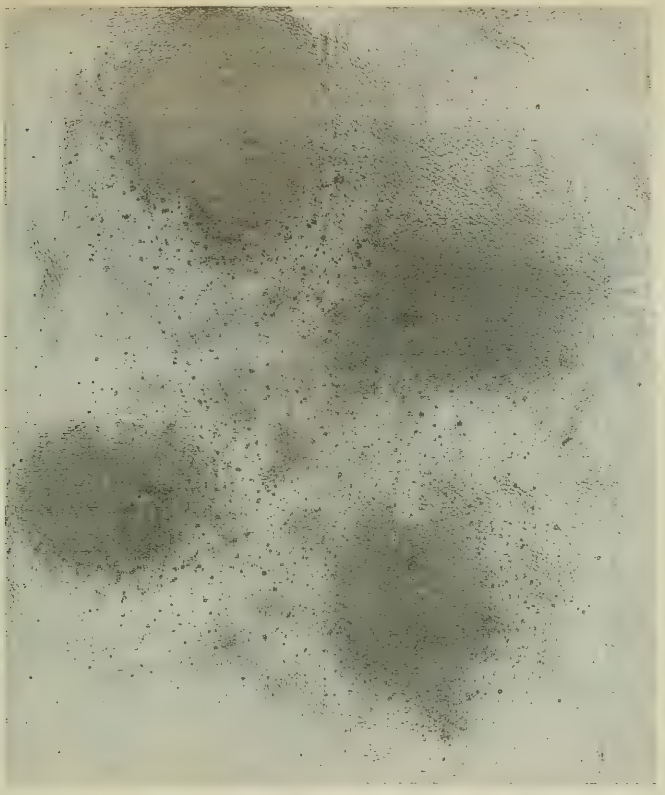
In regard to the blackening of the edges of the aperture of entrance in paper and cloth as well as in the flesh, experiment leads me to conclude that a part at least of this is due to the smut of the barrel — which even in the best revolvers becomes very great after repeated firing — and to the powder which clings to the ball because the latter is greased before firing. With a perfectly clean bullet fired from a clean and dry barrel the hole in the paper appeared free from any blackening; with a clean ball and an oiled but otherwise clean barrel there appeared slight smutting; with a greased ball, and especially after the piece had become foul, the blackening of the edges of the hole was very marked.

Nearly three years ago, while making some experiments in firing at short range, I noticed, in addition to the smutting of the paper by smoke, and to the marks of the partly burned and the unburned grains of powder distributed around the bullet hole, one spot, blacker and more burned than the rest. I found this was caused by the flame of the gases, by the burning powder, and by the residue, or ash, of the burned powder striking and resting upon this place. I also noticed that this burned and blackened spot held a most constant position directly above, or above and a little to one side of the bullet hole. Asking for the reason of this, I was told by an officer of the United States Ordnance Department that "as the velocity of the powder gases was greater than that of the ball, powder stains are found above rather than below the bullet hole." Thinking this might give some indication of the direction from which the shot was fired, I tried in later experiments to vary its position by firing at different angles, but with little or no effect.

Firing the pistol from either side, from above or from below the paper, the mark was still above the bullet hole, though its lower border sometimes came down to the level of the lower border of the opening made by the ball. After wasting much paper and ammunition it occurred to me to turn my pistol hammer down, that is, bottom side up. Now this spot appeared directly below the bullet hole, and I had a most pleasing solution of what had so long perplexed me.

I could put this spot on any spoke of the wheel of which the bullet hole represented the hub, simply by holding the pistol so that its hammer and sight were on a line with that spoke. Turning the pistol flat upon its side, with the hammer to the right, the spot appeared upon the right of the bullet hole; turning it hammer left, the mark was at the left of the hole.

The position of this burned or burned and blackened spot, varying constantly and varying exactly as the top or hammer of the pistol is turned on the long axis of its barrel, is due neither to the kind of weapon nor to the kind of ammunition used. Over two hundred experiments with seventeen different pistols and revolvers — rifled and smooth-bore of various calibres — fired with "loose ammunition," that is, powder and ball separate, or with rim-fire or centre-fire metallic cartridges, have failed to show any deviation from this result. It is due solely to the recoil of the muzzle of the weapon



This plate shows four shots made on dressed sheepskin from a Smith and Wesson new revolver, calibre 32, short, 6-inch range, with four positions of the hammer. The shot at the top was made with the hammer up, that at the bottom with the hammer down, those at the right and left sides with the hammer respectively right and left. Three fourths full size.

in the direction of its sight. When this recoil is prevented by fixing the weapon firmly in a vise the bullet hole will appear at or near the centre of the spot instead of at one side of it. This is well shown by the results of some seventy-two experiments kindly made for me, with the permission of the commanding officer of the National Armory at Springfield, Mass., by Mr. J. F. Cranston, an expert at the Armory. Of the seventy-two shots with three different weapons thirty-six were made with the pistols in a vise; each pistol was fired in four positions of the hammer — up, down, to the right, and to the left — at ranges of four, ten, and twelve inches; in no case did the mark appear at one side of the bullet hole. Of the thirty-six shots with the three weapons held in the same positions as before but held in the hand, at the same ranges, none that showed the mark plainly failed to show it at one side of the bullet hole and on a line with the hammer and sight.

It is barely possible that a pistol will be found in which the centre of gravity or of mass is so far forward on the line of its barrel that the recoil will be *downward* when held in the usual position for firing, but I am assured by gun dealers and manufacturers that, though rifles are sometimes so weighted at the muzzle, by brazing on a piece of iron, as to prevent the recoil upward, no pistols are made that do not thus recoil.

I have seen no allusion to the appearance and position of this spot in any work I have consulted, and have met no one who has ever noticed it.

I offer you, then, what I believe to be a new and almost infallible rule for determining the *position of the weapon*: —

Whenever this burned, or burned and smutted, spot is found, either upon the skin, the hair, or the clothing, at one side of the wound made by the bullet, by placing the muzzle of the weapon upon the wound so that the line of the hammer and sight will meet a line drawn from the centre of the wound through the centre of the spot of burning, or of burning and smutting, you will have the exact position of the weapon when it was fired. By position of the weapon I do not mean the distance at which it was fired, nor its angle to the body; the latter does not seem to modify the rule I have given. As some revolvers of large calibre and short barrel will sometimes produce the greatest smutting opposite the point of greatest burning, the latter must be understood in such cases as the spot to which this rule is to be applied.

It will occur to you that there are many positions in which a suicide could not, or would not, hold a weapon for the purpose of shooting himself, because he could not hold it firmly enough to be sure of inflicting a mortal wound. If this *brand*, if I may so designate it, is found either upon the skin, the hair, or the clothing, showing one of these positions of the weapon impossible or improbable for a suicide, it is reasonably certain that the case is one of homicide and not of suicide. No suicide, for instance, would hold a pistol to either the side or back of his head with the hammer and sight pointing forward, or forward and downward, nor would he hold it to his heart with the hammer pointing downward and inward, or downward and outward; nor to his side pointing backward.

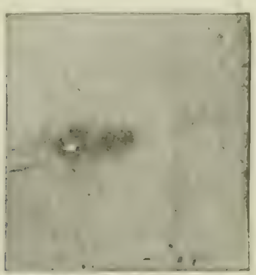
Moreover, if this *brand* is found in certain positions relative to the bullet wound, — such as forward and downward at the back of the head, or downward on the back, or downward and inward on the chest, — we may feel sure that the victim has not only been shot by another, but has been shot while lying down, or at least while in a reclining position; for no man who intends to shoot another holds his weapon upside down. While standing over the prostrate body he may easily fire so as to leave the *brand* of the powder upon any side of the bullet wound.

It is possible that in a struggle for the possession of a pistol it may be accidentally fired in one of these unnatural positions, but even then the very fact of its being held in such a position might be of importance in corroborating a claim that it was fired accidentally.

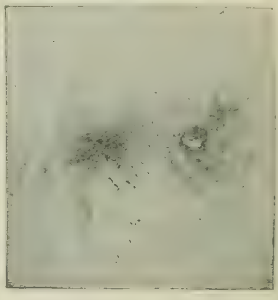
In testing for impossible or improbable positions of the weapon it should be cocked, as the hammer will thus interfere with positions that might otherwise appear possible.

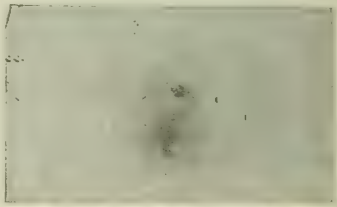
Let me say here that among the illustrations of the rule given some will be found which apparently do not exactly conform to the given position of the hammer; this is due solely to the fact that in firing at such short range it is difficult to hold the weapon in just the position intended on account of the great sense of danger to the eyes from the rebounding grains of powder.

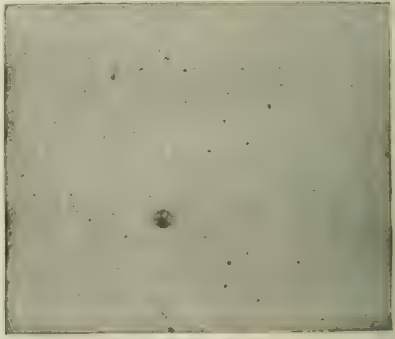
For the better preservation of these illustrations Mr. Charles O. Lovell, of Lovell's Photographic Gallery, has generously enabled me to present herewith excellent photographs of some of the best of them. The illustrations which accompany this article are photographic reproductions of the original shots, reduced in size.


Smith and Wesson 32, 6 in., hammer right.

From the few experiments I have made, I believe that the statement already quoted that "the charring and burning of the vicinity of the wound are always seen in shots at sixteen centimetres (6.3 inches), very nearly always from sixteen to thirty-two centimetres," will be found true in the case of shots fired from revolvers and pistols. One of .22 of an inch calibre, short, will probably show the powder brand plainly at four to six inches; a .32, short, at six to eight inches; a .38 at eight to ten inches; and a .44 at ten to twelve or thirteen inches. These figures are, of course, to be taken with a great deal of caution, as further observation may prove them to be erroneous.


Union 38, 6 in. range, hammer left.


Smith and Wesson 32, 8 in., hammer down.


Union 38, 36 inch range.

As the distance of this *brand* — which always follows the line of the hammer and sight — from the entrance wound of the bullet will vary with the "kick" of the pistol and with the degree of firmness with which it is held, it is not probable that anything can be learned from this of the distance at which the shot has been fired. Neither have I been able, as yet, to draw any inference from the size of these powder marks as to the distance of the weapon.

Hair, unless it is wet or very oily, will show marks of burning at six inches with even the smaller revolvers and pistols; at eight to ten inches with a .38, and at twelve to thirteen inches with a long barreled .44 revolver.

The powder marks upon the clothing will, by comparison with the results of experiments upon the same material made with the weapon and with ammunition similar to that used, furnish the criteria by which the distance may be judged.

I have found that upon broadcloth the spot or *brand* can be distinguished with care at fourteen inches with a .44 revolver; at nine to twelve inches with a short barreled .38; at eight inches with a .32 long; and at six to eight inches with a .22 and .32 short.

White flannel cloth will be scorched and singed so as to define the position of the hammer at twelve inches with a .32 long; at fourteen inches with the same weapon this could not be detected.

On cotton cloth at twelve inches with a Smith and Wesson .32 short this powder brand was plainly visible even after vigorous rubbing; with a Robin Hood, fired with a .32 short cartridge, the scorching and smutting were much less marked, the latter being an inferior weapon with corroded barrel. At fourteen inches with a Colt's army .44 the *brand* was well defined.

It will be seen that I have placed the tissues upon which this powder brand will appear in the following order: first — at the longest range — cotton and woolen cloth; next, the skin; and last, the hair. It is possible that when the skin is moist it may not show the *brand* even when the hair is burned.

Of the marks left by the powder upon the skin there remains for consideration the tattooing caused by the unburned particles of powder driven into the flesh. The proportion of powder wasted varies with the character of the weapon and with the kind of powder used; even in metallic cartridges of the same size it varies with the degree of compression used in fixing the ball. For heavy artillery this waste is over sixty per cent., and from my own experiments I know it to be very great with small arms, especially with the cheaper revolvers. In revolvers a part of the unburned powder escapes between the cylinder and the barrel; in all fire-arms a part of it may never reach the target; of that which does reach it a part rebounds; how much will imbed itself in the skin is so much a matter of uncertainty that it is difficult to determine at what distance a given weapon will present a certain definite degree of tattooing of the skin.

After various and unsatisfactory experiments, none of which were upon the cadaver, I can do no better than to refer again to the statement found in The New Dictionary of Medicine and Surgery, that "beyond .32 centimetres (12.5 inches) up to one metre there is no longer burning, but we may still find black grains incrusted around the wound." Whether the tattooing of the skin can be produced at this distance by pistols and revolvers is not stated; it seems to me very doubtful except in the case of the larger weapons of this class, having a long barrel and carrying a heavy charge of powder.

Neither can I give any definite estimate of the extent of surface covered by the tattooing at different distances. It is possible that in some cases an approximate estimate can be formed by experiments similar to the following made with a weapon with which a homicide had been committed: —

A boy was shot in the forehead with a "Standard" revolver, calibre .32 long. The tattooing measured two inches in diameter. The hair was considerably burned directly above the wound. Experiments with this pistol, and with cartridges similar to the one used, showed that to produce the amount of burning of the hair the weapon must have been held at a distance of six inches or less. Firing at two thicknesses of blotting paper placed upon a hard backing, as many grains of powder perforated the first layer of paper at six inches as at four inches, but to reduce the diameter of the surface perforated to the two inches of the tattooing of the skin the pistol had to be fired at a distance of four inches.

The fact that in very near shots clothing may be set on fire by the deflagration of the powder or by the burning wad is worthy of consideration.

Ogston says: "As to the question of a fire-arm discharged close to the body setting fire to the clothes, and extending from this to any distance along the dress of the party, the French Academy decided after several experimental trials that though the clothing may be set on fire in this way, and the fire spread to a limited extent, yet the burning is usually confined to the borders of the orifice in the dress."

Briand and Chaudé state that "the burning clothing may burn the parts with which it is in contact, but the point of departure of the combustion is always upon one of the points of the circumference of the hole made by the ball. It will not burn to any great extent."

In my opinion it is safe to say that, usually, this combustion will start from that point at the edge of the hole in the clothing which is in a line with the hammer and sight of the weapon, although if this is below the entrance of the ball the greater amount of burning may be above, as the flame would naturally pass upward.

Experimenting upon a worn, light weight broadcloth coat, I have not been able to set it on fire at any range even up to two inches with a .38 revolver; at eight inches several fibres of a cotton pocket were burned in the track of the ball. At seven inches with a Robin Hood .32, the pocket was somewhat burned; at nine inches a .38 Union set on fire the padding of the coat in the track of the ball.

Firing at an old and well-worn box cover, which was stuffed with excelsior and cotton batting and covered with a sleazy curtain damask, a Hood .32, at twelve inches, charred the covering to an extent of one half inch in diameter about the bullet hole; at ten inches five holes were burned in the covering above the bullet hole; at nine inches cotton batting set on fire in the track of the ball; a Colt's .32, at nine inches, fired hammer up, with rifle powder, set fire to the cloth at the upper edge of the hole; this fire burned until it had to be put out to save the target; fired hammer down, it set fire to the lower edge; at eight inches neither Smith and

Wesson's revolver, .22, nor Stevens' pistol, same calibre, produced any burning: at seven inches the Hood, and at five inches the Smith and Wesson's, .22, would always start a vigorous fire.

Such a target as this will give a fine illustration of the fact that the greater part of the flame follows the line of the hammer and sight. After exposing the cotton batting by making an opening in the cloth covering, and then firing shots about the circumference of this opening, with the sight pointed towards it, one can see the burning powder strike in the opening and set fire to the batting, while if the sight is turned away from the opening the flame will very rarely touch it.

In experiments on cotton cloth, at ten inches, with a Hood, .32 short, powder passed with the ball through four thicknesses of cloth, and set fire to the cotton batting in the box cover. At five inches a Whitney, .32 long, set the edge of the hole on fire. A Smith and Wesson, .32 short, set the cloth on fire, and burned a hole six inches in diameter.

Flannel did not burn at five inches.

It has been said that a pistol fired into the mouth has set fire to the portion of the clothing touching the neck, and burned the neck, chest, and chin. The fire extended to the furniture of the room. Such a burning, starting from a point below the entrance of the bullet, would seem very improbable, and would lead to the suspicion that the fire originated from some source other than the discharge of the weapon.

Devergie has stated that at 2.25 inches the shot can set fire to the clothing at the level of the hole made by the bullet, and the combustion may spread to a certain extent.

How shall we decide from these traces left by the projectile and by the powder upon the body and upon the clothing whether death has resulted from accident, from suicide, or from homicide?

It will not be necessary to recapitulate the evidences left by the projectile.

Accidental pistol-shot wounds cannot be distinguished from homicidal wounds when both are inflicted from a distance. In shots fired near by, when one is known to have been shot by another, and to have been shot while standing, an unnatural position of the weapon, as shown by the relative location of the *brand*, will tend to corroborate a claim of accidental shooting. So if one is known to have shot himself an unnatural position of the weapon will show that the shot was probably accidental. The location of the wound and the course taken by the ball may also characterize the wound as accidental.

Homicidal wounds may be far or near, and will be determined by the exclusion of accident or suicide. If there are several wounds upon the body the case is probably one of murder, but both barrels of a two-barreled pistol, or even more barrels of a revolver, may be accidentally discharged at the same time. One bullet, as has been said, may make five wounds, and a would-be suicide has been known to fire five shots into his own body. Suicides generally shoot at the head, — often directing the pistol into the mouth, — less frequently at the heart or lungs, more rarely at the abdomen; yet they sometimes fire at the back of the head. "The murderer more often, unless furious with passion, fires at the back or side of his victim."

If the wound be upon such a part of the body that a suicide would not be likely to inflict it upon himself, or if, as has been stated, the relative location of the aperture of the bullet to the burning of the hair, or of the burning or burning and blackening of the skin or of the clothing, shows that the pistol has been held in a position unnatural for a suicide, it is probable that a homicide has been committed.

If there is entire absence of these scorchings and brandings of powder it will also generally prove that the case is homicidal, but it must be remembered that suicides sometimes arrange contrivances, by means of cords attached to the trigger of the weapon, for shooting themselves from a distance, and that certain "chemical powders" do not leave any stains of the powder.

Casper relates the case of a man who undoubtedly shot himself through the heart, but not a single grain of powder was found on the edges of the wound, the neck, or the face. A like instance has come under my own observation in which a suicide held a pistol, loaded with the ordinary metallic cartridge, so closely to the temple that the blood spurted into the barrel of the weapon, yet there was only the burning of the hair, and a stain of powder smoke just back of the wound, an illustration of the rule already given governing the location of the powder brand.

Briand and Chaudé say that in the case of a suicide by a revolver it is very rare that the muzzle of the weapon, directed towards the head, can be more than twenty centimetres (7.87 inches) distant. Though this distance can be easily increased to even twelve inches by any one with average length of the arms, yet just as the suicide would not hold a pistol in any unnatural position of the hammer and sight of the weapon lest he should fail to inflict a mortal wound, so he will not be likely to exceed this limit of twenty centimetres.

If the bullet is found, its weight should be ascertained, as thereby it may be possible to show that although deprived of a part of its substance it still weighs more than the ball apparently used.

The external appearances of every pistol-shot wound should be studied with care. Then by experiments with the same weapon, and with ammunition similar to that used, it may be possible to determine many points otherwise doubtful, but of vital importance.

I do not know of any substance that has been proved to offer resistance to the impact of powder similar to that presented by the living human skin, and I am forced to leave this for some more fortunate member of our Society to discover. I will, however, venture the opinion that we have in blotting paper, of average thickness, a material of value for comparative experiments. With a target of two thicknesses of this fastened against a board, the surface covered by projections or elevations and perforations appearing upon the posterior surface of the outer sheet, will, I am inclined to believe, show the extent of surface marked upon the skin by powder grains when fired from the same distance. It may also be found that the number of these projections or elevations together with the number of these perforations will be equal to the number of grains of powder imbedded in the skin.

My experiments have been made upon sheep skin, chamois skin, upon the skin of a young calf, and upon the skin of a living cat; also upon blotting paper of various thicknesses, rubber, cotton and woolen cloth.

SUMMARY. The *distance* at which a pistol-shot has been fired may be estimated by the following general rules: —

(1.) From a great distance the entrance wound will usually be large and irregular; there will be absence of any great degree of lividity of its edges, and absence of the marks of powder. The wound of exit, if one is present, will usually be larger than the wound of entrance. At any distance the edges of wounds of entrance will usually be inverted, those of exit everted.

(2.) From a short distance the entrance and exit wounds will generally be nearly equal in size; the edges of the former will be blackened, and powder grains will be imbedded in the skin, but there will be absence of the scorchings and brandings of powder.

(3.) Close to the body the entrance wound will generally be larger than the exit. There will often be, in addition to the tattooing of the skin by unburned grains of powder, a mark or *brand* made by the flame of the gases and of the burning powder, by the soot of the partly burned powder, and by the residue or ash of the wholly burned powder. As a rule this *brand*, which may consist of a burning alone of the hair, the skin, or the clothing, or of a burning and blackening of the skin or clothing, will appear at one side of the bullet hole.

The *direction* of a shot will be shown in part by the trajectory of the ball, — a subject of which this paper does not treat, — and by the location of the wound of entrance. The character of the opening, whether rounded or oval, may give some indication of the angle at which the weapon has been held.

The *position of the weapon* (and whenever this term is used I wish to be understood to mean not its angle to or distance from the body, but the manner or position in which it is held; that is, whether it is held with its hammer and sight above the barrel, as in the usual position for firing, or with the hammer and sight below the barrel, as when the weapon is turned upside down, or in any other position of the hammer and sight relative to the barrel of the weapon) the *position of the weapon* is to be determined by the following rule: When the *brand* appears upon the hair, the skin, or the clothing at one side of the bullet hole, hold the weapon with its muzzle to the bullet hole so that the line of its hammer and sight will meet a line drawn from the centre of the bullet hole through the centre of the *brand*, and it will show the exact position of the weapon when fired.

This rule is deduced from the newly-discovered fact that, owing to the recoil of the muzzle of the weapon in the direction of its sight, this *brand*, when it appears at one side of the bullet hole, will appear upon that side which corresponds to the side of the hammer and sight in their position relative to the bore or barrel of the weapon. That is, if the weapon is held upside down the *brand* will appear below the bullet hole.

Accidental wounds are generally near wounds. When inflicted from a distance they cannot be distinguished from homicidal wounds. In shots fired near by, when a person is known to have been shot while standing, an unnatural position of the weapon, as shown by the location of the *brand*, will tend to corroborate a claim of accidental shooting. So, if one is known to have shot himself, an unnatural position of the weapon will show that the shot was probably accidental. The location of the wound and the course taken by the ball may also characterize the wound as accidental.

Homicidal wounds inflicted within the suicide limit have heretofore been distinguished from suicidal wounds alone by the location of the wound and by the uncertain evidence presented by the trajectory of the ball. When the location of the wound has been such that a person might easily have inflicted it upon himself there have been no means of determining from its character whether it was homicidal or suicidal. To aid in distinguishing between such wounds I offer the following rule: When the location of the *brand*, relative to the bullet hole, shows that the weapon has been held in a position of its hammer and sight impossible or improbable for a suicide it is probable that a murder has been committed. Certain relative locations of this *brand* may also indicate that the victim has been shot while in a reclining position.

Multiple wounds are usually homicidal, but may be either accidental or suicidal.

Shots fired beyond the usual suicide limit are probably homicidal.

Suicidal wounds. It is said that the suicide rarely holds the muzzle of his pistol at more than eight inches from the body. Suicides generally fire at the side or front of the head, next at the heart; they sometimes fire at the back of the head.

The distance from the body at which the weapon must be held to show the *brand* plainly is probably very nearly as follows: for small pistols and revolvers not over four to six inches; for large weapons of this class not over twelve to fourteen inches.

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A CASE OF IMPETIGO HERPETIFORMIS.[1]

BY W. E. BOARDMAN, M. D.

MAGGIE D., single, twenty-six years of age, healthy, was confined at the Boston Lying-In Hospital March 11, 1884, after a labor which was normal in all respects, except that the placenta was extracted, expression having failed to cause its expulsion, and this procedure was followed by a slight hæmorrhage, which, however, was easily controlled.

March 14th, on account of the continued rise in temperature and pulse and offensive lochia, in spite of the usual care and treatment pursued at the hospital in all cases, she was given an intra-uterine injection of corrosive sublimate solution, one to 2000.

Upon the following day this was repeated, morning and evening, and each injection was followed by the insufflation of powdered iodoform within the uterus. The chart indicates a fall in the temperature and pulse beat on the succeeding day, but at evening the injection of the sublimate solution and the insufflation of iodoform were repeated, and the next day gave a morning record of temperature 100.8° F., pulse 95.

Upon the next day (the 18th) the record shows another rise, and the patient complained considerably of pain in the right side and below the breast. Nothing was discovered upon physical examination to explain this, and fearing a renewal of the septic process the former treatment was employed at evening of that day. Upon the following day the chart shows a slight rise, there was continued complaint of the pain in the right side, and an erythematous blush was observed between the thighs and upon the labia. March 20th these parts became the seat of a vesiculo-papular pustular eruption, and the erythema was noticed on the buttocks, upper thighs, lower abdomen, and breasts, rapidly becoming papular, and in some portions, particularly upon the breasts and adjacent portions of the trunk, vesic-

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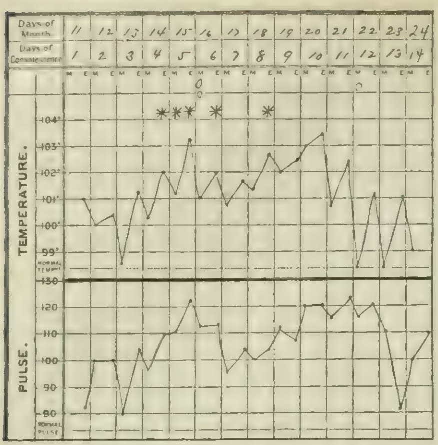
[1] Read before the Society for Medical Observation, May 5, 1884.



Note. — * indicates intra-uterine injection; o dejections.

ular and papular combined. This eruption gradually became confluent, and the parts first attacked began to scale. Upon the trunk the eruption became confluent and a serous effusion took place, commencing upon the lower abdomen, which raised the epidermis in the form of blebs, gradually increasing in size, flaccid and quickly ruptured, with the escape of a limpid, opaque fluid, non-irritant in character, and leaving the skin without ulceration, but oozing a thin fluid for a time, and of a deep rose-red color, desquamation following in large thin patches. Following essentially a similar order and appearance, the same process gradually invaded the whole surface by peripheral extension. The face, arms, and legs at the height of the inflammatory process presented a notable swelling and induration, which subsided after the rupture of the bullous sacs. In parts, especially upon the scalp, the fore-arms, hands, shins, and feet, the desquamation was largely in the form of thin, dry scales. The patient complained of some itching, which, however, was not excessive; of considerable pain, especially upon movement, where the disease was active. There was great prostration, necessitating frequent feeding and stimulation. The whole process occupied a period of about three weeks, though during the last week the patient was very comfortable, and convalescence rapidly ensued. Treatment: morphia for pain; oleate of zinc to the skin.

Dr. J. C. White very kindly visited the case on March 24th, the sixth day of the affection, and diagnosticated at once impetigo herpetiformis, or herpes impetiginiformis, and recommended the application of vaseline together with a wash of zinc and lime water.

The eruption, the history of which I have given, I fear, very imperfectly, belongs to a very limited series of cases, less than twenty in number, which have been observed and reported within the last twenty years, under various names, for example, herpes gestationis, herpes vegetans, herpes pyæmicus, herpes circinatus bullosus, herpes impetiginiformis, impetigo herpetiformis, pemphigus pruriginosus, and by some, for example Gibert, it has been called a pemphigus. These various terms evidently have been suggested by different phases of the same disease. Hebra saw only five cases, four of which proved fatal under his observation, and the fifth died under a subsequent attack, according to the evidence of his son. In most of these cases the patients have been women, and the eruption occurred *before* confinement. In a few instances, notably in three of Hebra's cases and in mine, the affection was post partum. Autopsies were made in Hebra's four fatal cases, but they showed no certain causes of death.

Neumann studied the anatomy of some cases and was able to demonstrate a notable dilatation of the vessels, particularly of the veins and lymph channels, an abundant round-celled infiltration of the cutis, and a proliferation of the cells in the parenchyma of the sweat glands.

The ætiology of the disease remains obscure, as it is with pemphigus. Generally it is attributed to reflex nervous disturbances which have their origin in the pregnant state, a theory which is strongly supported by analogy in the case of various affections of the skin during the parturient period. In my case I was at first inclined to trace a connection between the skin affection and the septicæmia, and it occurred to me that possibly it may have been a phase of iodoform poisoning. It is for this reason that I have given a brief account of the patient prior to the appearance of the skin affection. I have been unable, however, to substantiate either of these ideas by any recorded experiences of others. On the other hand several cases have been observed, in men, at least cases which have been considered to be the same disease by competent observers, and while these would not negative the theory that it is dependent upon a neurosis, still they serve to complicate the subject of the ætiology. Syphilis, too, has been suggested as a prime cause. In my case there was no evidence, historical or otherwise, pointing to this, and it may be added that competent observers and investigators have failed to find any evidence sufficient to make this an ætiological factor in the development of the disease under consideration.

With regard to the nomenclature, the weight of evidence appears to favor the name impetigo herpetiformis, which, I believe, was first suggested by Hebra from a study of his cases; though those evidently differed in several points, as to their appearance and mode of development, from cases reported by other observers. The very common term herpes gestationis seems to be inappropriate, for it would appear that most, if not all, of the cases which have been included under the names previously narrated were properly instances of the same affection under different phases, and hence this term would be inapplicable for obvious reasons, while the name suggested by Professor Hebra will embrace all, premising that in most cases the impetiginous element has been a predominant one, while in others vesicles abound with a marked papular efflorescence, and in others, with which my case may be classed, a bullous or pemphigoid appearance of the eruption became, perhaps, the most noticeable feature in its progress.

The prognosis appears to be governed by the extent of surface involved; the intensity of the febrile action; the various grades of the process, whether principally vesicles, blebs, or pustules; and the rapidity of the loss of strength.

The treatment has been largely symptomatic, and applied, in most severe cases, to sustaining the patient. Local treatment accomplishes little, if anything, in the way of checking or modifying the disease. Yet various applications have been employed successfully in affording relief to the pain, burning, and itching which usually prevail, for example, internally strichnine, quinine, iron, arsenic, stimulants, etc., and externally, tar preparations, various soothing salves, baths, zinc and lead lotions and powders, and in my case the greatest relief was afforded by the zinc and lime water lotion suggested by Dr. White. In cases where pus accumulates beneath the crusts absorption should be prevented by promoting the escape of the purulent matter.

CANCER OF THE BODY OF THE UTERUS, INVOLVING THE RECTUM.

BY FRANCIS MINOT, M. D.

Cancer of the uterus limited to the body of the organ, to the exclusion of the cervix, is so unusual that I think a report of the following case will be of interest not only to gynæcologists but to the general practitioner, who is often called upon to treat uterine disease. The diagnosis was obscure while the patient was under my care in the hospital. The gradual failure of flesh and strength, the pain, and the hæmorrhage were suggestive of malignant disease, while the apparently healthy condition of the os and cervix were opposed to that view; and the immediate and continued improvement which followed scraping the surface of the uterine cavity led me to hope that the case was one of so-called hyperplasia of the mucous membrane. The antecedents of the patient were not known to me until after her death, the hospital record stating that the family history was good.

S. C., sixty-one years old, single, a nurse by occupation, entered Massachusetts General Hospital June 28, 1883.[1] Her father died of cancer of the liver, and one uncle also died of cancer. Patient's health good till three years previous, when a bloody vaginal discharge began (she had ceased to menstruate eight years before). The discharge came and went at intervals till October, 1883, after which time it was continuous, quite profuse, inodorous, and contained clots. She noticed occasionally some fullness in the left iliac fossa, with acute pains from time to time; but there was no pain at time of entrance. She had lost some flesh during the preceding winter. The bowels were generally constipated.

She was a large woman, not emaciated. Pulse 108; temperature 99° F. A tumor was obscurely felt in the left iliac region, but its boundaries could not be made out, on account of the thickness of the abdominal walls. There was some tenderness in the same place. The os uteri was small, round, and normal in appearance. There was no hardness, ulceration, abrasion, or granulation about the cervix, os, or vagina. The sound entered easily to the depth of three and a quarter inches upward and backward; it could be freely moved inside the uterus, and was easily felt by the finger in the rectum. The fundus of the womb could be felt behind the pubes on deep pressure, and the organ could be swayed between the hand outside and a finger of the other hand applied to the cervix. No tumor could be detected per vaginam or per rectum. Profuse hæmorrhage occurred during the examination.

The hæmorrhage continuing, in spite of the administration of ergot and of douches of hot water, the canal of the cervix was dilated with a sea-tangle tent, and on July 10th the interior of the uterus was thoroughly curetted, and a considerable quantity of gelatinous substance was removed. The hæmorrhage gradually diminished, and ceased by the 23d. There was progressive improvement, and the patient left the hospital August 29th, on which day it was recorded that she had "greatly improved, is up all day, and goes out; has no bleeding, and only a slight discharge from the uterus."

For the rest of the history of the case, together with an account of the autopsy, and the specimen, I am indebted to Dr. George R. Fessenden, of Ashfield, the patient's physician, to whose care she returned after she went home. For several weeks her health was comparatively good, there was very little pain, and no hæmorrhage until September 30th, when she had a profuse bleeding and severe pain. The flowing lasted for a few days and was checked by ergot. After this she passed several months quite comfortably, being nearly free from pain, but there was a constant discharge of offensive pus from the uterus. In January the hæmorrhage returned, quite freely, at intervals, with acute pain in the left inguinal region, and she lost flesh and strength rapidly. The bowels became constipated, and during the last five weeks of her life there was no dejection at all; but there were frequent offensive discharges of pus, with fresh coagula, from the vagina. A tumor was felt in the left iliac region. The abdomen was distended with gas, and the peristaltic movements of the intestines were frequent and painful except when controlled by opium. There were paroxysms of severe pain in the left thigh and in the lumbar region. She vomited only two or three times, but there was constant, though slight, nausea. The mind was clear to the last. The temperature never rose above 101.5° F. The pulse averaged 115 in the minute. She died early in April.

Autopsy, twenty-four hours after death. Body greatly emaciated. Abdomen much distended. Large intestine of a dark-red color nearly throughout, and distended with soft, very offensive fæces; at about four inches above the anus it was completely occluded by a hard, red mass, three or four inches in length, which was connected with the uterus. Mesentery, dark red, and studded with cheesy nodules, with a puddle of pus beneath it. A large part of the uterus was destroyed by ulceration and imbedded in pus. The left ovary was of the size of a large filbert, and very hard, grating when cut. The specimen was sent to Professor Fitz, who reported that it was one of sarcoma of the uterus, the extension of the disease through the walls having involved the tissue about the rectum, thus producing the obstruction of the latter. The rectal constriction was so complete that a marked hypertrophy of the muscular coat had taken place.

— Dr. Scott (*St. Louis Courier of Medicine*) relates the case of a native of Missouri who had not been wet all over since 1863. The doctor, being astonished at this fact, made inquiries respecting other residents of the same State. He found that not a third of the people in Missouri bathed once a month, and fifty per cent. do not take a full bath from October to May.

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[1] See Med. Records, vol. ccclxx., p. 220.

REPORT ON THERAPEUTICS.

FRANCIS H. WILLIAMS, M. D.

ON THE ACTION AND USE OF DIURETICS.

IN the *Practitioner* for April and May one of the editors, Dr. Brunton, discusses this subject in a very interesting and practical manner. The first portion of his paper is devoted largely to a discussion of the physiology of the kidney and the circumstances modifying the secretion of the urine.

It is thought that diuretics may influence the circulation in several ways: by raising the blood pressure generally, or by increasing the local blood pressure in e kidneys, in two ways, (*a*) by contracting the efferent vessels or the arterial twigs which pass directly to the capillary plexus, (*b*) by causing dilatation of the renal arteries, and thus increasing the supply of blood to the kidney. This they may do in more ways than one, for they may either paralyze the vaso-motor nerves of the kidney or act on vaso dilating mechanisms. Diuretics may also act on the secreting cells of the tubules, and may increase the amount of solids excreted by them.

It is known that greater action from diuretics may be obtained by combining them than by using them singly. "Thus we see that digitalis, instead of acting as a diuretic, may completely arrest the renal circulation, and stop the secretion altogether by contracting the blood-vessels. If, however, we can combine it with something which will produce dilatation of the renal vessels, while the general blood pressure remains high, we shall greatly increase the circulation through the kidney, and obtain the desired result. Experiments in regard to this were made by Grutzner with nitrite of sodium. He found that this substance increased the secretion of urine when the blood pressure was reduced to a minimum by curara; and he found that it also had this effect when the blood pressure was raised by imperfect respiration. When the vaso-motor centre was greatly stimulated, however, by allowing the blood to become very venous, the nitrite of sodium no longer produced any increase of secretion.

"All nitrites have an action on the blood-vessels more or less alike. All of them cause the arterioles to dilate, either by an action on their muscular walls or on the peripheral terminations of vaso-motor nerves. One of the commonest diuretics is spiritus ætheris nitrosi, which contains nitrite of ethyl. Sometimes this is combined with acetate of ammonia as a diaphoretic, sometimes with digitalis, broom, or spirit of juniper as a diuretic. We have already seen that the action of the skin and of the kidneys are complementary, so that if we increase the secretion from the one we tend to diminish that of the other. At first sight, then, it might appear curious that we should use the same drug to increase the secretion of both. Yet there can be little doubt, from clinical experience, that nitrous ether is useful for both purposes, and the reason of its utility at once becomes evident when we remember that its action is strictly neither diaphoretic nor diuretic, but simply that of dilating the vessels, and consequently allowing the blood to flow freely in whatever direction it may be determined by other conditions. If by combining it with digitalis we can dilate the renal arteries while those of the other parts of the body remained contracted, it is evident that we shall obtain a much freer flow of urine than we could by the administration of digitalis alone.

"If, instead of a diuretic like digitalis, which acts chiefly through the blood-vessels, we combine spirits of nitrous ether with salts of potassium, which act on the secreting structure, it is evident that we are likely to obtain from the increased circulation in the kidneys caused by the nitrites a much more plentiful secretion than the potassium salts alone would have produced.

"*Uses.* Diuretics may be employed either for the purpose of removing water or solids from the body. They are used, —

"(1.) To remove the excess of fluid met with in the tissues and serous cavities in cases of dropsy.

"(2.) To hasten the removal of injurious waste products and poisonous substances from the blood.

"(3.) To dilute the urine.

"In cases where the accumulation of the fluid depends on venous congestion, as, for example, in cardiac dropsy, those diuretics which act on the general vascular system, like digitalis, strophanthus, squill, or erythrophleum, are most efficient, because they tend to remove the cause of the dropsy, as well as to assist the absorption and excretion of the fluid already effused.

"When the dropsy depends on the disease of the kidneys or liver other diuretics should either be given instead of, or along with, digitalis or squill, even in cases of cardiac disease. Where digitalis or squill are not proving efficacious the addition of a little blue pill greatly assists their action, though it would be hard to say in what way it does so.

"In dropsy depending on kidney disease decoction of broom, and oil of juniper, and nitrous ether are amongst the most reliable diuretics, and copaiba in hepatic dropsy.

"Diuretics are used to increase the secretion of solids in febrile conditions and in cases of kidney disease where the excretion of waste products is deficient, and their retention threatens to prove injurious. In such cases nitrate and bitartrate of potassium, turpentine, and juniper, and caffeine are useful.

"Diuretics are also used to increase the proportion of water in the urine, and thus to prevent the solids being deposited from it and forming calculi in the kidney or bladder, or even to dissolve again concretions which have been already formed.

"Water is, perhaps, the most powerful diuretic which we possess, although fewer experiments have been made with it upon animals than with the others. The diuretic action of water drunk by a healthy man is very marked, and it appears impossible to explain its elimination by a mere increase in blood pressure, whether general or local. It has, as we have remarked, the power of increasing tissue change, and thus multiplying the products of tissue waste which result from it, but it removes those waste products as fast as they are formed, and thus, by giving rise to increased appetite, provides fresh nutriment for the tissues, and thus acts as a true tonic.

"In persons who are accustomed to take too little water the product of tissue waste may be formed faster than they are removed, and thus accumulating may give rise to disease. If water be freely drunk by such persons the product of waste will be removed, and health maintained or restored. Thus many gouty persons are accustomed to take little or no water, except in the form of a small cup of tea or coffee daily, besides what they get in the form of wine or beer. In such people a large tumbler of water drunk every morning, and especially with the addition of some nitrate or carbonate of potassium, will prevent a gouty paroxysm. Still more numerous, possibly, is the class of people who rise in the morning feeling weak and languid, more tired, indeed, than when they went to bed. Now fatigue may be regarded as the imperfect response of muscles and nerves to stimuli, and such an imperfection in their action may be due either to their imperfect nutrition or to the imperfect removal of the products of their waste. Many such people are well fed, they sleep soundly, and it seems almost impossible to believe that the fatigue which they feel in the morning can result from imperfect nutrition, more especially as one finds that after moving about the languor appears, in a great measure, to pass off. It seems to me that this languor must depend upon imperfect removal of the waste products from the body, as we know that the secretion of urine, in healthy persons, is generally much less during the night than during the day. I am, therefore, in the habit of advising such persons to drink a tumbler of water before going to bed in order to aid the secretion of the urine and of the waste products during the night.

"In some cases, though not in all, the result has been satisfactory, and, possibly, might have been still more so had I added to the water the bicarbonate and nitrate of potassium, which, as I have already mentioned, is so useful in cases of gout.

"Lately a plan of treating gout by draughts of water at intervals during the day has been a good deal employed, and is in many cases successful. As an example of this I subjoin the diet used along with this treatment by a medical friend of mine who has been a martyr to gout, but who feels himself perfectly well as long as he adheres strictly to this course of diet:—

"Half-past seven A. M. Ten fluid ounces very hot water.

"Eight A. M. Breakfast. Equal parts of weak tea and milk, a small quantity of white sugar, a slice of fat bacon without a strip of lean, bread and fresh butter.

"One P. M. Milk pudding, rice, sago, tapioca, macaroni, or blanc mange, and small biscuits with butter; ten fluid ounces hot water.

"Four to five P. M. Ten fluid ounces hot water.

"Six P. M. Dinner. White fish or fowl (usually boiled), greens, bread, no potatoes, claret, seven fluid ounces.

"Eight to nine P. M. Ten fluid ounces hot water.

"Eleven P. M. Ten fluid ounces hot water.

"If he indulges either in meat or game, or drinks copiously of claret, or omits one or two glasses of hot water, he feels gouty and gravelly next day. It is obvious that by this plan of treatment, in which the ingestion of nitrogenous food is most strictly limited, at the same time that every facility is given for the elimination of the products of nitrogenous waste by the large quantities of hot water drunk in the course of the day, the accumulation of waste in the tissues ought to be most effectually prevented.

"*Adjuvants to Diuretics.* As the amount of urine secreted depends upon the difference in pressure between the blood in the glomeruli and the urine in the tubules, it is evident that any pressure on the tubules, whether caused by obstruction of the ureter by a calculus, by the mechanical pressure of dropsical accumulation in abdomen, or by distention of the venous plexus in the kidney itself, will tend to lessen the secretion of urine. Consequently we sometimes find that in such cases diuretics fail to act until the pressure has been relieved by paracentesis in cases of dropsy, or the venous congestion lessened by the use of a brisk purgative or by cupping over the loins.

"If the venous congestion is very great, as in cases of mitral disease or of chronic bronchitis with emphysema and dilated heart, bleeding from the arm may be advantageous or even imperatively necessary. In dilated heart and in mitral incompetence the action of digitalis on the heart itself, strengthening its action, and enabling it more effectually to pump the blood out of the venous into the arterial system, and thus to reduce venous congestion, will aid its action upon the kidneys."

NITRITE OF SODIUM IN ANGINA PECTORIS.

As regards the treatment of angina pectoris, which was spoken of in last year's report, it may be stated that further successful cases have been published in the *Lancet* for November 24, 1883. On the other hand, although Drs. Ringer and Murell consider it a valuable remedy [1] they find that the drug is apt to cause very unpleasant symptoms, and that five or, better, three grain doses should be used.

COCA, TEA, GUARANA, COFFEE.

In the last *Ephemeris* [2] Dr. Squibb gives four valuable and interesting papers on these topics. He has found it very difficult to obtain good specimens of coca, so much so that he has felt obliged to give up making its fluid extract.

Tea, coffee, Paraguay tea, guarana, and Kola nuts have all come into use in widely separated countries, and produce similar effects, namely, to refresh, renew, or sustain the physical and mental organism. And it is curious to find that after they have all been thus long used, although each came from a different natural order of plants, the same active principle, namely, caffeine, could be extracted from all. Coca contains cocaine, a substance which produces similar physiological effects in much smaller doses, although chemically it is very different from caffeine. In order to compare their ability to counteract the tendency to sleep they were tried in the same individual under the same conditions and the result used as a measure of their physiological action.

In this way coca was measured against tea, then coffee against guarana, and finally, to compare the four agents, pure caffeine was taken as a standard.

Having established a certain result with three grains of caffeine, it was found that three fluid drachms of the fluid extract of coca were needed to produce the same result. The three fluid drachms of coca contained .45 grain of cocaine, so that cocaine is about 6.5 times as strong as caffeine. Admitting that it is possible to obtain good coca readily, it would contain much less of cocaine than tea does of caffeine.

FLUID EXTRACT OF CAMELLIA (CHINESE OR JAPANESE TEA).

Tea leaves, as is well known, are prepared and exported with great care, and may easily be obtained of a very uniform quality and strength. After many trials a satisfactory fluid extract of tea was obtained by the process of repercolation, using a menstruum of water, alcohol, and glycerine.

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[1] Lancet, November 3, 1883.

[2] Also this JOURNAL, September 18, 1884, p. 283.

Seventy minims of this fluid extract, containing two grains of caffeine, was found to antagonize a tendency to sleepiness as effectively as three grains of pure caffeine, showing that two grains of caffeine in its natural condition is as effective as three grains extracted from the plant and used as caffeine.

Coca, for centuries, was in popular domestic use for the same purposes and effects as tea before it was introduced as a medicine. It would seem best that tea should be introduced to use as a medicine as a substitute for coca, since the one can always be had of uniform good quality while the other cannot. The effects are, probably, identical, and the quantity of tea necessary to produce the effect is much smaller. The cost of coca, measured by its effect, is, perhaps, five times as great as of tea. For these and other reasons it would seem better to use a fluid extract of camellia rather than of coca. Of course a preparation of known and uniform strength would have advantages, for medicinal purposes at least, over the usual cup of tea.

GUARANA.

This substance is a rude, heterogeneous mixture. Neither the ingredients nor their proportions have ever been known with any useful degree of accuracy, and probably the composition is not constant. For various reasons Dr. Squibb has given up making the fluid extract of guarana, and substituted for it a fluid extract of green or unroasted coffee.

FLUID EXTRACT OF GREEN COFFEE.

Like tea, coffee can also be readily obtained of excellent quality and uniform prices.

In the trials of the fluid extract of coffee an amount containing 1.95 grains of caffeine produced the same results as three grains of pure caffeine or two grains of caffeine as it exists in tea, and about 2.58 grains as it exists in guarana.

The method of comparing these agents by a physiological test is not offered by Dr. Squibb as "a method of precision or as worthy of any great trust, and it is especially guarded against being received for more than it is worth. It is only a practical plan, carried out with much pains and care for close guessing at results, but the observations are fairly consistent among themselves, and, therefore, place the agents in a true relation to each other."

This would seem to be too modest a statement of their worth, and the profession are certainly indebted to him for a better acquaintance with the composition and comparative merits of some much-used drugs.

IODOFORM.[1]

Dr. Gaetano Rummo has studied the physiological action of iodoform experimentally in the laboratory of Professor Vulpian, in Paris, and an outline of his paper may interest many practitioners who have and others who will find the antiseptic and local anæsthetic properties of this drug useful.

Iodoform was discovered in 1822, and for about fifteen years it was of interest only to chemists. Bouchardat, in 1836, studied its properties and anticipated its future. In 1853 it was again studied in Paris, and since then, especially during the seventies, in Germany and elsewhere.

All authors admit the local anæsthetic effect of iodoform, and most admit its general anæsthetic action. It has a powerful antiseptic action. Nearly all authors affirm the paralyzing and narcotic action of the drug, and its convulsive action has been seen by many.

It is eliminated principally as iodide. How it acts, in what way it influences the secretions and the gastro-intestinal tract, and many important facts relating to its physiological action, were less well understood. As a consequence surgeons found themselves in the face of a serious accident, iodoform poisoning, and a reaction against this substance was the consequence.

There are three classes of phenomena in iodoform poisoning: —

"(1.) Gastro-intestinal troubles: anorexia, loathing of food, taste of iodoform in the mouth, coated tongue, epigastric pains, vomiting, and sometimes diarrhœa.

"(2.) Cardio-vascular troubles: the pulse is accelerated to 130–140 beats per minute, becomes irregular, and in some cases the pulse wave is weak; the pulse and heart's action denote threatening syncope.

"(3.) Nervous troubles: psychical phenomena appear, periods of excitation, agitations, hallucinations, tendency to suicide, impulsive mania, furious delirium; in some it is possible to find a period of depression characterized by melancholia, particularly sadness with a tendency to weeping, somnolence, loss of memory, comatose state. It is not rare to see convulsions and paralysis.

From this it is not to be inferred that iodoform deserves to be considered a dangerous substance, for in three thousand hospital cases, and in about four thousand out-patients Mosetig-Moorhof did not discover a single case of poisoning.

Iodoform is easily absorbed by the skin deprived of its epidermis; it is absorbed by inhalation, and especially by the stomach and the peritonæum. It is eliminated slowly as iodide of sodium by all the secretory organs, and in small quantities in the breath as iodoform. Large doses cause, in animals, albuminuria and hæmaturia, and fatty degeneration of all organs, especially the liver.

Iodoform does not stop the development of bacteria already begun in putrid liquids, but it is more powerful to prevent their formation.

Hofmokl, who considers iodoform very useful in surgery, suggests that the application of iodoform bougies to long fistulæ of the soft parts is more hurtful than otherwise, as the fistulæ are only stopped up, and the products of decomposition are not discharged. Equally unwise is the filling up of the mouth of a fistula with dry powdered iodoform.

— Dr. McCallum (*British Medical Journal*, June 14th) reports two cases in boys, in both of whose breasts a milky fluid could be made to exude by pressure upon the nipple. Both boys were masturbators.

— For sprains, Professor Brinton teaches (*Col. and Clin. Record*, July) that the limb is to be put into a vessel of very hot water immediately, boiling water being added as it can be borne, and kept immersed for twenty minutes or until the pain ceases. Then put on a pretty tight bandage, and order rest. Sometimes the joint can be used in twelve hours. If the trouble is more chronic apply a silicate of sodium dressing, and let the patient walk with a cane if the ankle be the joint affected.

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[1] A Year Book of Therapeutics for 1884, edited by Royal W. Amidon.

Hospital Practice and Clinical Memoranda.

A CASE OF EPILEPTIC MANIA.[1]

BY DAVID G. HALL, M. D.,
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So much has been written on the subject of epilepsy, it may seem to be a rather worn-out subject. There are occasionally cases, however, whose symptoms differ from the ordinary epileptic fit where the patient cries out and suddenly falls, has spasmodic contractions of the muscles, froths at the mouth, etc., and within a short time recovers consciousness. Fits of this kind are, of course, common everywhere in private practice, but cases of epilepsy where the fits are accompanied by periods of great excitement are rarely met with except in hospitals for the insane, partly from the fact that they are less numerous than the milder variety, and chiefly because such patients are placed in institutions before the disease has assumed its most violent form. Such cases are by far the most dangerous of all classes of insane patients. When not excited they are a constant source of annoyance to their fellow-patients; they are always complaining of something; never satisfied with their food, no matter what it is, although at the same time they will eat twice as much as their digestive organs should be required to assimilate. They have almost always bad dispositions, which, of course, is not surprising when we consider the strain the nervous system undergoes during the periods of excitement. I use the term excitement, for in some cases this seems to be a more prominent symptom than the fits themselves.

One of the worst cases of epileptic mania which has been in the Northampton Hospital for several years was admitted May 15, 1882.

A man, forty-two years of age, about five feet six inches tall, thick set and muscular; weight on admission 143 pounds, at present weighing 190, showing a gain of forty-seven pounds. He has for years been subject to sexual excess, and also to the use of intoxicating liquors. The following are the facts upon which the physicians who signed the certificate of commitment based their opinions, to wit: "Attacks of acute mania, during which he commits the most violent acts, and is unsafe and difficult of restraint. On Sunday, May 14th, in a semi-nude state, he left his bed, and, with a large club, struck his own sister on the head several times, producing severe scalp wounds and injury to the brain. A tendency to destroy property. Further, we think these attacks are the sequel of epilepsy, to which he has been for a long time subject."

While investigating the case more carefully we learned the patient had been employed as clerk in a stock broker's office in New York, but on account of ill health had been obliged to give up work, and for a few months had been living with his father and mother, who reside in a neighboring town.

During an excitement he got out of bed and jumped through a window into the yard, carrying the sash and all before him. Here he found his sister and another woman with two little children. Picking up a cart stake, about three feet long and two inches in thickness, he started for the children, but the women seized them, and ran into a corner of the yard, where they were followed by this epileptic, who had now reached a state of uncontrollable excitement. He struck his sister with the club twice on the top of the head, and once on the back of the neck, when his father interfered, and prevented his doing further injury. Blood oozed from the sister's ears, she vomited at intervals, and was unconscious most of the time for several days, but after a long illness she recovered sufficiently to attend to her household duties, although it is said her nervous system still shows some effects of the shock it received.

Little could be learned as to hereditary tendency to disease of the nervous system, for all the relatives who ever came to see the patient seemed disinclined to talk about the case, and were especially reticent in regard to any nervous diseases which have occurred in the family. After a great deal of roundabout questioning the following fragments of family history were obtained: All members of the family are of a very nervous and excitable temperament. An uncle of the patient was an epileptic, and a child of the sister assaulted has epileptic convulsions. The patient himself had convulsions during teething, but these are said to have been very slight, and to have lasted only a short time. The first excitements of which I could get any history commenced about twenty years ago, soon after he left the army. At that time they were not very severe, and occurred at much longer intervals than at present. He married about this time a handsome and accomplished woman, and three children have been born to them, none of whom have been epileptic. Every year the excitements increased in severity until he would attack any one with whom he came in contact, no matter whether it was friend or foe.

When admitted to the hospital, the day after the assault, he was very nervous, had a rapid pulse, was restless and noisy for a few days, and then, apparently, recovered. In a few weeks, however, the excitement returned in all its fury, and has ever since occurred at intervals varying from a few days to three months. As a rule it comes on gradually, and in this respect differs from the majority of the cases of epileptic mania. He begins to find fault with everything and everybody, considers himself wholly recovered, and thinks he is greatly abused because he is not allowed to go home; sometimes, when sitting quietly, he will lose consciousness for a few moments, the eyes become fixed, and a slight spasm or twitching of the muscles will occur, especially those of the legs and fore-arms; the walk is slow and unsteady; the legs seem to be stiff and unwieldy; in a day or two he becomes more and more nervous and excitable, and finally loses all control of himself. He will, at times, jump up and down in his room, swing his arms about, and shout at the top of his voice. The face is sometimes pale, but usually flushed. The eyes become so congested they closely resemble a case of acute conjunctivitis, and they have a peculiar, wild stare, which is anything but pleasant to look at. But perhaps the most striking thing one observes is the change in the voice. It is only with the greatest effort he is able to make himself understood. It takes him a long time to get started, and then there is an explosion of words, which are chopped off abruptly, so to speak, as though the muscles concerned in articulation became spasmodically contracted. This high state of excitement does not, however, continue for any great length of time. There are always intervals throughout the day when he can take a little nourishment. As a rule the periods of excitement continue from five to ten days, but occasionally they last two or three weeks, when they gradually disappear, leaving him weak and irritable.

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[1] Read before the Hampshire District Medical Society, September 11, 1884.

Thus we have a case which so evidently belongs under the head epilepsy or, more properly, epileptic mania, there can be no doubt that must be the proper diagnosis. Yet, as far as we know, the patient was never known to fall, never bit his tongue but once, and his lips once, never had the "epileptic cry" or anything approaching the "aura," which so often occurs in this disease.

In regard to the prognosis, all we can say is that this case, like all other cases of true epilepsy, is hopeless. If he lives many years he will, probably, become more or less demented.

The treatment at first consisted chiefly of tonics, but as the patient gained so rapidly in flesh, and showed himself capable of eating, at least, twice as much as two ordinary men, they were soon discontinued. When the excitements are coming on he is given large doses of "salts and senna," and also moderate doses of bromide, which latter are continued until he has wholly recovered.

In regard to responsibility, almost any number of pages might be written. In the eyes of the law this patient would not, of course, be held responsible for a moment, and no physician would dare give as his opinion that this man should be held accountable for his misconduct; yet insane persons, if their minds are not too far gone, are oftentimes just as liable to take advantage of their condition as any of the other descendants of Adam. Within a month a patient told me "if old so and so (speaking of another patient) did n't keep away from him he would split his head open with his chamber." When reproved for it he said, "If I should do it nobody could hurt me. They say I am insane, and the law would n't punish an insane person." And so it is with the present case. I cannot but believe this patient at times takes advantage of his condition, and does things he ought not to do when his mind is sufficiently clear for him to know better. Several months ago he had an attendant whom he very much disliked. He resented everything he asked him to do, and never hesitated to quarrel with him if the least opportunity presented itself. So during an excitement he struck the attendant with an earthen chamber, which had been very carelessly left in the room, making an ugly gash just above the left eye.

Several days after he had recovered he told me very quietly he intended to kill his attendant, and would do it yet; thus not only showing he remembered the affair, but acknowledging he did it intentionally. So, if we were to judge only from the patient's own words, we should be obliged to say he was, at least to a certain extent, responsible; but if we stop to follow the case all through, compare the actions of the patient now with his conduct before the disease became developed, remember how the loss of self control became more and more marked as the excitements increased in severity, we are compelled to acknowledge that this patient should be considered irresponsible, and should in no way be made to answer for what, in all probability, he never would have done had he not become subject to this disease.

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MR. TAIT'S ADDRESS.

AT the annual meeting of the Canada Medical Association, recently held in Montreal, Mr. Lawson Tait delivered a noteworthy address on Abdominal Surgery. The words of such a master will be widely read, but, we believe, with a certain disappointment that the distinguished author should not have manifested in himself "the power of judging the question solely upon its merits, and entirely apart from any prejudice, tradition, or personal bias." Indeed it seems to us that Mr. Tait was actuated quite as much by a desire to castigate Sir Spencer Wells as to lay before the profession the results of his own experience and observation. The animus of the address is well shown by the author's words in his allusion to Mr. Keith, to whom, in Mr. Tait's opinion, "is due the whole credit of the modern development of abdominal surgery," namely, "it has ever seemed specially hard that while wealth and a title have been the lot of the man who had done nothing but obstruct progress, yet to the author of our present proud position nothing has come save a good deal of misrepresentation and abuse."

But passing over the personalities of this truly polemic discourse, we read with interest Mr. Tait's explanation of his remarkable success; it is briefly this: entire restriction to his chosen field, the most minute attention to every detail, and great personal attention to cleanliness in every part of his work. In common with Keith, Bantock, Savage, and many others, Mr. Tait has given up the spray and all the details of Listerism, believing, after long and careful trial, that they prejudice his success. In ovariotomy he believes in the intra-peritoneal treatment of the pedicle, and has discarded the clamp. As regards the use of perchloride of iron for tanning the stump after hysterectomy, which he says is "the only contribution Sir Spencer Wells has ever made to abdominal surgery," he believes that owing to the impossibility of accurately closing the abdominal wound where a clamp is necessarily used on a thick pedicle, the iron is liable to trickle down into the peritoneal cavity and cause fatal peritonitis. In the treatment of uterine myomata Mr. Tait believes with Mr. Thornton, Professor Hegar and others, that in the great majority of cases removal of the uterine appendages arrests menstruation, arrests also the growth of the tumor, and in many cases causes it to entirely disappear. There is, however, in his opinion, a soft, œdematous variety of myoma on which removal of the appendages exercises no control, and in such cases and in those in which for any reason the appendages cannot be removed he advises supra-vaginal hysterectomy, for which operation he predicts a brilliant future.

Mr. Tait's success in the surgical treatment of chronic ovaritis and of chronic inflammation and occlusion of the tubes is well known. He points out the frequent difficulty of diagnosticating these cases, especially when the ovaries and tubes are prolapsed and adherent. We believe, with Mr. Tait, that in doubtful cases an experienced surgeon is fully justified in making an exploratory abdominal incision. Of Battey's operation Mr. Tait has not come to a decided opinion, and indeed his experience has been purposely limited to only six cases, as he has not cared to prejudice the results of his other work by complicating it with what seemed to him a doubtful proceeding. He believes the future of the operation is still open for discussion and thinks it may prove beneficial and therefore justifiable chiefly in cases of menstrual epilepsy.

We had supposed it to be generally acknowledged that McDowell was the first to plan and execute the operation of ovariotomy; but Mr. Tait says that the first operation "was performed unwittingly, in 1701, in a Scotch village by Robert Houston," and that eighty-six years afterwards Houston's example was "imitated" by McDowell. We do not believe that the profession is yet prepared to take from McDowell his proud distinction and bestow it upon one who at best performed but an accidental and incomplete operation.

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THE DRY DIET CURE OF DYSPEPSIA.

For fully half a century the medical profession has been acquainted with the advantages of a diet exclusively of milk in certain gastro-intestinal affections. It has been found that for irritable and inflammatory states of the digestive tube this regimen often furnishes the most favorable conditions for sustentation and restoration. Clinicians have given precise indications for its employ. Thus Gubler, in his Commentary on the Codex, very judiciously remarks that "milk agrees better with the irritable and congested stomachs of gouty and herpetic subjects, and those that have made excessive use of condiments and alcoholic stimulants, than with those who have been suffering from atonic dyspepsia, or who have tendencies to catarrhal or serous diarrhœa."[1] "There are," he continues, "certain gastralgias and dyspepsias which are not benefited by milk diet."

At a recent meeting of the Société de Therapeutique, Paris, Dr. Henri Huchard gave an account of his experience in the treatment of several inveterate cases of dyspepsia, attended with dilatation of the stomach; after complete failure of the milk regimen he changed his course, prescribing a dry diet and abstinence, as far as possible, from liquids. The result was most gratifying, all his patients getting well. What was characteristic of these cases was the aggravation of the gastric troubles on the ingestion of liquids. In all there was marked distention of the stomach, amounting in some instances to chronic dilatation; there were besides, gaseous eructations, colicky pains with sometimes cardiac oppression, a furred condition of the tongue, with often nausea and vomiting, but that which especially attracted attention was the supervention of attacks of suffocation or pain on the attempt being made to swallow any kind of liquid food. One of Huchard's patients — fortunately cured by abstinence from liquids — used to have prolonged fainting fits on taking a few spoonfuls of porridge. "Milk, broth, gruel caused such extreme discomfort that the young woman preferred to go without food. For the constipation from which she was suffering — and it is noteworthy that patients afflicted with this form of dyspepsia are generally constipated — I ordered one day a glass of Hunyadi János, but the first mouthful caused such anguish of suffocation that she could take no more." Huchard, from whose article in the *Bulletin general de Therapeutique* (August 30th) we quote, gives to Chomel the honor of having first noted and clearly defined this "dyspepsia of liquids," although older authorities have remarked in cases of feeble digestion that the ingestion with meals of considerable quantities of liquids determines distention of the stomach and diminution in the secretion of gastric juice, while it is a saying of Beau that "good stomachs belong to those who drink little, and who drink nothing at meal time." Chomel described a peculiar swashing sound (*bruit de clapotment*) heard in the stomach, and generated by the presence in the cavity of that viscus of an excess of liquids and of gas, as being pathognomonic of this affection. This *swashing* noise is heard when the patient is suddenly turned from one side to the other, or when he otherwise changes his position; a good way, and one which Chomel recommends, is to place the patient before you in a standing posture, and with both your hands on the sides of his abdomen to give several abrupt lateral impulsions.

Having observed that in this form of dyspepsia the stomach digests solids much better than liquids, Chomel formulated the dry diet treatment, which consists in the utmost possible abstinence from liquids; the patient not being allowed to take more than one small cup of his ordinary drink during his repast. Full baths of lukewarm water and lavements were permitted in ordinary to maintain the requisite fluidity of the blood. An interval of at least eight hours between the morning and the afternoon meal was enjoined; if the time of breakfast was fixed at eleven A. M., the dinner could not be had till seven P. M. Soups of any kind might be taken, provided they were made quite thick. To these soups were added bread in small quantity, roast, boiled, or broiled meats warm or cold, fish, eggs, legumes, on condition that sauces should be used with them very sparingly. Fruits were permitted with moderation except such as are very juicy, *e. g.*, melons, grapes, peaches, etc. With this form of dyspepsia such foods as are finely divided and pulverulent (the powder of meat for instance) agree very well; raw oysters on bread, or scalloped oysters are unobjectionable dishes. For the constipation which afflicts these patients those purgatives should be selected which present themselves in a solid form.

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[1] Gubler, Commentaries du Codex, p. 203 (cited by Huchard).

Huchard cites instances in the practice of his eminent master, where under the influence of this regimen all uncomfortable dyspeptic and reflex symptoms disappeared, and in which health was afterwards enjoyed except at such times as the person through indiscretion transgressed by indulgence in some favorite beverage; even trifling indiscretions being sometimes followed by oppression, colicky pains, palpitations, *glou-glou* sounds sufficiently loud to attract the attention of standers by, etc. One of these patients could not take a glass of cold water of an evening without suffering the next morning from dryness of the mouth, flatulent distention of the stomach, and suppression of urine.

According to Huchard, then, abstinence from liquids, or the "dry diet cure," to which Fonssagrives has given the name of *xerophagia* (Gr. "I eat dry food"), produces excellent effects in certain dilatations of the stomach, in atonic dyspepsias, in the dyspepsia of liquids. He thinks also that this kind of regimen is applicable to other affections characterized especially by excess of arterial tension — to atheromatous patients, to individuals affected with interstitial nephritis, aortic affections, certain cases of angina pectoris, with considerable elevation of vascular pressure, and to persons predisposed to divers hæmorrhages, cerebral congestions, etc.

"GUIDE, PHILOSOPHER, AND FRIEND."

The leading London medical weeklies have all printed, as usual, their "students'" numbers, containing information which, doubtless, is of use to young men about to study in the great capital. We cannot help thinking, however, how appalled many a young disciple of Galen must be at the amount and solidity of the good advice which is tendered him. One hundred pages of reading-matter and advertisements is the contribution of *one* of these journals to the special needs and temptations of the medical student, and at least two other weekly periodicals are equally generous. We note with interest one innovation, modeled, as we are told, on Mr. Hamerton's Intellectual Life. It consists of letters of advice, drawn up to meet various imaginary conditions. The following supposed communications are printed at length: "From the Dean of a London Medical School to a Widow who proposes that her Son shall enter the Medical Profession." "To the Same, from a Country Apothecary." "From a London Physician to an old School-Fellow, who has asked Advice about his Son." "From a Successful Surgeon to a Young Genius who has decided to study Medicine." "From a Country Practitioner to his Son, who has just entered at a London Hospital." "From a Prosperous Young Specialist to his Brother, who desires to Follow in his Footsteps." "From a Second-Year's Student to his Friend, a Freshman."

This department still falls short of that fullness which one looks for in a complete letter-writer, inasmuch as there must be a number of young men who do not find their own special circumstances fully detailed, and may, therefore, not know exactly what to do. It would be well to make some additions, as, for instance, "From a Distinguished Professor of Dermatology to a Young Man afflicted with Freckles;" "From a Wealthy Maiden Aunt to her Nephew, with Enclosure to buy a Skeleton;" "From a Renowned Obstetrician to his Second Cousin, recently married." Other appropriate topics for this department will, doubtless, suggest themselves to our esteemed contemporary before the issue of its next "student's number."

MEDICAL NOTES.

— *Science*, taking a comparative view of the characters of the English and American associations for the advancement of science, both held this year on this side the Atlantic, says, among other interesting observations, that in the matter of paying compliments and moving thanks in an easy and graceful manner, our English cousins have the advantage of us. It is the almost universal custom for the chairman of the Section to thank the reader of a paper, and often in elaborate terms. This consumes a good deal of time, and it is a question whether such wholesale compliment is desirable. It was observed, however, that the distinguished and genial presiding officer of one of the Sections made use of two quite different formulæ for expressing his appreciation of the merits of the paper: in one case hoping "that the Section would join him in thanking Professor —— for his interesting and important communication upon this subject;" and in another, "that the Section would join him in thanking Professor —— for his communication upon this interesting and important subject." The importance of the proper arrangement of words was never shown to better advantage.

— The *Medical News* (September 13th) discourses pleasantly of one of the latest born of the family of the cocci — the *Influenzacoccus;* "Dr. Otto Seifert had the opportunity of observing an epidemic of influenza in Würzburg. It was not exactly a pandemic. The first case came under his notice, in the Julius Hospital, on the 4th of January, 1883, and the last on the 24th of March in the same year; and they numbered, in all, *seven.* He was, therefore, enabled to cope single-handed with the whole epidemic. He not only routed it, horse and foot, but he also took it captive, and has studied its appearance and habits with the care and interest due to so distinguished a prisoner of war. As the reader anticipates, it is a coccus, and a micrococcus at that. Enlarged 350 times, its length is from 1.5 μ to 2 μ, and its breadth 1 μ; and its number in the sputum is legion. It arranges itself mostly in long chains, the rank and file, less often in pairs (diplococci), and occasionally it stands forth alone (monococcus). It was caught in the secretions of the nares and in the sputum in the earlier actions of the campaign. Later, when these became fouled and purulent, the coccus forsook them. In the tears, even when they most bedimmed the eyes, it was not found.

The captive was clad by its conqueror in a robe of methyl-violet, and made a magnificent appearance. In order to establish its identity, laborious comparisons of the nature of control experiments were made. Examinations of the same secretions of many other sick than the seven were conducted, but with a negative result. The coccus was not there; nor was it found in any blood — even of the seven. The inoculation of two white guinea-pigs failed. Like other fierce captives it grew sullen and refused to do its trick. Or was it like those noble beasts which become sterile in captivity? Dr. Otto Seifert magnanimously gave it a new robe, of almost Tyrian purple, but the spirit of the victor prevailed, and he has called it by a name not its own — 'Influenzacoccus,' and has broken its spirit by likening it to the base coccus of gonorrhœa."

— Osteotomy for genu valgum was discussed at the International Medical Congress, and Macewen's supracondyloid osteotomy was acknowledged by all to be the most satisfactory one. Professor Ogston gracefully acknowledged that his own operation (fracture of the internal condyle) did not yield as good results as Macewen's simpler and safer operation. Professor Schede said that, with German surgeons, he had accepted Macewen's operation as the best. He differed from Dr. Macewen in doing his operation in one respect — he did not use but one chisel, and considered the withdrawal of the instrument from the wound a serious matter, in that it led to an unnecessary disturbance of the parts, and frequently some difficulty occurred in reintroducing the chisel. He thought that in many cases the tibia, rather than the femur, was involved, and in these cases he preferred his own operation (section of the tibia). Mr. Bryant complimented the gentlemen on the manner in which they had given up their pet operations, and had accorded to the supracondyloid operation (Macewen's) its just value.

— In a paper read before the Buffalo Medical Society by Dr. Pryor it is stated that two thirds of the births in that city are reported for registration by midwives. He criticised sharply the ignorance of many of these women, whose fees for a labor case were only $3 to $5. In the discussion upon this paper one speaker said that he knew a midwife of Buffalo who said she "had attended one thousand successive successful cases, among which she had turned fifty times in cross presentations, has had fifty footling cases, and one of placenta prævia, had three times called a doctor to apply the forceps, and had removed the placenta with her hand fifty times." A more striking commentary than these figures on the competence of the midwife would be hard to find. One case in twenty of transverse presentations and the same ratio of footling cases! Yet after putting her hand into the uterus of every twentieth woman for the placenta, besides performing version fifty times, the midwife sends three times for a doctor to put on forceps!

— A nursery-maid, in London, aged seventeen, has been charged with willful murder and convicted of manslaughter for killing a child by tying a scarf round its neck to stop its crying while she was wheeling it before her in a perambulator. She was reading a book, and, naturally, any noise like that of a crying child diverted her attention from the more important occupation in hand. The diversions of most nurses hereabouts are not literary, but we wonder what some mothers would say if they ever became aware (as probably they never do) of the neglect to which their children are exposed while mademoiselle, in the French cap, is chattering with her companions or flirting with her *garçon.*

— Lawson Tait says: Any woman who has an ovarian tumor removed in her own house is a fool for her pains.

Correspondence.

THE CHOLERA EPIDEMIC OF 1873.

A REVIEW OF A CONGRESSIONAL REPORT.

LOWELL, *September* 22, 1884.

MR. EDITOR, — Perhaps there is no better work on this dreaded disease, as it has appeared in our own country, than this Congressional Report. Covering over a thousand pages, all phases of the subject have received most careful attention. The epidemic of 1873 extended over eighteen States, but happily did not visit Massachusetts. The Report was published in 1875, and embodies the experience of a large number of physicians. It was prepared under the direction of the Surgeon-general of the army. Full records were collected of 7356 cases, and of these more than half (fifty-two per cent.) died. The results in the use of the more common drugs are thus stated: —

In the treatment by calomel, in large and small doses, there was a mortality of twenty-three per cent.; calomel and opium there was a mortality of thirty-one per cent.; calomel, opium, and acetate of lead, the mortality was forty per cent.; calomel, opium, and stimulants the mortality was fifty per cent. In cases where stimulants alone were employed the mortality was increased to fifty-nine per cent. Where the preparations of iron were used, the mortality was thirty-three per cent., while from the acid treatment but eight per cent. is recorded. Of the latter the cases reported are scarcely numerous enough to afford reliable data — sixty-four cases with five deaths."

"The evidence is conclusive that the exhibition of opium followed by alterative doses of calomel, and absolute rest in the recumbent posture, almost invariably arrested the disease when in the premonitory stage. In the advanced stages the entire range of the Pharmacopœia seems to have been brought into use with no better results than have been obtained in previous epidemics."

The Report "strongly corroborates the beneficial results obtained from the use of sulphate of iron and dilute sulphuric acid as prophylactics during an epidemic."

As so much has been said lately about the valuable work of Dr. Koch and his colleagues, it is interesting to recall what has been done in the same field by previous observers. In 1872 a most interesting series of experiments was made by Nedswetzky, of Russia, on the bacteria of cholera dejections. A summary of his results is given in this Congressional Report.

When the bacteria were subjected to *quinine*, *camphor*, *carbolic acid*, *tar*, *calomel*, or *chloral* they lived and moved as before. In the experiment with *opium* he added one drachm of the tincture to two drachms of the rice-water discharges. The bacteria all remained alive until the sixth day, when a few of them died. The same result occurred with *nux vomica*. *Chloroform* and *muriatic acid* were almost immediately fatal; while death of the bacteria invariably followed the addition of *sulphate of iron*, *chlorine* water, *tannic*, *nitric*, or *sulphuric acids* to the rice-water discharges.

If it be true, as is now very generally believed, that these living bacteria, or "bacilli," cause the disease, the importance of the above experiments cannot be overestimated.

The conclusions with regard to the general character of Asiatic cholera are summarized in the following seven "propositions" under the head of ætiology: —

"Proposition I. That Asiatic cholera is an infectious disease resulting from an organic poison, which, gaining entrance into the alimentary canal, acts primarily upon and destroys the intestinal epithelium.

"Proposition II. That the active agents in the distribution of the cholera poison are the dejections of persons suffering from the disease in any of its stages. That in these dejections there exists an organic matter which, at a certain stage of decomposition, is capable of reproducing the disease in the human organism to which it has gained access.

"Proposition III. That cholera dejecta coming in contact with and drying upon any objects, such as articles of clothing, bedding, and furniture, will retain indefinitely their power of infection. That in this manner a sure transmissibility of the cholera infection is effected, and that a distinct outbreak of the disease may occur by such means at great distances from the seat of original infection.

"Proposition IV. That the specific poison which produces the disease known as cholera originates alone in India, and that by virtue of its transmissibility through the persons of infected individuals or in the meshes of infected fabrics the disease is carried into all quarters of the world. That cholera has never yet appeared in the western hemisphere until after its route of pestilential march has been commenced in the eastern world, and that its epidemic appearance upon the North American continent has invariably been preceded by the arrival of vessels infected with cholera sick, or laden with emigrants and their property from infected districts."

The epidemic of 1873 in the United States is believed to have been traced to a fair held in the Punjab in 1867.

"Proposition V. That the respiratory and digestive organs are the avenues through which individual infection is accomplished; that through the atmosphere of infected localities cholera is frequently communicated to individuals; that water may become contaminated with the specific poison of cholera from the atmosphere, from surface washings, from neglected sewers, cess-pools, or privies, and that the use of water so infected will induce an outbreak of the disease.

"Proposition VI. That the virulence of a cholera demonstration, the contagion having been introduced into a community, is influenced by the hygienic condition of the population, and not by any geological formation upon which they reside.

"Proposition VII. That one attack of cholera imparts to the individual no immunity from the disease in the future, but that the contrary seems to be established."

Very truly yours,

WM. H. LATHROP, M. D.

ELECTION OF HONORARY MEMBERS OF THE MASSACHUSETTS MEDICAL SOCIETY.

MR. EDITOR, — Have the Councilors of the Massachusetts Medical Society any authority to *elect* honorary members of said Society? In trying to settle this question I would beg the liberty to call the attention of the Fellows of said Society to some of the provisions of the Charter and subsequent acts of the Legislature.

By the Charter, Art. I., Section 5, it was enacted that the Fellows of said Society may *elect* such persons as they shall deem proper to be Fellows thereof; but the number of said Society who are inhabitants of this Commonwealth shall not at any time be more than seventy.

The Act of 1803, Section 1, authorized the *Fellows, for the time being*, of the Massachusetts Medical Society, in any meeting called and holden for the purpose before the next annual meeting, to *elect* into that Corporation, and to be Fellows thereof, such and so many suitable persons, being physicians or surgeons, resident within this Commonwealth, as they may see fit.

Section 2 authorizes the Fellows at the next annual meeting and afterward at every annual meeting thereof to choose so many Councilors as said Society from time to time judge necessary. And Section 3 says: "And the said Councilors, at any stated meeting of the same, and only those meetings, and after three months' nomination of every candidate, and not otherwise, by a major vote of those present may *elect* any suitable person or persons to be a Fellow or Fellows of said Society, provided that all practicing physicians and surgeons resident within this Commonwealth, who shall be so elected, shall, within one year after such election, subscribe the By-Laws of said Society, or otherwise declare in writing their assent to the same, or such election shall be void. And all persons not practicing physicians or surgeons, or not resident within this Commonwealth, who shall be so elected shall be deemed honorary members of the said Society."

The above are all the provisions of law by which Fellows or the Councilors of the Massachusetts Medical Society were ever authorized to *elect* Fellows or members of said Society. Certain acts have been passed at different times by which licentiates and others might become members, but no provisions by which any person could be *elected* a member of said Society.

The law of 1859 declares that "No person shall hereafter become a member of the Massachusetts Medical Society except upon examination by the Censors of said Society.

This act certainly deprives not only the Councilors but the Fellows also of said Society of all power to *elect* any person to membership of the Society, and consequently all persons *elected* to be members of said Society since that time were illegally elected.

It is true there may be a doubt whether the law of 1859 was binding upon the Society before the vote of the Society, October 4, 1876, directing and authorizing the secretary to record the acceptance of the Society to said act of the Legislature (the Legislature, in the Charter, not having reserved any right to alter, amend, or annul said Charter without consent of said Corporation). Yet the vote of the Society at that time is in such form as clearly to imply that the Society did accept the act at the time of its passage.

I leave it for the Fellows of the Society to judge whether the statement made at the last annual meeting that "all the honorary members of the Society *elected* since March, 1859, were illegally elected" was a remarkable one. M.

September 20, 1884.

Miscellany.

HOW TO PREPARE ANTISEPTIC DRESSINGS OF MERCURIC BICHLORIDE.

Now that the advantages of the mercuric bichloride as an antiseptic dressing have been clearly established, receiving as it does the sanction of so many eminent surgical authorities, and becoming extensively employed in hospital and private practice, writes Dr. Charles Meigs Wilson, in the *Philadelphia Medical Times* (September 6, 1884), a few words as to its proper preparation for such purposes may be of interest. Corrosive sublimate is soluble in water in the proportion of thirty grains to the ounce. Various vehicles have been employed, as glycerine, ether, alcohol, or the latter in equal parts and water. Of all these the preference should be given to water as a medium, because of its capability of imbibition and solution, and the readiness with which it may be obtained. Sufficient sodium chloride should be added to solutions of the sublimate (an equal part) to prevent the latter's decomposition and the formation of calomel. In hospitals it is possible to have the solutions freshly prepared and frequently renewed, but in private practice this is not always feasible, especially if the case be of long duration, and at a distance from a drug shop. A convenient solution for private use, and one which will keep indefinitely, is the following: —

Hydrarg. bichlor.	ʒii.
Sodii chlorid.	ʒi.
Aquæ distillat.	f℥iv. M.

One fluid drachm of this added to a pint of water makes a solution of about one to a thousand. Sir Joseph Lister makes use of the following formula in preparing solutions of corrosive sublimate: One drachm by weight of a solution, one part of corrosive sublimate in one and one half parts of glycerine, contains two fifths its weight, or twenty-four grains, of the sublimate. This multiplied by one thousand (the proportion of water required) gives twenty-four thousand grains, or nearly three pints. It is, however, much more convenient to use fluid measure than weight, and one fluid drachm of the glycerine solution referred to requires four pints of water to produce the one to one thousand solution. Surgical authorities are pretty well agreed that one to one thousand is the proper solution to use for douching, washing, and dressing wounds. For vaginal or uterine irrigation, one to two thousand is the proper strength, and no stronger solution should be used in abdominal surgery. The best medium in which to use the corrosive sublimate for surgical dressings is finely-pulverized wood. This may be obtained at a number of the instrument makers' and drug shops. The wood-wool is sterilized by being subjected to a dry heat (above 220° F.). It is then soaked for twelve hours in a one half per cent. solution of corrosive sublimate. Afterwards it is spread out and dried. It is then placed in a bag of gauze (such as is used for the Lister dressing) or mosquito-bar netting, prepared by being saturated with the following solution: —

Corrosive sublimate.	gr. x.
Alcohol	f℥ix. et fʒii.
Glycerine	fʒi. et ♏xx.

This dressing is applied dry. Care should be taken to apply the dressing so that the margins of the bag extend an inch or so beyond the margins of the wound. This dressing is capable of absorbing twelve times its weight of water. It is applied with the ordinary roller, and requires no mackintosh or covering.

In St. Mary's Hospital, Brooklyn, we are told that a very useful combination is obtained as follows: Dissolve six grains of corrosive sublimate in ether and alcohol, of each one half ounce. Dissolve sodii chlor., twenty-four grains, in glycerine, one ounce. Mix the two solutions, and triturate thoroughly with one pound of wood-wool. Spread to dry, and after the ether and alcohol have evaporated mix well with one part to ten, by weight, of powdered naphthaline. Two powerful germicides are thus combined.

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MISSED ABORTION; SCLEROSIS OF THE PLACENTA.

At a recent meeting of the Obstetrical Society of New York a paper was read by Dr. H. J. Garrigues narrating the case of a woman, aged thirty, married ten years, in her sixth pregnancy, who presented herself for treatment, having had daily slight hæmorrhage for four weeks. The size of the womb corresponded to the fourth month. No sounds being audible, pregnancy, with death of the fœtus, was diagnosticated. About a week later the bleeding had ceased, and the patient felt well.

About nine months after her last menstruation a fœtus and placenta, in one mass, were expelled with moderate pain. They were perfectly fresh. The fœtus, a female, seemed to be at the end of the fourth month, with partial arrest of development. The mouth was large, the lips only partially formed; hare-lip and cleft palate existed. The epidermis had come off to a great extent, forming casts of the hands and feet. The soft parts appeared much atrophied.

The placenta measured eight by six centimetres, and appeared mainly hard, whitish, and lardaceous, without cotyledons. Its fœtal surface was normal. The cord, twenty centimetres in length, had a velamentous insertion. Of the membranes only some pieces of gelatinous tissue remained, and of the decidua only a few long shreds were found. The death of the fœtus was due to the sclerosis of the placenta, which is supposed to be of syphilitic origin.

A dead fœtus undergoes either putrefaction or mummification. In the former case it causes fever, and if not expelled must be removed. In the latter case, as in that under consideration, it may be retained for many months. The wasting of the soft parts should be attributed not so much to absorption of the liquids as to starvation, inasmuch as scarcely any placental tissue was left. A similar condition is found in adults deprived of food. Missed abortion is of some practical interest. Where the fœtus is decomposed its removal is indicated, but no treatment is called for in case of mummification. As the diagnosis will generally be doubtful, inasmuch as the uterus might contain a living fœtus, it is advisable to abstain from active measures. The possibility of this condition occurring should be borne in mind so as to avert unjust suspicion, for example, when a married woman, in the absence of her husband, expels a fœtus corresponding to a development of shorter duration than the father's absence. The woman may require treatment for uterine disease, or, perhaps, both she and her husband for syphilis.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 13, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	851	403	36.86	10.99	22.58	2.34	1.98
Philadelphia	927,995	425	166	22.32	10.56	14.88	5.52	3.36
Brooklyn	644,526	—	—	—	—	—	—	—
Chicago	632,100	250	149	40.00	6.40	28.40	2.80	4.00
Boston	423,800	218	102	38.70	13.80	25.76	3.68	4.14
Baltimore	408,520	173	80	26.68	8.70	11.60	2.32	5.22
St. Louis	400,000	180	85	27.19	6.11	14.44	4.44	2.22
Cincinnati	272,400	111	41	24.32	13.51	9.91	8.10	—
New Orleans	234,000	134	31	21.42	17.02	5.18	—	.74
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	102	44	28.42	13.72	13.88	4.90	2.94
Pittsburg	180,000	93	54	42.80	5.35	29.96	4.28	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	60	23	34.44	18.04	26.24	6.54	4.92
New Haven	62,882	20	11	35.00	25.00	25.00	—	—
Nashville	54,400	27	11	62.90	11.20	30.30	7.40	3.40
Charleston	52,286	35	14	14.30	17.16	8.58	2.86	—
Lowell	71,447	29	16	44.85	13.80	41.40	3.45	—
Worcester	69,442	37	21	29.70	8.10	27.00	—	2.70
Fall River	62,674	40	24	45.00	5.00	30.00	2.50	2.50
Cambridge	60,995	20	7	32.00	8.00	28.00	—	—
Lawrence	45,516	25	18	24.00	20.00	12.00	4.00	—
Lynn	44,895	8	2	12.00	—	—	12.50	—
Springfield	38,090	16	5	31.25	—	—	25.00	—
Somerville	31,350	15	9	73.33	—	46.66	—	20.00
Holyoke	30,515	15	8	39.99	—	33.33	6.66	—
New Bedford	30,144	15	6	39.99	—	33.33	—	—
Salem	29,503	14	7	35.70	14.28	35.70	—	—
Chelsea	24,347	9	4	22.22	11.11	22.22	—	—
Taunton	22,693	13	4	53.83	—	30.76	—	23.07
Gloucester	21,400	4	3	—	25.00	—	—	—
Haverhill	20,905	8	3	37.00	25.00	25.00	12.00	—
Newton	19,421	9	3	11.11	11.11	11.11	—	—
Brockton	18,323	5	1	—	20.00	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	12	4	16.66	25.00	16.66	—	—
Fitchburg	13,433	3	0	—	33.33	—	—	—
Ninety-one Massachusetts towns	364,039	89	29	39.34	23.60	30.35	2.24	5.52

Deaths reported 3066 (no reports from Brooklyn, Buffalo, and Milwaukee): under five years of age, 1388; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 887, diarrhœal diseases 606, consumption 372, lung diseases 110, typhoid fever 109, diphtheria and croup 91, malarial fevers 53, whooping-cough 44, scarlet fever 29, cerebro-spinal meningitis 27, puerperal fever eight, erysipelas four, small-pox one. From *malarial fevers*, New Orleans 19, New York 11, Baltimore nine, St. Louis seven, Chicago, Cincinnati, and Nashville two each, Charleston one. From *whooping-cough*, New York 23, Philadelphia five, Chicago and Baltimore three each, Boston and District of Columbia two each, St. Louis, Providence, and Nashville one each. From *scarlet fever*, New York 10, Chicago and Cincinnati three, Boston, District of Columbia, Pittsburg, and Holyoke two each, St. Louis, Providence, Springfield, Somerville, and Braintree one each. From *cerebro-spinal meningitis*, New York six, Philadelphia five, Nashville and Woburn three each, Cambridge two, Chicago, Baltimore, New Haven, Lawrence, Holyoke, Lynn, and Peabody one each. From *measles*, New York 13, Chicago two. From *puerperal fever*, Philadelphia, Boston, and St. Louis two each, Chicago and Cincinnati one each. From *erysipelas*, New York two, Cincinnati and District of Columbia one each. From *small-pox*, New Orleans one.

Cases reported in Boston: typhoid fever 48, scarlatina 45, diphtheria nine, and measles one.

In 110 cities and towns of Massachusetts, with an estimated population of 1,416,011 (estimated population of the State 1,955,104), the total death-rate for the week was 22.9 against 22.10 and 19.75 for the two previous weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending August 30th, the death-rate was 25.3. Deaths reported 4245: infants under one year 1695: acute diseases of the respiratory organs (London) 181, diarrhœal diseases 967, scarlet fever 70, whooping-cough 69, measles 64, fever 52, diphtheria 23, small-pox (London 12, Liverpool, Sheffield, and Sunderland one each) 15. The death-rates ranged from 19.5 in Birkenhead to 37.8 in Preston; Birmingham 32.3; Blackburn 35.4; Bradford 26.6; Leeds 29.8; Leicester 29.5; Liverpool 32.6; London 20; Manchester 34.1; Nottingham 29; Sheffield 28; Sunderland 28.4. In Edinburgh 16.5; Glasgow 25; Dublin 29.9.

For the week ending August 30th, in the Swiss cities there were 59 deaths from diarrhœal diseases, consumption 22, lung diseases 12, diphtheria and croup two, typhoid fever two, small-pox one, measles one. The death-rates were, at Geneva 9.2; Zurich 17; Basle 24; Berne 21.1.

The meteorological record for the week ending September 13th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps. —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Sept., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 7	30.050	64	74	62	84	90	92	89	NE	E	SE	15	10	3	C	O	O	—	—
Mon., 8	29.955	72	90	63	82	53	90	75	W	SW	SW	6	10	6	C	F	O	—	—
Tues., 9	29.984	76	89	70	96	68	90	81	W	SE	SW	6	6	5	F	C	C	—	—
Wed., 10	30.004	80	94	71	83	55	87	75	W	SW	Calm.	10	4	0	C	C	O	—	—
Thurs., 11	29.924	69	81	64	100	90	86	92	SE	SE	W	2	7	8	G	C	C	—	—
Fri., 12	30.094	64	93	57	56	41	63	53	NW	NW	NW	14	17	12	C	C	C	—	—
Sat., 13	30.276	54	62	47	68	40	58	55	NW	N	NW	7	20	10	C	C	C	—	—
Mean, the Week.	30.040	68.4	83.5	62.2				74.4										3.20	0.14

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 20, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	686	341	28.28	13.49	17.11	1.60	4.64
Philadelphia	927,995	339	133	16.53	21.66	7.98	9.69	8.55
Brooklyn	644,526	287	138	33.25	16.45	24.50	1.50	3.00
Chicago	632,100	241	140	36.49	7.05	18.68	4.56	5.40
Boston	423,800	—	—	—	—	—	—	—
Baltimore	408,520	175	73	26.22	14.50	10.44	2.32	9.86
St. Louis	400,000	137	57	36.50	6.57	14.60	2.92	6.57
Cincinnati	272,400	98	44	26.32	7.14	7.14	4.08	7.14
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	108	55	38.44	12.48	20.16	7.68	3.44
Pittsburg	180,000	62	25	28.98	11.27	11.27	6.44	11.27
Milwaukee	142,400	65	46	35.42	7.70	23.10	3.08	1.54
Providence	119,405	43	21	37.28	11.65	32.63	2.33	—
New Haven	62,882	24	9	24.96	20.80	16.64	—	—
Nashville	54,400	14	2	64.26	—	7.14	14.28	35.70
Charleston	52,286	27	14	18.52	7.40	7.40	7.40	—
Lowell	71,447	23	[illegible]	25.10	8.70	13.05	8.70	—
Worcester	69,442	27	14	29.62	11.11	18.52	—	7.40
Fall River	62,674	29	16	34.48	17.24	27.58	3.45	3.45
Cambridge	60,995	26	12	38.46	15.40	30.80	3.85	—
Lawrence	45,516	24	13	37.44	4.16	29.12	—	4.16
Lynn	44,895	20	10	25.00	15.00	20.00	—	5.00
Springfield	38,090	—	—	—	—	—	—	—
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	7	4	28.56	—	28.56	—	—
New Bedford	30,144	8	5	37.00	—	37.00	—	—
Salem	29,503	11	4	9.09	9.09	9.09	—	—
Chelsea	24,347	5	1	—	20.00	—	—	—
Taunton	22,693	9	4	33.33	22.22	22.22	—	11.11
Gloucester	21,400	8	5	12.50	12.50	—	12.50	—
Haverhill	20,905	8	2	25.00	25.00	12.50	—	—
Newton	19,421	5	0	—	40.00	—	—	—
Brockton	18,323	12	3	25.00	16.66	25.00	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	6	1	16.66	—	—	—	—
Fitchburg	13,433	3	1	—	33.33	—	—	—
Ninety-one Massachusetts towns	349,175	77	17	7.78	21.07	7.78	—	—

Deaths reported 2850 (no reports from New Orleans and Buffalo): under five years of age, 1324; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 798, consumption 342, lung diseases 142, diarrhœal diseases 453, diphtheria and croup 130, typhoid fever 90, malarial fevers 34, whooping-cough 32, scarlet fever 29, measles eight, cerebro-spinal meningitis eight, erysipelas five, puerperal fever six, yellow fever two. From *whooping-cough*, New York 16, Philadelphia four, Brooklyn three, Chicago and Milwaukee two each, Baltimore, Cincinnati, New Haven, Cambridge, and Haverhill one each. From *malarial fevers*, St. Louis 12, Brooklyn eight, New York and Baltimore five each, Chicago, Cincinnati, Nashville, Charleston, and Newburyport one each. From *scarlet fever*, Chicago seven, District of Columbia six, New York and Philadelphia five each, Baltimore and Providence one each. From *measles*, New York six, Chicago two. From *cerebro-spinal meningitis*, New York and Philadelphia two each, Chicago, Cincinnati, Worcester, and Lawrence one each. From *erysipelas* Chicago two, St. Louis, Milwaukee, and New Haven one each. From *puerperal fever*, Chicago and Milwaukee two each, Boston, Cincinnati, and Newburyport one each. From *yellow fever*, Brooklyn two, Boston one.

Cases reported in Boston: scarlet fever 44, typhoid fever 34, diphtheria 19, and measles three.

In 109 cities and towns of Massachusetts, with an estimated population of 1,345,140 (estimated population of the State 1,955,104), the total death-rate for the week was 20.64 against 22.09 and 22.10 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending September 6th, the death-rate was 24.1. Deaths reported 4053: infants under one year of age 1471; deaths in London 1529: acute diseases of the respiratory organs (London) 167, diarrhœal diseases 848, whooping-cough 77, scarlet fever 63, fever 55, measles 48, diphtheria 43, small-pox (London 11, Liverpool two) 13. The death-rates ranged from 13.1 in Derby to 38.8 in Bolton; Birmingham 28.7; Blackburn 36.8; Bradford 24.9; Leeds 27.6; Leicester 30.6; Liverpool 31.6; London 19.9; Manchester 30.2; Nottingham 30.8; Sheffield 26.4. In Edinburgh 15.2; Glasgow 23.9; Dublin 29.3.

For the week ending September 3d, in Paris, there were 175 deaths from consumption, typhoid fever 32, diphtheria and croup 27, measles 18, whooping-cough seven, erysipelas five, scarlet fever three. The death-rate was 21.64.

For the week ending September 6th, in the Swiss towns, there were 34 deaths from diarrhœal diseases, consumption 22, lung diseases nine, typhoid fever eight, diphtheria and croup five, scarlet fever two, erysipelas one, small-pox one. The death-rates were, at Geneva 16.3; Zurich 19.7; Basle 14.7; Berne 22.2.

The meteorological record for the week ending September 20th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Sept., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 14	30.387	52	61	41	67	40	62	56	NW	NW	NW	15	6	5	C	C	C	—	—
Mon., 15	30.268	54	66	44	62	65	80	69	NW	SE	SW	5	12	8	F	C	F	—	—
Tues., 16	29.829	69	78	55	78	43	66	62	SW	SW	SW	10	16	16	O	C	O	—	—
Wed., 17	29.738	71	82	64	70	37	86	64	SW	SW	SW	9	8	8	F	F	F	—	—
Thurs., 18	29.935	62	71	57	67	58	67	64	NW	SE	NW	8	7	8	F	F	O	—	—
Fri., 19	30.233	55	61	48	74	75	88	79	N	E	Calm.	10	11	0	C	C	F	—	—
Sat., 20	30.074	58	70	51	92	67	81	80	SE	SW	W	3	14	9	F	O	C	—	—
Mean, the Week.	30.066	60	69.9	51.5				67.8										1.40	0.04

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM SEPTEMBER 20, 1884, TO SEPTEMBER 26, 1884.

Middleton, Passmore, major and surgeon. Having reported from sick leave of absence, assigned to duty at Fort Leavenworth, Kansas. Paragraph 2, S. O. 188, headquarters Division of Missouri, September 19, 1884.

White, Robert H., captain and assistant surgeon. Ordered for duty as post surgeon, Fort Gaston, Cal. Paragraph 2, S. O. 110, headquarters Division of California, September 13, 1884.

Wilson, William J., captain and assistant surgeon. From Department of Dakota to Department of the East.

Gardiner, J. de B. W., captain and assistant surgeon. From Department of Arizona to Department of the East.

Corbusier, William H., captain and assistant surgeon. From Department of the East to Department of Arizona.

La Garde, L. A., captain and assistant surgeon. From Department of Missouri to Department of Dakota. Paragraph 1, S. O. 220, A. G. O., September 19, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR TWO WEEKS ENDING SEPTEMBER 27, 1884.

Harmon, G. E. H., passed assistant surgeon. September 16th, from Navy Yard, Norfolk, to Naval Academy.

McClurg, W. A., passed assistant surgeon. September 16th, from Naval Academy to Naval Hospital, Philadelphia, Pa.

Leach, Philip, passed assistant surgeon. September 16th, from Hospital, Chelsea, Mass., to the Palos.

Coles, J. W., surgeon. September 16th, as member and recorder of Naval Examining Board, and to Hospital, Philadelphia.

Derr, E. Z., passed assistant surgeon. September 16th, to Navy Yard, New York.

Mackie, B. S., surgeon. September 16th, from Training Ship Jamestown as member and recorder of Naval Examining Board.

Kindleberger, D., medical inspector. September 18th, from the Hartford, sick.

Dickson, S. H., passed assistant surgeon. September 19th, permission to leave United States.

Bloodgood, D., medical inspector. October 1, 1884, to Washington for examination preliminary to promotion, and as to qualifications for sea duty.

Hord, W. T., medical director. October 1, 1884, as member of Naval Examining Board.

Turner, T. J., medical director. October 1, 1884, as member of Naval Examining Board.

Boyd, J. C., passed assistant surgeon. September 25, 1884. Placed on waiting orders.

Oberly, A. S., surgeon. October 1, 1884, to Washington for examination preliminary to promotion, and as to qualifications for sea duty.

Gynecological Society of Boston. — The next regular meeting will be held on the second Thursday of October, at four o'clock, P. M. It will be the quarterly meeting, and lunch will be provided.

Henry M. Field, M. D., *Secretary.*

Died. — September 26, 1884, Luther Clark, M. D., M. M. S. S., of Boston, aged seventy-four years.

Books and Pamphlets Received. — A Treatise on Physiology and Hygiene for Educational Institutions and General Readers. Fully Illustrated. By Joseph C. Hutchison, M. D., LL. D. New York: Clark & Maynard. 1884.

Original Articles.

THE ABSORPTION OF SUGAR AND ALBUMINOIDS BY THE STOMACH.[1]

BY ROBERT MEADE SMITH, M. D.,
Professor of Comparative Physiology in the University of Pennsylvania.

As the conviction gradually gained ground that absorption in the small intestine could not be attributed to mere filtration and osmosis, and as in default of other plausible explanation the conveyance of foodstuffs into the tissues of the mucous membrane of the alimentary canal was held to be a special function of the protoplasm of the epithelial cells, the question as to how the wall of the stomach absorbed gained in importance; and if the epithelial cells are the main organs of absorption. All the points of contrast which may exist in the manner and rapidity of absorption in the stomach and small intestine will be of great importance in explaining the peculiarities of these organs. For since there is no occasion for doubting the identity of the protoplasmic contents of cylindrical epithelial cells of different localities, the differences in the power of absorption possessed by different cells may be referred to the dissimilarity in structure of the free border of those cells; and as is well known the intestinal and gastric epithelial cells possess these differences in the most marked degree. Indeed this dissimilarity of structure may be sufficient to explain the absorption of fat by the former and its non-absorption by the latter, without acknowledging the necessity for the previous reduction of the fat to the form of an emulsion.

On the other hand, for many hours daily the free surface of the epithelial coat of the stomach is bathed in a fluid whose degree of acidity in other circumstances is sufficient to destroy protoplasmic vitality. And while the escape of the stomach from self-digestion may be explained as due to the neutralization of this acid by the alkali of the blood and lymph, while the above might apply on anatomical grounds to the sub-epithelial tissues, it could scarcely hold for the free protoplasmic surfaces of the epithelial cells. Consequently, if the protoplasm of the gastric epithelial cells preserves its vitality in spite of the fact that it is separated from an acid digestive fluid only by a thin porous cap of mucus, it must either be held that these special cells, in contradistinction to other protoplasmic bodies, escape the action of the gastric acid, or that the acid of the gastric juice so condenses the mucus in the free surfaces of the cells as to prevent further entrance of fluid. In the latter case we could then only expect that the walls of the stomach would be capable of absorption when the acidity of the gastric contents had fallen below a certain degree.

Without regarding the numerous old observations which seemed to prove the absorption of various drugs and poisons by the walls of the stomach, Tappeiner[2] and Von Auret[3] have studied the absorption of sugar and peptone by the stomach by a method which is free from all the objections which might be urged against the earlier investigations. Both of these investigators, the former especially, found that the walls of the stomach were but slightly capable of absorption, and both failed to explain the conditions under which this limited absorption occurred.

From a few experiments made by Prof. C. Ludwig it seemed possible that the stomach of the frog might yield clearer results. Since the stomach of the frog is clothed with an epithelium which in its essential features is identical with that of the mammalian stomach, at his suggestion I commenced a series of studies, part of which were made last summer in Leipzig, and the remainder in the autumn in Philadelphia, on the following plan: The stomach was exposed in frogs which had fasted for at least a week, the pylorus ligated, and the abdominal wound carefully sewed up. After then introducing into the stomach either through the mouth or œsophagus a weighed amount of food of known composition, the frogs were kept for varying lengths of time and then killed by pithing. The stomachs were then excised and their contents collected, tested as to reaction, and weighed in the wet and dry state, and then incinerated; when grape sugar had been introduced the dried residue of the gastric contents was dissolved in a measured quantity of water and the percentage of sugar remaining in the stomach determined by titration with Fehling's fluid. Often instead of in a single frog the pylorus was tied at the same time in a number of frogs, each of which then received the same amount of food, and all were then killed and the contents of their stomachs examined together. By this means individual deviations from the general rule were eliminated as much as possible, and greater certainty in the results assured. And since of the hundred and more frogs subjected to this operation no more died than in an equal number kept in confinement without undergoing any operation it may be concluded that the operation itself does not interfere with the normal activity of the stomach.

Although the stomachs of fasting frogs with the exception of a slight amount of mucus were nearly always found empty, it does not necessarily follow that such would be the case after ligation of the pylorus, since the operative procedures might cause an irritative secretion to be poured out into the stomach; the following experiments were made to settle this point: —

A number of fasting frogs, after ligating the pylorus, were kept alive from one to six days and the contents of their stomachs then examined. With a single exception a small amount of acid mucoid fluid was found which was carefully removed, weighed, and its weight again determined after drying and incineration.

The following tables give the mean figures obtained in numerous experiments: —

After Twenty-four Hours' Ligation of Pylorus.

	Mgr.	In percentage.
Total contents of stomach	504	100.00
Water	496	98.40
Organic matter	7.5	1.49
Ash	0.4	0.07

After Forty-eight Hours' Ligation of Pylorus.

	Mgr.	In percentage.
Total contents of stomach	407	100.00
Water	395	97.00
Organic matter	11	2.83
Ash	0.5	0.11

After Seventy-two Hours' Ligation of Pylorus.

	Mgr.	In percentage.
Total contents of stomach	395	100.00
Water	383	96.97
Organic matter	11.4	2.88
Ash	0.5	0.12

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[1] Communication from the Leipzig Physiological Institute.

[2] Zeitschrift für Biologie, xvi.

[3] Archiv f. Anat. u. Phys., 1881.

After Ninety-six Hours' Ligation of Pylorus.

	Mgr.	In percentage.
Total contents of stomach	552	100.00
Water	538	97.46
Organic matter	13	2.35
Ash	1.5	0.27

As a mean of the above determinations it may be stated that after ligation of the pylorus the stomach of the frog contains a fluid which contains 2.35 per cent. of organic matter.

After One Hundred and Twenty Hours' Ligation of Pylorus.

	Mgr.	In percentage.
Total contents of stomach	1040	100.00
Water	1011	96.99
Organic matter	23	2.22
Ash	6	0.58

After One Hundred and Forty-four Hours' Ligation of Pylorus.

	Mgr.	In percentage.
Total contents of stomach	311	100.00
Water	304	97.75
Organic matter	7	2.22
Ash	0.3	0.10

In another case in which the pylorus has been ligated for 144 hours the stomach was completely empty.

The preceding figures show that the percentage of water in the contents of the stomachs of which the pylorus has been ligated for from one to six days is subject to but slight variation, running from 97 to 98.5 per cent. The total contents of the stomach is also nearly a constant quantity, averaging from 300 to 500 milligrammes, in only one case reaching one gramme, and in another case falling to the condition generally found in the stomachs of fasting frogs with open pylorus.

The fact that neither the total amount nor the percentage of water in the contents of the stomach is subject to variation, at any rate not proportionately to the time during which the pylorus remains ligated, deserves especial attention in order to determine whether the secreting activity of the empty stomach ceases shortly after the ligation of the pylorus, and the secreted fluid then remains unabsorbed, or whether the secretion and absorption go on in equal degrees. Without attempting to solve this question, it is sufficient for the purposes of the present research to know that ligation of the pylorus, even when maintained for six days, does not produce any disturbance of function or abnormal secretion which could interfere with or complicate the results of the experiments as to the degree of absorption in the stomach.

THE ABSORPTION OF GRAPE SUGAR.

In three different series of experiments the sugar was introduced into the stomach either dry or in 28.5 or 16.8 per cent. solution. In order to avoid loss and to insure greater purity in the results, when dry sugar was given the pylorus was first ligated, and then a small incision made in the œsophagus, through which the stomach was first dried with absorbent cotton and the sugar then introduced through the same opening. The œsophagus was then ligated at its entrance into the stomach so as to prevent loss through vomiting or by passage into the intestine. The following results were obtained: —

1. *Three Hours after Introduction of Sugar.*

Dry Sugar.			Sugar in 28.5 Per Cent. Solution.			Sugar in 16.8 Per Cent. Solution.		
Sugar.		Water.	Sugar.		Water.	Sugar.		Water.
Given.	Absorbed.		Given.	Absorbed.		Given.	Absorbed.	
175 mgr.	103 mgr.	775 mgr.	200 mgr.	75 mgr	801 mgr.	182 mgr.	65 mgr.	1275 mgr

2. *Six Hours after Introduction of Sugar.*

Dry Sugar.			Sugar in 28.5 Per Cent. Solution.			Sugar in 16.8 Per Cent. Solution.		
Sugar		Water.	Sugar.		Water.	Sugar.		Water
Given.	Absorbed		Given	Absorbed.		Given	Absorbed	
200 mgr.	161 mgr.	1945 mgr	200 mgr.	150 mgr	1923 mgr.	182 mgr.	71 mgr	1477 mgr.

3. *Nineteen Hours after Introduction of Sugar.*

Dry Sugar			Sugar in 28.5 Per Cent. Solution			Sugar in 16.8 Per Cent. Solution.		
Sugar		Water.	Sugar.		Water.	Sugar.		Water
Given	Absorbed		Given	Absorbed.		Given	Absorbed	
200 mgr	175 mgr	8775 mgr	400 mgr	175 mgr	2588 mgr	182 mgr.	170 mgr.	1587 mgr.

4. *Twenty-two Hours after Introduction of Dry Sugar.*

Sugar Given.	Sugar Absorbed.	Water.
200 mgr.	150 mgr.	4089 mgr.

5. *Twenty-four Hours after Introduction of Sugar.*

	Dry Sugar.			Sugar in 16.8 Per Cent. Solution.		
	Sugar Given.	Sugar Absorbed.	Water.	Sugar Given.	Sugar Absorbed.	Water.
a.	200 mgr.	186 mgr.	2589 mgr.	182 mgr.	82 mgr.	3351 mgr.
b.	200 mgr.	184 mgr.	516 mgr.	–	–	–

6. *Forty-eight Hours after the Introduction of Sugar.* Sugar entirely disappeared from stomach; this was also the case after *seventy-two hours.* In each instance from 1000 to 2000 milligrammes of water were found in the stomach.

In each one of the above experiments sugar had been absorbed by the stomach, but with different degrees of rapidity, depending on the density of the solution of sugar employed. The following table shows this point more clearly: —

Time after the Introduction of Sugar in Hours.	Dry Sugar.		Sugar in 28.5 Per Cent. Solution.		Sugar in 16.8 Per Cent. Solution.	
	Per Cent. Absorbed of the Amount given.	Per Cent. of Sugar remaining in the Fluid in Stomach.	Per Cent. Absorbed of the Amount given.	Per Cent. of Sugar remaining in the Fluid in Stomach.	Per Cent. Absorbed of the Amount given.	Per Cent. of Sugar remaining in the Fluid in Stomach.
3	60	9.03	38	15.60	30	9.18
6	80	3.72	75	2.60	39	7.51
20	87	0.66	87	1.20	90	0.76
24	92	0.86	97	0.12	44	2.98

From the above it is evident, in the first place, that in equal periods the amount of sugar absorbed increases with the density of the preparation of sugar introduced into the stomach, and consequently the rapidity of absorption sinks in proportion to the amount of fluid poured out into the stomach, facts which would be expected, whatever be the mechanism of absorption. And, in the second place, it is clear that the stomach from which absorption has taken place contains more fluid than was introduced with the sugar.

Amount and Composition of the Fluid poured out by the Stomach.

1. DRY SUGAR.

	Water Poured Out. Mgr.	Residue free from Sugar. Per Cent.	Sugar Absorbed. Mgr.	Relation between Water Poured Out and Absorbed. Sugar = 1.
After 3 hours.	775	2.32	103	0.13
After 6 hours.	1049	2.86	161	0.04
After 19 hours.	3775	2.67	175	–
After 22 hours.	4089	3.04	150	–
After 24 hours.	2589	2.34	186	–
After 24 hours.	516	3.10	184	–

2. SUGAR IN 28.5 PER CENT. SOLUTION.

	Water Poured Out. Mgr.	Residue free from Sugar. Per Cent.	Sugar Absorbed. Mgr.	Relation between Water Poured Out and Absorbed. Sugar = 1.
After 3 hours.	301	3.65	75	0.25
After 6 hours.	1423	2.60	150	0.10
After 20 hours.	1588	2.08	175	0.11

3. SUGAR IN 16.8 PER CENT. SOLUTION.

	Water Poured Out. Mgr.	Residue free from Sugar. Per Cent.	Sugar Absorbed. Mgr.	Relation between Water Poured Out and Sugar Absorbed.
After 3 hours.	375	2.93	65	0.17
After 6 hours.	577	?	71	–
After 18 hours.	687	3.35	170	–
After 24 hours.	2451	?	82	–

To obtain any conception as to the amount and character of this fluid the amount of water introduced with the sugar must be deducted from that found in the stomach at the end of the experiment, and the amount of sugar present in the dried residue must be subtracted from the total amount of the latter.

It is seen from the above tabular statement that the amount of fluid in the stomach increases with the duration of absorption, and with the amount of sugar disappearing from the stomach; and that the amount of fluid actually poured out by the stomach is inversely proportional to the amount of water introduced with the sugar; thus it reaches its greatest amount when dry sugar is given, and is least when the sugar is given in the form of a weak solution. And it further appears that the amount of water by weight poured out by the stomach is always largely in excess of the amount of sugar absorbed.

These results are evidently of an osmotic character, but in searching for the osmotic equivalent it must be remembered that the fluid poured out is not pure water, but a solution of various substances, as shown in the above table in the column which gives the percentage of residue which was free from sugar, and which, since not introduced with the food, must have been contributed by the stomach. Further, the amounts of this residue closely coincide in each case, and, what is well worthy of attention, are almost identical with the amounts of solid residue which were found in stomachs of the frogs in whom the pylorus had been tied and no food given. It might, therefore, be concluded that the gastric glands had been stimulated by the presence of sugar in the stomach. If this be correct then it must also be assumed that two separate and independent processes were going on at the same time in the stomach, a secretion by the glands and an absorption of sugar by the epithelial cells, an assumption which is rendered hardly tenable when it is remembered the reaction of the contents of the stomach after the administration of sugar was never acid, but nearly always markedly alkaline.

Therefore the presence of a solid residue free from sugar can evidently not be regarded as opposed to the absorption of sugar by osmosis, especially when it is remembered that the sugar when absorbed does not enter pure water, but blood or lymph, whose constituents must also be concerned in the osmotic process.

In concluding this portion of my subject it must be stated that even after the sugar has entirely disappeared from the stomach, forty-eight or seventy-two hours after its introduction, the stomach then contains far more fluid than is found in a stomach whose pylorus has been tied and no food given. Thus after forty-eight hours 1967 milligrammes of fluid with 3.4 per cent. solids were found, and after seventy-two hours 2440 milligrammes with 3.3 per cent. solid.

ABSORPTION OF ALBUMEN.

For experiments as to the absorption of albuminoids, fresh frog's muscle seemed the most suitable food, since, when taken from a fasting animal, it contains but little fat, and is almost constant in the percentage of water which it contains. From several estimations I obtained 78.24 per cent. of water, and 20.83 per cent. of organic matter, figures which very closely correspond with the results of the analyses of Von Bibra, and as all the frogs were kept under similar circumstance these figures, therefore, serve as the data on which my calculations are based.

Before proceeding with the experiments on frogs with ligated pylorus I first gave to each of a large number of normal frogs 200 milligrammes of frog's muscle, and then killed them after the lapse of forty-eight hours. In each case the stomach was found empty, from which it was concluded that the amount given was readily digested.

But when the same amount was given to frogs in whom the pylorus had been previously ligated it was found that a much longer time was required before the food was absorbed; only after ninety-six hours was solution completed. When large amounts of frog muscle, such as 500 or 1000 milligrammes, were given, the time of digestion was still further prolonged, sometimes not being complete after 120 hours.

According to the observations of E. Brücke with artificial gastric juice, this delay in the process of digestion in the ligated stomach may be attributed to the accumulation of digestive products, since the amount of fluid poured out by the stomach increased with the increase of time during which the food remained in the stomach, and the reaction of the contents of the stomach up to the time of complete solution of the food was always strongly acid. The delay could not, therefore, have been due to diminished acidity of the gastric juice.

Since the time required for the solution of a given amount of frog's muscle varied in different animals, the duration of the experiment cannot be used as a means of measuring the progress of digestion. The experiments can only be grouped by comparing the characters of the gastric contents.

With a single exception the stomach in all cases contained more water than was contained in the food, while the organic matters were sometimes in excess, and sometimes less than was contained in the amount of frog's muscle given as food. That a diminution in the amount of organic matter found in the stomach after feeding can only be due to absorption is self-evident, but it does not by any means follow that the difference in weight represents the amount absorbed. On the other hand, the cases in which the organic residue found in the stomach was in excess of that given with the food do not necessarily indicate an interruption in the process of absorption, for the stomach not only contains the amount of food administered, but with the entrance of food the stomach commences to fill itself with gastric juice, as shown by the solution of the food, the acid reaction, and the excess of water. From the experiments made on the secretion poured out into the empty stomach after ligation of the pylorus, and in those in which sugar was given, it can be concluded that, in all probability, in the stomach in which digestion of meat is taking place a secretion, containing from 2.5 to 3.0 per cent. organic residue, will also be poured out. Under the assumption of this percentage, and of the origin of the excess of water in the secretion of gastric juice, it is possible to follow much more closely the steps of the experiments.

In the following series of experiments those are first detailed in which there could be no doubt but that a part of the albuminoids of the food were absorbed, since the contents of the stomach at the end of the experiment were poorer in organic matter than the food. The experiments are arranged according to the degree of difference between the organic constituents of the food and of the contents of the stomach: —

I.

	Duration of Digestion. Hours.	Loss of		In Contents of Stomach.		Degree of Digestion
		Organic Matter. Mgr.	Water. Mgr.	Organic Matter. Mgr.	Water. Mgr.	
1	120	25	105	27	907	Complete.
2	24	104	396	89	758	Incomplete.
3	72	104	396	87	1493	Incomplete.
4	96	104	396	81	1315	Complete.
5	144	42	158	13	576	Complete.
6	96	42	158	12	374	Complete.
7	192	41	156	10	294	Complete.
8	96	42	158	6	514	Complete.
9	48	42	158	6	528	Complete.
10	96	42	158	4	139	Complete.
11	48	208	792	145	1603	Incomplete
12	24	208	792	142	1149	Incomplete
13	96	208	792	81	1328	Incomplete.

Since the difference in weight between the amounts of organic matter in the food and in the contents of the stomach after digestion is liable to cause an erroneous estimate of the actual amount of matter which has been absorbed by the stomach, an attempt has been made in the following table to correct these figures. The order of arrangement of the experiments is the same as in the preceding table: in the second column is noted the excess of organic matter in the food given over that found at the end of the experiment in the contents of the stomach, while the third column gives the excess of water in the stomach over that contained in the food. The fourth column is calculated on the supposition that the water of the gastric contents has been secreted as gastric juice and contains 2.5 per cent. of organic matters. If the figures of the fourth column of this table are added to those of the third column of Table I. the sum will represent the amount of organic matters which the stomach must have contained had no absorption taken place; but if the actual amount of organic matter found in the stomach is subtracted from this sum the amount absorbed will be determined; this quantity is represented in the following table in the column headed "Probably absorbed". —

II.

	In the Stomach.		Excess of Water regarded as Secretion, with 2.5 Per Cent. Organic Matter. Mgr.	Amount probably Absorbed. Mgr.
	Less Organic Matter than in Food. Mgr.	More Water than in Food. Mgr.		
1	8	762	19	17
2	15	654	16	31
3	17	1389	34	51
4	23	1019	25	48
5	29	418	10	39
6	30	216	5	35
7	31	138	3	34
8	36	356	8	44
9	36	370	9	45
10	38	19 mgr. less.	3	41
11	63	811	20	83
12	66	457	11	77
13	127	536	13	140

As already stated, in the cases where 500 milligrammes and more of frog's muscles were given as food the stomach still contained undissolved food; nevertheless absorption of the portion of food which had passed into solution had occurred, for less organic matter was found in the stomachs than had been given in the food. Thus there was a loss of organic matter in —

Exp.
2. Of 15 mgr. after 24 hours after feeding with 500 mgr. muscle.
3. Of 17 mgr. after 72 hours after feeding with 500 mgr. muscle.
11. Of 63 mgr. after 48 hours after feeding with 1000 mgr. muscle.
12. Of 66 mgr. after 124 hours after feeding with 1000 mgr. muscle.
13. Of 127 mgr. after 96 hours after feeding with 1000 mgr. muscle.

These differences are too great to fall within the limit of error in weighing. And, moreover, it must be remembered that the amount of organic matter found in the stomach is not derived solely from the food but also from the secretion poured out by the gastric glands, so that the amount absorbed must have been in reality greater than the above figures which give the loss of organic matter. Since the strongly acid reaction of the contents of the stomach points to a continuation of the act of digestion, it follows from the above observations that digestion and absorption can occur simultaneously; or, more strictly, that the power possessed by the gastric epithelium of absorbing digested albumen is not prevented by the contact of a strongly acid secretion.

Since, therefore, absorption commences before solution of the food is complete, it may be expected that simultaneously with or shortly after the completion of digestion the constituents of the food will be absorbed.

If now the experiments in Table I. are examined in which digestion was complete, namely, Nos. 1, 4, 5, 6, 7, 8, and 9, the following differences are found between the amounts of organic matter in the stomach and in the food. In —

1. 8 mgr. after 120 hours after feeding with 137 mgr. muscle, with 35 mgr. organic residue.
4. 23 mgr. after 96 hours after feeding with 500 mgr. muscle, with 104 mgr. organic residue.
5. 29 mgr. after 144 hours after feeding with 200 mgr. muscle, with 42 mgr. organic residue.
6. 30 mgr. after 96 hours after feeding with 200 mgr. muscle, with 42 mgr. organic residue.
7. 31 mgr. after 162 hours after feeding with 195 mgr. muscle, with 41 mgr. organic residue.
8. 36 mgr. after 96 hours after feeding with 200 mgr. muscle, with 42 mgr. organic residue.
9. 36 mgr. after 48 hours after feeding with 200 mgr. muscle, with 42 mgr. organic residue.
10. 38 mgr. after 96 hours after feeding with 200 mgr. muscle, with 42 mgr. organic residue.

If it is supposed that the organic matter found in the stomach is derived solely from the digested food it must then be concluded that in Nos. 8, 9, and 10 of the above series the digested albumen was almost entirely absorbed. But if, on the other hand, it is admitted that an important portion of the chyme is derived from gastric secretion, and my argument is accepted, that the water which is secreted by the stomach brings with it 2.5 per cent. of organic matter, then Nos. 1, 5, 6, and 7 of the above series are also to be included in the group in which the digested albumen was almost entirely absorbed (see Table II.).

Passing now to the consideration of the experiments in which the stomach after death contained not only more water, but also more organic matter, than was given with the food, we find again a confirmation of the statement that the passage of water from the walls of the stomach to its interior carries with it a considerable quantity of organic matter.

The following table brings out these points: —

	Duration of Digestion. Hours.	Loss of		In the Stomach.		Degree of Digestion.
		Organic Matters. Mgr.	Water. Mgr.	Organic Matters. Mgr.	Water. Mgr.	
a.	48	42	158	43	821	Incomplete.
b.	48	42	158	57	955	Incomplete.
c.	120	43	154	46	1567	Incomplete.
d.	90	52	200	58	786	Incomplete.
e.	72	57	219	60	1196	Incomplete.
f.	48	60	226	66	851	Incomplete.
g.	48	104	396	119	1463	Incomplete.
A.	124	42	158	51	1412	Complete.
B.	77.5	36	139	52	1196	Complete.
C.	143	28	106	51	1146	Complete, Faintly acid.
D.	192	25	104	52	1903	Complete, Neutral.

Since after the administration of food a fluid containing organic matter passes into the cavity of the stomach, it is clear that from the mere quantitative comparison of the food and the contents of the stomach no conclusion can be at once drawn as to the degree of absorption which has taken place. But if, as in the consideration of the absorption of organic matter, the calculation is made under the assumption that the excess of water in the stomach over that given with the food has also brought into the stomach 2.5 per cent. of organic matter in solution, it is clear that even when more organic matter is found in the stomach than was contained in the food absorption has nevertheless taken place. This is shown in the following corrected table:

	In the Stomach.		Excess of Water regarded as Secretion, with 2.5 Per Cent. Organic Matter. Mgr.	Probable Amount Absorbed of Organic Food Stuffs. Mgr.
	More Organic Matter than in Food. Mgr.	More Water than in Food. Mgr.		
a.	1	663	17	16
b.	15	797	20	5
c.	3	1313	33	30
d.	6	568	14	8
e.	3	777	19	16
f.	6	625	16	10
g.	15	1077	27	12
A.	9	1256	31	22
B.	8	957	24	8
C	3	1040	26	3
D.	27	1826	46	17

Although the small amounts absorbed in *A*, *B*, *C*, and *D*, in spite of the total solution of the food, form an apparent contradiction to the earlier experiments the discrepancy can be readily explained. For it was noted in the experiments in which the sugar was completely absorbed that the stomach did not then empty itself, but even after the lapse of a long interval contained a fluid with 3.3 to 3.4 per cent. organic residue, and it is perfectly warrantable to assume that a similar state of affairs holds in the case of the digestion and absorption of albuminous food; and that being the case, the organic matters found in the stomach in the latter instance may be referred to the fluid secreted by the stomach. Accepting these data as a basis for calculation, it is found that the contents of the stomach in A contains 3.62, in B, 4.34, in C, 4.45, and in D, 2.73 per cent. of organic residue, figures which so closely correspond to the percentage of organic matters in the stomach after it is known that all the food has been absorbed that they cannot be used as an argument against the total absorption of the albuminoid elements of the food.

As to whether the above theories are actually true, or as to what forces are concerned in the absorption of albumen by the mucous membrane of the stomach, no demonstration can be given until chemistry permits a better quantitative separation of the constituents of the gastric juice and the derivatives of digested albuminous food.

At present the assumption that the absorption in the stomach is of the nature of a process of diffusion seems the most probable. Several facts harmonize with this view. In the first place the slowness of absorption; for if it were of an osmotic nature absorption would only be possible when the albumen had been converted into peptone or into some substance not already present in the blood or lymph. Again the fact that the stomach fills itself with fluid in exchange for the absorbed albumen is a further indication of the osmotic character of the process. And finally, the anatomical structure of the gastric epithelium furnishes another point in favor of this view, for the surface exposed to the cavity of the stomach is composed of porous mucus incapable of spontaneous protoplasmic movement.

Apart from all hypothesis, however, the experiments detailed above clearly show the marked difference between absorption in the stomach and in the intestine. For after the completion of digestion the intestine rapidly absorbs both the digested food products and the greater part of the glandular secretions, so that only a comparatively dry residue remains unabsorbed, while in the stomach after the absorption of sugar or albumen there remains a considerable volume of fluid for several hours. It may of course be objected that the state of affairs which exists in a stomach with ligated pylorus does not necessarily hold in that organ when in its normal condition, but the above experiments show that the ligation in the frog is but slightly disturbing, and the most that can be claimed is that in the normal condition the fluids transuded in absorption pass into the intestine to again from there enter the blood.

APPENDIX.

DETAILS OF EXPERIMENTS.

Analysis of Frog's Muscle.

Water	78.2366
Matters soluble in alcohol	[illegible]
Matters insoluble in alcohol	[illegible]
Ash	[illegible]
	99.9998

Water = 78.2366	80.43
Solids = 21.7633	19.57
99.9999 (Rms.)	100.00 (Von Bibra.)

Absorption of Albuminoids.

Exp. I. May 7, 1883. Frog: weight 55.8 grm. Pylorus ligated; 0.2855 grm. frog's muscle introduced into stomach. Contents of stomach after 48 hours = 0.9204 grm. Reaction acid; muscle not completely digested.

Water	0.8505
Insoluble in alcohol	0.0549
Soluble in alcohol	0.0115
Ash	0.0035
	0.9204

Exp. II. May 7, 1883. Frog: weight 48.25 grm. Pylorus ligated at 5.30 P. M.; 0.2755 grm. frog's muscle introduced into stomach. After 72 hours contents of stomach = 1.0575 grm.

Water	0.9955
Soluble in alcohol	0.0160
Insoluble in alcohol	0.0438
Ash	0.0022
	1.0575

Exp. III. May 8, 1883. Frog: weight 55 grm. Pylorus ligated, and 0.253 grm. frog's muscle given. After 90 hours contents of stomach = 0.7860.

Water		0.7236
Insoluble in alcohol	Albumen	0.0470
	Ash	0.0065
Soluble in alcohol		0.0089
		0.7860

Muscle partly digested; reaction acid.

Exp. IV. May 8, 1883. Frog: weight 47.7 grm. Pylorus ligated, and 0.1945 grm. frog's muscle given. After 162 hours muscle entirely digested; reaction faintly acid.

Water		0.2940
Insoluble in alcohol	Albumen	0.0076
	Ash	0.0020
Soluble in alcohol		0.0019
		0.3055

Exp. V. May 10, 1883. Frog: weight 53 grm. Pylorus ligated, and 0.2 grm. frog's muscle given. After 124½ hours muscle entirely digested; reaction weak acid. Contents of stomach = 1.4695.

Water		1.4125
Insoluble in alcohol	Albumen	0.0355
	Ash	0.0063
Soluble in alcohol		0.0152
		1.4695

Exp. VI. May 17, 1883. Frog: weight 47 grm. Pylorus ligated, and 0.134 grm. frog's muscle given. After 143 hours muscle entirely digested; reaction very faintly acid. Stomach contained mucus.

Water		1.1461
Insoluble in alcohol	Albumen	0.0399
	Ash	0.0114
Soluble in alcohol		0.0108
		1.2082

Exp. VII. May 17, 1883. Frog: weight 42.7 grm. Pylorus ligated and 0.130 grm. frog's muscle given. Stomach was not entirely empty. After 192 hours muscle dissolved; reaction neutral.

Water		1.9299
Insoluble in alcohol	Albumen	0.0401
	Ash	0.0073
Soluble in alcohol		0.0119
		1.9892

Exp. VIII. May 23, 1883. Frog: weight 53 grm. Pylorus ligated, and 0.22 grm frog's muscle given. After 240 hours muscle dissolved; reaction acid. Stomach contained remains of a large, partly digested fly, which was taken out before analyzing.

Water		3.0909
Insoluble in alcohol	Albumen	0.0764
	Ash	0.0422
Soluble in alcohol		0.0247
		3.2342

Exp. IX. May 23d. Frog: weight 51 grm. Pylorus ligated, and 0.175 grm. frog's muscle given. After 77½ hours muscle entirely dissolved; reaction strongly acid.

Water		1.1960
Insoluble in alcohol	Albumen	0.0402
	Ash	0.0051
Soluble in alcohol		0.0120
		1.2533

Exp. X. May 28th. Frog: weight 47 grm. Pylorus ligated, and 0.22 grm. frog's muscle given. After 120 hours muscle dissolved. Stomach also contained parts of earth worm, which were removed before the analysis; reaction acid.

Water		1.9232
Insoluble in alcohol	Albumen	0.0220
	Ash	0.0065
Soluble in alcohol		0.0124
		1.9841

Exp. XI. May 28th. Frog: weight 39 grm. Pylorus ligated, and 0.197 grm. frog's muscle given. After 120 hours muscle completely digested; reaction strongly acid. Contents of stomach = 1.6184.

Water		1.5670
Insoluble in alcohol	Albumen	0.0330
	Ash	0.0054
Soluble in alcohol		0.0130
		1.6184

Exp. XII. May 28th. Frog: weight 54 grm. Pylorus ligated, and 0.170 grm. frog's muscle given. After 121 hours muscle completely digested; reaction faintly acid. Contents of stomach = 0.9386.

Water		0.9071
Insoluble in alcohol	Albumen	0.0150
	Ash	0.0050
Soluble in alcohol		0.0115
		0.9386

Exp. XIII. June 12th. Eighteen frogs were allowed to fast for three weeks, and then 0.2 grm. frog's muscle inserted in the stomach of each, the pylorus not being ligated. After 48 hours all the frogs had digested the amount of food given. The contents of the stomach was estimated in four of these frogs; reaction faintly alkaline.

Water		0.3085
Insoluble in alcohol	Albumen	0.0125
	Ash	0.0020
Soluble in alcohol		0.0035
Contents of stomach of four frogs		0.3265

In the remaining 13 frogs the pylorus was ligated on June 14th at twelve M. Of these frogs seven received each 0.2 grm. frog's muscle. The stomach was empty in all. See Exp. XIV., XVI., and XVIII. The other frogs received no food. See Exp. XV., XVII., and XIX.

Exp. XIV. After 48 hours' digestion of 0.2 grm. frog's muscle, with ligated pylorus; muscle not entirely dissolved; reaction acid. Contents two frogs = 2.0275 grm.

Water		1.9100	0.9550	In one frog.
Insoluble in alcohol	Albumen	0.0778	0.0389	
	Ash	0.0034	0.0017	
Soluble in alcohol		0.0363	0.0181	
		202.75	1.0137	

Exp. XV. After 48 hours' ligation of pylorus without food. Contents of stomach in two frogs = 0.8139.

Water		0.7900	0.3950	In one frog.
Insoluble in alcohol	Albumen	0.0123	0.0061	
	Ash	0.0009	0.0004	
Soluble in alcohol		0.0107	0.0054	
		0.8139	0.4069	

Exp. XVI. After 96 hours' digestion of 0.2 grm. frog's muscle, with ligated pylorus. Muscle entirely dissolved; reaction acid. Gastric contents two frogs = 0.5276.

Water		0.5148	0.2574	In one frog.
Insoluble in alcohol	Albumen	0.0060	0.0030	
	Ash	0.0008	0.0004	
Soluble in alcohol		0.0060	0.0030	
		0.5276	0.2638	

Exp. XVII. After 96 hours' ligation of pylorus without food. Contents of stomach in two frogs = 1.1040.

Water		1.0755	0.5377	In one frog.
Insoluble in alcohol	Albumen	0.0120	0.0060	
	Ash	0.0030	0.0015	
Soluble in alcohol		0.0135	0.0067	
		1.1040	0.5519	

Exp. XVIII. After 144 hours' digestion, with ligated pylorus, of 0.2 grm. frog's muscle. Muscle entirely dissolved; reaction acid. Contents of stomach of two frogs = 1.1827.

Water		1.1525	0.5762	In one frog.
Insoluble in alcohol	Albumen	0.0200	0.0100	
	Ash	0.0037	0.0018	
Soluble in alcohol		0.0065	0.0032	
		1.1827	0.5912	

Exp. XIX. After 144 hours' ligation of pylorus without food. Stomach was absolutely empty.

Exp. XX. After 24 hours' ligation of pylorus without food. Reaction acid. Contents of stomach of three frogs = 1.5120.

Water		1.4885	0.4961	In one frog.
Insoluble in alcohol	Albumen	0.0150	0.0050	
	Ash	0.0010	0.0003	
Soluble in alcohol		0.0075	0.0025	
		1.5120	0.5039	

Exp. XXI. After 72 hours' ligation of pylorus without food. Contents of stomach of three frogs = 1.1845.

Water		1.1490	0.3830	In one frog.
Insoluble in alcohol	Albumen	0.0328	0 0109	
	Ash	0.0015	0.0005	
Soluble in alcohol		0.0012	0.0004	
		1.1845	0.3948	

Exp. XXII. After 120 hours' ligation of pylorus; no food given. Contents of stomach of two frogs = 2.0809.

Water		2.0222	1.0111	In one frog.
Insoluble in alcohol	Albumen	0.0268	0.0134	
	Ash	0.0114	0.0057	
Soluble in alcohol		0.0205	0.0102	
		2.0809	1.0404	

Exp. XXIII. After 144 hours' ligation of pylorus; no food given. Contents of stomach of two frogs = 0.6225.

Water		0.6080	0.3040	In one frog.
Insoluble in alcohol	Albumen	0.0059	0.0029	
	Ash	0.0006	0.0003	
Soluble in alcohol		0.0080	0.0040	
		0.6225	0.3112	

Exp. XXIV. After 96 hours' digestion of 0.2 grm. frog's muscle, with ligated pylorus. Muscle entirely digested; reaction acid. Contents of stomach of four frogs = 1.5455.

Water		1.4955	0.3738	In one frog.
Insoluble in alcohol	Albumen	0.0328	0.0082	
	Ash	0.0005	0.0001	
Soluble in alcohol		0.0167	0.0042	
		1.5455	0.3863	

Exp. XXV. October 9, 1883. Frog. After 96 hours' digestion of 0.2 grm. frog's muscle, with ligated pylorus; frog had fasted ten days. Stomach empty; muscle entirely dissolved; reaction acid. Contents of stomach (one frog) = 0.1428.

0 1385 = water.
0.0038 = organic matter.
0.0005 = ash.
0.1428

Exp. XXVI. Three frogs. After 48 hours' digestion of 0.2 grm. frog's muscle, with ligated pylorus. Muscle not all digested. Contents of stomach of three frogs = 2.6002.

Water	2.4631	0.8210	In one frog.
Organic matter	0.1301	0.0433	
Ash	0.0070	0.0023	
	2.6002	0.8666	

Exp. XXVII. Five frogs. After 48 hours' digestion, with ligated pylorus, 1.0 grm. frog's muscle given to each. Muscle not dissolved. Contents of stomach of five frogs = 8.8811 grm.

Water	8.0150	1.6030	In one frog.
Organic matter	0.7314	0.1453	
Ash	0.1347	0.0269	
	8.8811	1.7752	

Exp. XXVIII. After 96 hours' digestion of 1.0 grm. frog's muscle, with ligated pylorus. Muscle not all digested. Contents of stomach of four frogs = 5.7069.

Water	5.3143	1.3283	In one frog.
Organic matter	0.3226	0.0806	
Ash	0.0700	0.0175	
	5.7069	1.4264	

Exp. XXIX. After 24 hours' digestion of 1 grm. frog's muscle, with ligated pylorus. Muscle not digested. Contents of stomach of six frogs = 7.9043.

Water	6.8928	1.1488	In one frog.
Organic matter	0.8507	0.1418	
Ash	0.1608	0.0268	
	7.9043	1.3174	

Exp. XXX. After 24 hours' digestion of 0.5 grm. frog's muscle, with ligated pylorus. Muscle not digested. Contents of stomach of four frogs = 3.4356.

Water	3.0320	0.7580	In one frog.
Organic matter	0.3542	0.0885	
Ash	0.0494	0.0123	
	3.4356	0.8588	

Exp. XXXI. After 48 hours' digestion of 0.5 grm. frog's muscle, with ligated pylorus. Muscle not all dissolved. Gastric contents of four frogs =5.8507.

Water	5.3510	1.3377	In one frog.
Organic matter	0.4755	0.1188	
Ash	0.0242	0.0060	
	5.8507	1.4625	

Exp. XXXII. After 72 hours' digestion of 0.5 grm. frog's muscle; pylorus ligated. Muscle not all dissolved. Contents of stomach of four frogs = 6.3501.

Water	5.9696	1.4926	In one frog.
Organic matter	0.3475	0.0868	
Ash	0.0330	0.0082	
	6.3501	1.5876	

Exp. XXXIII. After 96 hours' digestion, with ligated pylorus, of 0.5 grm. frog's muscle. Muscle digested. Contents of stomach of four frogs = 5.6041.

Water	5.2611	1.3152	In one frog.
Organic matter	0.3225	0.0806	
Ash	0.0205	0.0051	
	5.6041	1.4009	

Exp. XXXIV. After 120 hours' digestion of 0.5 grm. frog's muscle; pylorus ligated. Muscle entirely dissolved. Contents of stomach of three frogs = 1.4550.

Water	1.3862	0.4620	In one frog.
Organic matter	0.0636	0.0212	
Ash	0.0052	0.0014	
	1.4550		

Time	24 Hours	48 Hours	72 Hours	96 Hours	120 Hours
No. of experiment	XXX.	XXXI.	XXXII.	XXXIII.	XXXIV.
Water	0.7580	1.3377	1.4926	1.8152	0.4620
Organic matter	0.0885	0.1188	0.0868	0.0806	0.0212
Ash	0.0123	0.0060	0.0082	0.0051	0.0014

In 0.5 grm. frog's muscle:

Water	0.40
Organic matter	0.09
Ash	0.01
	0.50 grm.

Absorption of Sugar.

Exp. XXXV. December 11, 1883. 0.25 grm. of crystalline grape sugar (97 per cent. pure) was dissolved in 26 cc. distilled water and mixed with the mucus from the stomach of three frogs, and dried in a crucible in hot-water oven; the residue was then dissolved with gentle heat in 26 cc. water, filtered, and sugar in filtrate estimated with Fehling's solution (1. cc. = 0.005 grm.). 2.7 cc. of the filtrate contain 0.025 grm. sugar.

Exp. XXXVI. 0.1 grm. sugar dissolved with mucus from frog's stomach in water, dried over water bath, residue dissolved in 20 cc. water, filtered, and sugar estimated in filtrate. (1) 2.05 cc. = 0.01 grm. sugar; (2) 2.1 cc. = 0.01 grm.

Exp. XXXVII. 0.2 grm. sugar dissolved in water with contents of frog's stomach, dried in water oven, residue dissolved in water, filtered (during which some was lost), and diluted to 25 cc. As the sugar was only 97 per cent., instead of 0.2 grm. only 0.194 was actually used.

1.75 cc. of filtrate = 0.01 grm. sugar.
25 cc. of filtrate = 0.143 grm.

The missing 0.051 probably lost when filter upset.

The same filtrate was examined in a 1 decimeter tube of Laurent's polarimeter, and gave rotation of the right of 2.8°. As 100° = 20.51 grm. sugar in 100 cc., 2.8° = .143 grm. in 25 cc., or precisely the same result obtained with Fehling's test.

Exp. XXXVIII. Frog. Pylorus ligated; 0.25 grm. undissolved sugar introduced through a glass tube into stomach. After 28 hours contents of stomach = 2.2026 grm.

Water	2.1663
Solids	0.0363
	2.2026

Residue dissolved in water, filtered, and diluted to 15 cc.

(1.) 3.55 cc. = 0.005 grm. sugar.
(2.) 3.7 cc. = 0.005 grm. sugar.
Water poured out into stomach = 2.1663
Sugar absorbed from stomach = 0.225

A little sugar was found in the water in the dish in which the frog was kept; perhaps it came from the urine. The peritonæum was distended with fluid.

Exp. XXXIX. Frog. Pylorus ligated; an opening was made in the lower part of the œsophagus, and the stomach emptied and dried with absorbent cotton. A glass tube was then pushed into the stomach through the opening in the œsophagus, and 0.2 grm. sugar inserted through tube into stomach. The œsophagus was then tied on the gastric side of the opening. After 19 hours contents of stomach = 3.9013, faintly alkaline.

Water	3.7751
Solids	0.1262
	3.9013

Residue dissolved in water, filtered, and diluted to 20 cc. — 4 cc. = 0.005 grm. sugar.

Water poured out = 3.7751 grm.
Sugar absorbed = 0.175 grm.

Exp. XL. Frog. Pylorus and œsophagus ligated, and 0.2 grm. sugar given, as in Exp. XXXIX. Stomach empty. After 22 hours contents of stomach = 4.2637.

Water	4.0889
Solids	0.1748
	4.2637

Residue dissolved in water, filtered, and diluted to 20 cc. — 2 cc. = 0.005 grm. sugar.

Water poured out = 4.0889
Sugar absorbed = 0.150

Exp. XLI. In order to see if secretion of water was produced in the stomach by the manipulation necessary to introduce sugar the pylorus was ligated, and a glass rod inserted into the stomach through an incision in the œsophagus, and moved around about as much as the glass tube would be through which sugar was given. The œsophagus was then ligated. After 96 hours contents of stomach = 0.1031 grm.

Water	0.0999
Solids	0.0032
	0.1031 grm.

Three other similar experiments gave corresponding results: in one instance after 24 hours the stomach was absolutely empty. For the amount of secretion caused by ligation of pylorus, see Exp. XIII et seq.

Exp. XLII. Frog. Pylorus and œsophagus ligated; 0.2 grm. sugar given as in Exp. XXXIX. After 24 hours contents of stomach = 0.5479 grm.

Water = 0.5156
Solids = 0.0323

0.5479

Residue dissolved in water, filtered, and diluted to 20 cc. — 12 cc. = 0.01 grm. sugar.

Water poured out = 0 5156
Sugar absorbed = 0.0184

Exp. XLIII. Frog. Pylorus and œsophagus ligated: 0.2 grm sugar given as above. After 48 hours contents of stomach = 1.9671 grm.

Water = 1.9011
Solids = 0 0660

1.9670

Residue dissolved in water and diluted up to 25 cc. Contained no sugar.

Water poured out = 1.9011
Sugar absorbed = 0.200

Exp. XLIV. Frog. Pylorus and œsophagus tied: 0.2 grm. sugar given as above. After 72 hours contents of stomach = 2.4398 grm.

Water = 2.3588
Solids = 0.0810

2.4398

Residue contained no sugar.

Water poured out = 2.3588
Sugar absorbed = 0.2000

Exp. XLV. Two frogs. Pylorus ligated and 0.2 grm. sugar given as above to each. After 24 hours, contents of both stomachs = 5.3280, alkaline.

Water	5.1771
Solids	0.1509
	5.3280

Residue dissolved and diluted up to 25 cc. — 4.5 cc. = 0.005 grm. sugar.

Water poured out	2.5885	in each frog.
Sugar absorbed	0.186	

Exp. XLVI. Two frogs. Pylorus tied and 0.2 grm. sugar given to each, as above. After six hours contents of both stomachs = 2.236 grm.

Water	2.098
Solids	0.138
	2 236

Residue dissolved and diluted to 25 cc. — 3.2 cc. = 0.01 grm. sugar.

Water poured out	1.049	in each frog.
Sugar absorbed	0.161	

Exp. XLVII. Frog. Pylorus ligated and 0.173 grm. sugar given as above. After three hours, contents of stomach = 0.862 grm.

Water	0.775
Solids	0.087
	0.862

Residue dissolved and diluted up to 25 cc. — 3.6 cc. = 0.01 grm. sugar.

Water poured out	0.775
Sugar absorbed	0.1036

Exp. XLVIII. Frog. Pylorus and œsophagus ligated and 0.2 grm. sugar given with 0.5 grm. water. After 20 hours contents of stomach = 2.1457 grm.

Water	2.0877
Solids	0.058
	2.1457

Residue dissolved and diluted to 25 cc. — 5 cc. = 0.005 grm. sugar.

Water poured out	1.5877
Sugar absorbed	0.175

Exp. XLIX. Frog. Pylorus and œsophagus tied and 0.2 grm. sugar and 0.5 grm. water given. After three hours contents of stomach = 0.9373.

Water	0.8013
Solids	0.136
	0.9373

Residue dissolved and diluted to 25 cc. — 2 cc. = 0.01 grm. sugar.

Water poured out	0.3013
Sugar absorbed	0.075

Exp. L. Frog. Pylorus and œsophagus tied: 0.5 grm. water and 0.2 grm. sugar given. After six hours contents of stomach = 2.0088 grm.

Water	1.9230
Solids	0.0868
	2.0098

Residue dissolved and diluted to 25 cc. — 5 cc. = 0.01 grm. sugar.

Water poured out	1.423
Sugar absorbed	0.150

Exp. LI. Frog. Œsophagus and pylorus tied: 0.2 grm. sugar and 0.5 grm. water given. After 27½ hours contents of stomach = 4.1065 grm.

Water	3.9165
Solids	0.1900
	4.1065

Residue dissolved and diluted to 25 cc. — 22 cc. = 0 195 grm. sugar.

Water poured out	3.4165
Sugar absorbed	.195

Exp. LII. Frog. Œsophagus and pylorus tied: 0.9 grm. water and 0.182 grm. sugar given. After three hours contents of stomach = 1.403 grm.

Water	1.275
Solids	0.128
	1.403

Residue dissolved and diluted to 20 cc. — 1.7 cc. = 0.01 grm. sugar.

Water poured out	0.375
Sugar absorbed	0.065

Exp. LIII. Frog. Pylorus and œsophagus tied: 0.9 grm. water and 0.182 grm. sugar given. After six hours contents of stomach = 1.6242 grm.

Water	1.4770
Solids	0.1472
	1.6242

Residue dissolved and diluted to 25 cc. — 2.25 cc. = 0.01 grm. sugar.

Water poured out	0.5770
Sugar absorbed	0.071

Exp. LIV. Frog. Pylorus and œsophagus tied: 0 9 grm. water and 0.182 grm. sugar given. After 18 hours contents of stomach = 1.6223 grm.

Water	1.0353
Solids	0.5870
	1.6223

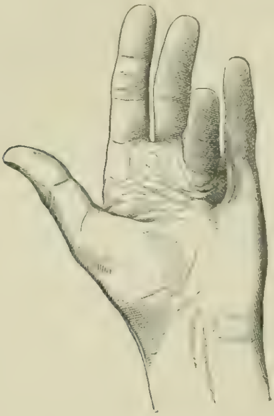
Residue dissolved and diluted to 20 cc. — 11.5 cc. = 0.01 grm. sugar.

Water poured out	0.1333
Sugar absorbed	0.1700

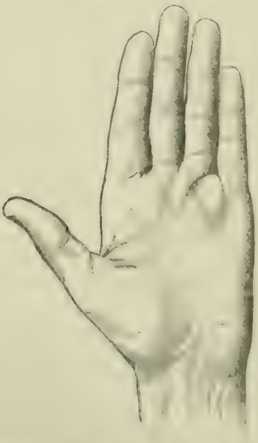
A CASE OF DUPUYTREN'S CONTRACTION.

BY EMERSON WARNER, M. D., WORCESTER, MASS.

G., a clergyman of distinction throughout New England and beyond, had been affected with this disease since he reached the age of forty. He is tall and slender, and of a bilio-nervous temperament. He has not for years enjoyed the best of health, yet has been able most of the time to perform pulpit service. The trouble in his hand began first as a feeling of soreness and hardness in the palm of his right hand. It slowly increased till it involved the little, ring, and middle finger of each hand, causing a marked deformity, flexing and drawing the fingers forward towards the palm of the hand, wrinkling and hardening the skin over the metacarpo-phalangeal joint. Four years after the right hand began to be affected the left hand first showed signs of trouble. The ring finger of this hand was attacked, and it suffered more from contraction than the fingers of the right hand. At the middle phalangeal joint the finger made nearly a right angle. This was an awkward deformity for a public speaker to be continually thrusting into the face of his hearers. It was difficult to put on gloves, and in every way it was a more or less painful annoyance.



He had often applied for help, not only to the writer but to many another surgeon, but only to be told that nothing could be done. He had made up his mind to endure this state of things, and constantly and surely, though slowly, growing worse until, perchance, amputation of one or more fingers might give the only relief which he could obtain.



About the beginning of the present year he called my attention to the work of Mr. William Adams on this subject, of which he had learned through a gentleman in Philadelphia, who had been operated by Dr. Keen of that city. So far as we then knew this was the only operation, as described by Mr. Adams, that had been done in this country. He asked that this operation might be done for his relief.

On the first day of March I operated upon his left hand, choosing this first as only one finger was involved. I used a very small knife, used mostly by oculists, consisting of little more than a very sharp point and a cutting edge. A sufficient number of subcutaneous incisions were made to cause the deformity to disappear. The finger at once appeared natural, was easily flexed, and took its place beside the other fingers, ready for duty, as though never crippled or in any degree disabled. It was laid on a splint, and an antiseptic dressing applied. The next day he was perfectly comfortable, and went about as usual, except that he did not leave the house.

On the 15th of March, two weeks later, he submitted to operation on the right hand. He then could use his left hand, and on the first Sunday in April he assumed the pulpit duties of a Brooklyn pastor who had been granted a three months' furlough. The patient feels himself relieved of a very serious deformity, and I see no reason why he should fear its return.

As the history shows, this disease occurred in a clergyman in middle life, and, so far as known, it was not caused by any injury, nor can it surely be traced to a strangely marked gouty diathesis. He has a brother, a little younger, who is suffering slightly from the incipient stage of the disease, but there is as yet no deformity.

On March 25th of the current year Mr. Noble Smith read a paper on this subject before the Royal Medical and Chirurgical Society of London. April 17th Dr. Robert Abbe read a paper before the New York Academy of Medicine on the same subject. Thus does the subject receive a new impetus at about the same time in these widely separated localities.

Reports of Societies.

MEETING OF THE AMERICAN GYNECOLOGICAL SOCIETY.

The ninth annual meeting of the American Gynecological Society was held at Chicago Tuesday (September 30th), Wednesday, and Thursday. The meetings were held at the Palmer House, the President, **Dr. Albert H. Smith**, of Philadelphia, presiding. Twenty-three Fellows were present.

Dr. W. H. Byford, of Chicago, the chairman of the Committee of Arrangements, delivered a brief address of welcome, in which he touchingly alluded to the great loss the Society had sustained since its last meeting in the death of Dr. J. Marion Sims.

Dr. John C. Reeve (Dayton, Ohio), presented a paper on several

MOOT POINTS IN REGARD TO INVERSION OF THE UTERUS.

Several cases were cited tending to prove that it was possible for uterine inversion to occur without the influence of pregnancy or an existing uterine tumor, and that, while inversion usually begins at the fundus, it oftentimes happens that the inversion begins with the cervix. The cases which he had observed also demonstrated the fact that, although an inversion occurring during the puerperal state usually takes place immediately after delivery, it may occur several days later. He also cited several cases in which an inversion had occurred unaccompanied by those symptoms which are usually considered inseparable from such an accident. In the discussion which followed corroborative evidence was given by Drs. Byford, Sawyer, and Howard.

Dr. H. P. C. Wilson (Baltimore) read a paper on

FOREIGN BODIES IN THE ABDOMEN AFTER LAPAROTOMY,

in which he gave a summary of twenty-one cases, six occurring in this country and fifteen in Europe, in which a foreign body, usually a sponge, had been left behind within the abdominal cavity. Among the cases cited was one occurring in his own practice in which he had removed an ovarian tumor from a patient between five and six months advanced in pregnancy. A miscarriage occurred on the eighteenth day after the operation. After a tedious convalescence the patient so far recovered as to go to her home in the country. Soon after she began to develop abdominal symptoms, and five months later a piece of sponge worked its way to the surface, and was removed; the local symptoms subsiding and the patient making a complete recovery. He believed that operators did not use sufficient care to avoid such accidents, and advised that, in all such operations, as few instruments and sponges as possible should be used; the sponges should be selected with especial reference to their perfectness, strength, and softness; that no divided sponges should ever be used; the instruments should not be too small, and there should be as few assistants as possible.

Dr. Thomas said that in four hundred cases of laparotomy he had only seen this accident happen once. The patient had presumably a cancer of the spleen and Bright's disease. An exploratory incision was made, the diagnosis verified, and the incision sewed up. In this case ether was used, which he would not advise at the present time, as he was convinced that, in cases of renal disease, a cessation of urinary secretion follows the use of ether, an accident which never follows the use of chloroform. In this case not a drop of urine was secreted after the administration of the ether, and the patient soon became comatose and died of uræmic poisoning. At the autopsy a piece of sponge was found in the abdominal cavity. So great was the liability to leave a sponge behind that he now always used sponges to each of which a tape, six inches in length, was attached.

Dr. Dunlap recommended the making of a long abdominal incision, which heals as readily and as perfectly as a short one, and helps to prevent the occurrence of foreign bodies being left within the abdominal cavity.

Dr. Mundé thought great care should be taken not to use friable sponges or those which had torn or roughened edges. In the final clearing out of the abdominal cavity sponges attached firmly to sponge-holders only should be used. During the discussion seven new cases were reported by different members in which some foreign body had been left behind by the operator.

At the afternoon session Dr. C. D. Palmer, of Cincinnati, read a paper on the

VALUE OF ABDOMINAL SECTION AS A MEANS OF DIAGNOSIS.

Tapping had been shown by statistics to be a far more dangerous procedure, and at best only gives us an idea of the contents of the tumor, but no information as to its surroundings or even, in many cases, its location. The abdominal section was comparatively harmless except in cases of cancerous subjects.

Dr. Wilson agreed with the writer, and cited the case of a patient in whom he had made an exploratory abdominal incision and found the case to be one of amniotic dropsy. The wound was sewed up, the os uteri dilated, and six gallons of amniotic fluid withdrawn, and the uterus cleared of its contents. In two weeks the patient was well.

Dr. Engelmann did not agree with the reader in believing the operation any more dangerous in cancerous than in non-cancerous subjects.

VAGINAL ENUCLEATION OF CERVICAL FIBROIDS.

Dr. Paul F. Mundé (New York) read a paper in which he strongly advocated the vaginal enucleation of cervical fibroids when they were a cause of dystocia. As proof of his statement he reported a case in which he had removed under such circumstances a very large fibroid, weighing three pounds, and gave a summary of nine cases he had collected, in all of which the mother recovered, and of the five viable children three were born alive; while of thirty cases of Cæsarean section, performed under similar circumstances, twenty-four of the mothers had died and sixteen of the children had been lost.

WEDNESDAY.

The discussion of Dr. Mundé's paper was opened by Dr. Jenks, who cited a case in which he had removed a small fibroid by enucleation.

Dr. Byford thought it was better in all cases of uterine tumors to wait until labor came on. Enucleation performed earlier exposes the mother to the same danger as if done at the time of labor, but gives rise, in addition, to the great probability of a miscarriage.

Dr. Van de Warker had seen, in consultation, a case which had been thirty hours in labor, and in which the pelvis was filled with a fibroid of the posterior cervical wall. He advised enucleation, but was overruled. Cæsarean section was performed, and the mother died of shock. The autopsy showed that enucleation could have been easily performed. In this case the child was saved.

Dr. Reamy had enucleated a tumor in one case, and both mother and child had done well. The operation, he believed, should be done at the time of labor, for he was convinced that patients were less liable to sepsis at that time.

In closing Dr. Mundé thought that many circumstances should decide the time of the operation, such, for example, as the growth of the tumor, its location, and general characteristics.

EXTRA-UTERINE PREGNANCY.

Dr. Thomas (New York) presented a report of six cases of extra-uterine pregnancy, being a supplementary report to that read by him two years ago in Boston, in which he reported twenty-one cases. These cases were reported in detail, and illustrated many points in the diagnosis and treatment of this rare accident. The reader dwelt on the necessity of early making out a diagnosis, since in these cases delays are dangerous, and prompt action an absolute necessity. An operation should never be performed at full term simply because there is a fœtus in the abdomen, but only when the presence of that fœtus is causing trouble. The better plan is to wait until atrophy of the placenta has taken place. If the child is alive in the abdomen at full term of course it should be removed even at the increased risk to the mother. In the electric current we have the best agent for infanticide, which is the first step towards recovery. Up to the fifth month this should always be used in preference to a resort to the far more dangerous procedure of laparotomy. In cases where the fœtus is in the tube rupture takes place within the first four months. After that the fœtus is probably within the abdominal cavity, and whenever its presence there has been clearly made out electricity should be used unless the child is alive, in which case the patient should go to full term, and then laparotomy is indicated. The weaker forms of electricity should first be used, although it was astonishing how powerful a current had proved, in some cases, harmless to the fœtus as well as the mother.

Dr. Mundé reported a case in which he had operated successfully. He preferred to use the faradic rather than the galvanic current, believing it to be safer and equally efficacious.

Dr. Wilson reported a case of a woman pregnant with twins. The one in the uterus was delivered at term, and the one in the abdomen was delivered by laparotomy a month later, — both children living.

Dr. Baker, in support of some of the facts brought forward in Dr. Thomas's paper, namely, the difficulty of diagnosis before the third month and the danger of aspiration in cases of hæmatocele complicating the pregnancy, reported four cases, three of which were seen in consultation. The first was a patient in whom all the rational signs of extra-uterine pregnancy were present, and ether was given in order to confirm the diagnosis by physical examination. Two days before there had been symptoms of internal hæmorrhage, with almost collapse, but the patient having recovered sufficiently the attempt was made with the anæsthetic. The examination failed to substantiate the diagnosis, and the patient sank while under the ether and died. The autopsy showed tubal pregnancy of six or seven weeks' standing, with an unruptured sac, and about two quarts of blood within the peritoneal cavity, hæmorrhage having occurred from a small vessel at the end of the tube. It would have been a perfect case for laparotomy had the diagnosis been made earlier. In another case aspiration of a post-uterine tumor supposed to be hæmatocele gave bright blood, which contra indicated further operation, and the patient died from exhaustion in two or three days. An autopsy showed a rupture of the tube, with hæmorrhage and escape of a three months' fœtus within the abdominal cavity. The remaining two cases recovered, though not owing to any special skill of the reporter. One was a patient operated on for sterility, who became pregnant within two months after leaving the Free Hospital for Women, but the site of the pregnancy was a left tubo-interstitial one. The fœtus died in the fifth month, and has since remained encysted, gradually shrinking to about one third of its greatest size. The last case was seen about four years after the death of the fœtus, which had apparently taken place at the sixth month. The fœtal parts could be distinctly felt. No operative interference was advised, and the encysted fœtus has remained, occasioning little if any inconvenience. This patient has within eighteen months given birth to a child in the most natural manner.

Dr. Maury (Memphis) read a case of

TUBAL PREGNANCY,

with subsequent rupture of the sac. He believed it was a great mistake to operate at the time of the rupture, but that we should always wait until the period of shock was passed.

Dr. Mundé read a paper on

THE LIMITS OF VAGINAL HYSTERECTOMY FOR CANCER,

illustrated by two cases. The paper was in answer to one read last year by Dr. Jackson, in which the writer had pronounced the removal of a cancerous uterus an unjustifiable procedure. In the first of the two cases reported by Dr. Mundé the patient recovered from the operation. A recurrence of the disease took place in nine months, although the patient is still alive. In the second case the disease was found to have spread to the vaginal wall, and the patient died of shock from internal, concealed hæmorrhage. Dr. Mundé agreed with Dr. Jackson that, owing to patients' unwillingness to submit early to examinations a diagnosis was often impossible until the disease was too far advanced. He disagreed entirely with the second statement of Dr. Jackson, that the operation was only for amelioration. He had collected the reports of eighty-two operations. In forty-eight the disease had recurred in from two months to two and a half years, while in thirty-two cases there had been no recurrence. In other words, 39.2 per cent. of patients in whom the operation had been performed early, over one third, had been free from any recurrence for at least two years or more. He believed that the operation should be confined to a small class of cases, to those where the cancerous degeneration was limited to the uterus, and in that organ had extended up beyond where the operation of incision could be performed; where there was perfect freedom of uterine motion, the vagina capacious, and the patient in good condition to withstand the shock of the operation, although this was comparatively slight. As regards the danger of the operation, its fatality was constantly becoming less as operators were becoming more experienced. Out of 256 cases which he had collected there had been sixty-two deaths, or 24.6 per cent.

In reply to the paper, **Dr. Jackson** said all operations must be judged by the principles underlying them. All surgical operations should be done either to relieve suffering or to prolong life. This operation, he claimed, did neither. It lessens the sufferings only of those whom it kills. The recurrence of the cancer brings with it the same suffering and the same death. Cases of cancer unoperated have lived fully as long as those on whom the operation has been performed. He felt confident that the area of the operation was a very limited one and would become more so. Removal can be accomplished far less dangerously by other means, and with equally good results.

Dr. Van de Warker thought there were other and safer ways of operating. It must be very rare, in his opinion, that the extirpation removed beyond the line of infiltration. He thought in examining the figures read by Dr. Mundé that the cases of recurrence should be considered with reference to whether the patients were menstruating or had passed beyond the climacteric; for there is a marked tendency in the first class of cases to recur which does not obtain in women later on in life.

Dr. Engelmann agreed with Dr. Mundé *in toto*. It is an operation which should be fairly tested. The statistics are improving. Time has not elapsed sufficiently to show how long these patients in whom it has not yet recurred are going to be free from a recurrence. The whole thing is *sub judice* and not warranting Dr. Jackson's wholesale condemnation.

Dr. Palmer agreed that the mortality caused by the operation will doubtless be still further reduced; but the impossibility of diagnosticating the extent to which the cancer has extended will rule out the operation.

Dr. Baker alluded to six cases which he had previously reported to the Society, in which he had operated by a method fully described in the *American Journal of Obstetrics* for April, 1881. Five of these patients are still well, from four to six years having elapsed since the operation, while the remaining one has succumbed to a return of the disease after a respite of about three years.

Dr. Reamy claimed that the operation does not prolong life. Statistics are needed to show how long patients live with cancer in whose cases no operation is performed. The disease will be found to have extended into the tissues so far that recurrence is sure to come. The operation can be done more safely than heretofore, but the statistics do not prove that life is prolonged, and he agreed with Dr. Jackson that the operation was unwarranted.

Dr. Mundé closed the discussion by repeating the main points of the paper, which he considered had not been answered.

Thursday.

At the opening of the morning session the President, **Dr. Albert H. Smith** (Philadelphia), delivered the annual address, taking as his subject

THE PRESENT ASPECT OF THE PUERPERAL DISEASES.

The paper was largely historical, and gave in detail the present position held by observers at home and abroad. The writer favored the continued use of antiseptics, and insisted on the great value and harmlessness, when properly used, of intra-uterine injections.

Dr. Sawyer (Chicago) made some remarks on

THE OCCIPITO-POSTERIOR POSITION IN VERTEX LABORS,

illustrating his paper with an analysis of thirty-five cases. He claimed that the occiput presented much more frequently posteriorly than was supposed, and that rotation forward was the exception and not the rule. He favored the rotation either by the hand introduced within the vagina or by long forceps whose handle was a curve continuous with the curve of the blade.

Dr. Richardson differed entirely from Dr. Sawyer. He agreed with him that these positions were among the most troublesome to be found in obstetric practice. He, however, believed that in all cases, if the flexion of the head was complete, the occiput would rotate forward. Where it does not, as in Dr. Sawyer's cases, it was either because the head was partially extended or because the presenting part had not yet reached the floor of the pelvis. The treatment in these cases should be to flex the head either manually or by the introduction of the ordinary forceps with the pelvic curve downwards instead of upwards. In the vast majority of cases all will then go well. There was no call for special forceps for such cases.

Dr. Reamy did not agree at all with Dr. Sawyer either as to the frequency of these cases or their failure to rotate forward. In all cases as soon as the position is known, and the os sufficiently enlarged, correct the misplacement in the absence of a pain with the forceps — the straight-handled forceps being just as good as this new curved pair.

Dr. Howard recommended the use of Tarnier's forceps in these cases.

Dr. Engelmann thought that too much stress should not be laid on the instrument, but on the necessity of a judicious use of any forceps in the hands of the operator.

Dr. Smith totally disagreed with Dr. Sawyer on the several points on which the paper was based, and agreed with the other speakers on the facility with which the head can be rotated, even in those rare cases in which a failure of rotation has taken place.

AN INSIDIOUS AND FATAL FORM OF SEPTICÆMIA.

Dr. Engelmann (St. Louis) read a paper giving the account of several cases in which a most insidious and fatal form of septicæmia was developed. They were cases in which, in the absence of the usual symptoms, intuition and not medical skill seemed to be our guide. There was in all a marked absence of either fever or pain. The danger seemed greatest where the symptoms were least, or even wanting. A slight diarrhœa and a possible elevation of temperature to a degree were the only symptoms. Neither the temperature nor pulse revealed the cause of the fatal result which followed in all the cases. The cases were non-puerperal and puerperal.

Dr. Richardson confirmed the statement of the reader, and alluded to several cases of puerperal origin in which he had noticed this same absence of the usual symptoms of septicæmia. There was in all his cases at first a day or two of suspicious symptoms, but after these had passed there were left only a slight diarrhœa and what he had noted in all the cases, a well-to do mental condition, the patient always considering themselves as "well." The marked progressive general failure alone showed the mischief.

Dr. Reamy confirmed the opinion of Dr. Engelmann, and said that all cases in which there was an abdominal distention without pain but with a diarrhœa he looked upon with suspicion.

Dr. Johnson cited a case in which death had occurred on the ninth day after delivery, in which all the symptoms were as Dr. Engelmann had described.

PAPERS READ BY TITLE.

The following papers were read by their titles: —

The Hygiene of Pregnancy, by Dr. Samuel C. Busey, Washington.

Rapid Dilatation of the Cervical Canal, by Dr. Wm. Goodell, Philadelphia.

The Physiognomy of the Vulva as a Sequence of Anal Disease, and the Cause or Sustaining Cause of Uterine Disease, by Dr. Isaac E. Taylor, New York.

The Early History of the Treatment of Vesicovaginal Fistula in the United States, and the Statistics of the Several Modes of Operating, by Dr. Nathan Bozeman, New York.

Contributions to the Topographical and Sectional Anatomy of the Female Pelvis, by Dr. David B. Hart, Edinburgh.

Fibro-myomata and Fibro-cystic Myomata of the Uterus — their Diagnosis, Prognosis, Pathology, and Treatment, with Cases and Specimens, by Dr. R. S. Sutton, Pittsburg.

The Ring of Bandl, by Dr. W. T. Lusk, New York.

The new President, Dr. Howard, was introduced to the Society, and the meeting adjourned.

THE BUSINESS MEETING

was held Wednesday evening at half-past eight o'clock. The limit of membership was changed from sixty to one hundred. It was voted to hold the next meeting at Washington on the last Tuesday but one of September and the following Wednesday and Thursday.

Dr. George E. Bantock, of London, was elected an Honorary Fellow.

ELECTION OF OFFICERS.

The following officers were elected: —

President: Wm. J. Howard, of Baltimore.

Vice-Presidents: Wm. L. Richardson, of Boston; Paul F. Mundé, of New York.

Secretary: Frank P. Foster of New York.

Treasurer: Matthew D. Mann, of Buffalo.

Council: Joseph T. Johnson, of Washington; A. Reeves Jackson, of Chicago; H. P. C. Wilson, of Baltimore; E. Van de Warker, of Syracuse.

* * *

MASSACHUSETTS MEDICAL SOCIETY.

COUNCILORS' MEETING.

A STATED meeting of the Councilors was held at the Medical Library, Boston, on Wednesday, 1st inst., at eleven o'clock A. M. The meeting was called to order by the President, **Dr. Charles D. Homans.**

APPOINTMENT OF DELEGATES.

Delegates to other State medical societies were appointed as follows: —

Vermont, **Drs. A. M. Smith**, of Williamstown, **N. S. Babbitt**, of North Adams.

New York, **Drs. A. C. Deane**, of Greenfield, **F. K. Paddock**, of Pittsfield.

THE SHATTUCK PRIZE.

The Committee on Publications reported, through **Dr. Hodges**, that the Society's prize fails to induce competition, and the committee has, therefore, decided to request that instead of the prize as now offered the income of the Shattuck Fund be appropriated for the objects set forth in the terms of the bequest of the donor. The following resolution was presented by the committee: —

Voted, That the Committee on Publications be directed and authorized to offer a prize of $1000 for an essay on the Climate and its Modifications as Influencing Health and Disease, or on any of the diseases of the inhabitants of New England, or on any kindred subject, such essay, with a sealed envelope containing the author's name, to be delivered to the chairman of the Committee on Publications on or before the first day of March of the year 1888. It is understood that such prize shall be given at the annual meeting of that year, and only to an essay deemed worthy of it by the committee.

After discussion the report of the committee was accepted, and its recommendation adopted.

THE NORFOLK SOUTH DISTRICT MEDICAL SOCIETY.

The committee to which was referred at the previous meeting the petition for the establishment of the Norfolk South District Medical Society, to consist of Fellows of the Society residing in the towns of Quincy, Braintree, Randolph, Holbrook, Weymouth, Hingham, and Cohasset, reported through its chairman, **Dr. Hodges.**

The report stated that the District Societies of Norfolk and Plymouth, duly and individually notified, were ably represented at a hearing on July 11th, and the proposal was discussed in detail by those present. The committee recommended that the prayer of the petitioners be granted. This recommendation was adopted by the Council.

CHANGES IN COMMITTEES.

By the resignation of **Dr. Wellington** from the Committee on Finances the following changes were made in Standing Committees: —

Dr. Francis Minot was transferred from the Committee on Membership and Resignations to the chairmanship of the Finance Committee, and **Dr. Joseph Stedman** was appointed to fill the vacancy thus made in the Committee on Membership and Resignations.

MEDICAL DIPLOMAS. — BOARDS OF CENSORS.

The following, offered by **Dr. H. P. Bowditch**, as amended by Dr. Minot, was, after discussion, adopted: —

That the Standing Committee on Medical Diplomas be requested to consider and report at the next meeting on the propriety of adding to the list of recognized colleges the names of the following medical schools: University of Berne. University of Zurich. Woman's College of the New York Infirmary. Woman's College of Pennsylvania. Medical School of Paris. And also the names of any other regular schools which may be referred to said committee by any Councilor as graduating or having graduated women as physicians, whether such school be American or foreign.

That the committee also take into consideration diplomas of foreign medical colleges as evidences for admission into the Society.

In the discussion on the adoption of the above resolution, **Dr. Reynolds** remarked that, in his opinion, years of study and success as practitioners should count for something as well as the passing of the examination, in admission to the Society, and he believed that by a single Board of Censors the object of the Society, to discriminate between those who are fitted to practice medicine and those who are not, would be more likely to be attained than by the present method of admission by several Boards.

In approval of these remarks **Dr. Hazelton** offered the following: —

That a committee of five be appointed by the President to consider if it be proper to take steps to change the Constitution and By-laws in regard to the Boards of Censors.

Dr. **Bronson** said that the remarks of Dr. Reynolds were exceedingly pertinent and worthy of attention. The change proposed would be of immense advantage to the Society.

Dr. **Dudley** stated that two years ago he was a member of a committee which had this subject before them. They found that to institute such a change it would be necessary to have the Charter altered by the Legislature.

Dr. **Harvey** argued that the fact that the subject has been one of inquiry by committees shows the present methods not to be satisfactory.

After further discussion Dr. **Hazelton**'s motion was adopted, and the committee was instructed to report at the next meeting.

The following were appointed to constitute the committee: Drs. I. H. Hazelton, J. P. Reynolds, J. C. Gleason, E. H. Bradford, E. B. Harvey.

HONORARY MEMBERS.

Dr. **Bronson** called attention to the statement made at the annual meeting of the Society, that of late years all honorary members of the Society had been illegally elected, and asked if such is the case.

In reply the By-law was read regarding the election to honorary membership, and it was stated that its provisions had been complied with.

Adjourned at 12.15 p. m.

CHICAGO MEDICAL SOCIETY.

LISTON H. MONTGOMERY, M. D., SECRETARY.

Stated meeting, September 15, 1884. Dr. **D. A. K. Steele**, President.

CONGENITAL MALFORMATION OF THE STOMACH. — EXHIBITION OF BONY TUMOR OF PELVIS. — RESOLUTIONS IN BEHALF OF THE NATIONAL BOARD OF HEALTH LOOKING TO SANITARY MEASURES FOR THE RESTRICTION OF CHOLERA, YELLOW FEVER, ETC.; APPOINTMENT OF COMMITTEE. — MEDICAL DEPARTMENT OF THE PUBLIC LIBRARY.

The following scientific and other important business as announced was transacted: —

Dr. **C. W. Earle** read a brief paper on Congenital Malformation of the Stomach, and presented the stomach of an infant that lived for twelve days on the minutest quantity of nourishment. The autopsy revealed that no opening existed between the stomach and duodenum, nor was there a pylorus. It was ascertained, however, that biliary matter had been discharged in the fæces. The same gentleman also read a report of a case of Bony Tumor of the Female Pelvis, and exhibited the pathological specimen, which weighed three pounds and a half. Both specimens were regarded as being rarely seen, and the cases were informally discussed, after which the Secretary, Dr. **Liston H. Montgomery**, presented the following preamble and resolutions, and moved their adoption: —

Whereas, From present reports and indications in foreign countries cholera and yellow fever (both pestilential diseases) prevail, and as the latter especially is always assuming a threatening attitude toward us, and is not conducive to our national prosperity nor to public health, and should, if possible, be averted with earnest and efficient sanitary measures, and

Whereas, Cholera may make its appearance on this continent ere another twelve months should elapse, and should likewise, if possible, be averted or restricted to the narrowest limits, therefore

Resolved, That it is the sense of the Chicago Medical Society to have that department of the government relating to public health recognize the services of able sanitarians who constitute the National Board of Health for the purpose of coöperating with municipal, State, and other organizations of a similar kind, and that a committee of seven (7) members of this Society be appointed by the Chair to draft suitable resolutions in behalf of said National Board.

Resolved, Furthermore, that this committee present said resolutions to the Congress of the United States, memorializing that body to make a sufficient appropriation for the purpose of said Board for scientific investigation in the prevention and restriction of epidemic, preventable, and pestilential diseases.

We believe this action should be promptly taken at the coming session of our National Legislature, and that a thorough sanitary organization of the nation should be recognized, and with it absolute enforcement of the best means for the protection of her citizens and the improvement of our inter-State sanitary condition.

The mover of the resolutions stated that inasmuch as they had been published on the postal card announcements every officer and member of the Society, which consisted of 276 members, had (he presumed) become familiar with their reading. He desired that there be an extended discussion, and that every one present their views upon them. The motion to adopt was promptly seconded by Drs. R. E. Starkweather and H. J. Reynolds. They evoked much discussion. Among those who participated were Dr. E. Andrews, Dr. J. A. Robison, Dr. J. H. Etheridge, Dr. W. H. Curtis, Dr. H. A. Johnson, Dr. J. H. Hollister, Dr. G. H. Chapman, Dr. P. M. Woodworth, Dr. C. E. Webster, Dr. John Bartlett, each of whom favored their adoption. Upon call of the question the motion to adopt unanimously prevailed.

The **President** arose to state that he desired a little time to complete the committee, which he regarded as an important one.

Dr. **E. Andrews** moved, duly seconded by Dr. C. E. Webster, "That this Society hereby express its thanks to Dr. Vincent L. Hurlbut for the gift of a very valuable collection of books and pamphlets, consisting of 300 volumes, to the Library Committee of the Society for the Chicago Public Library." The speaker also stated, in behalf of the Library Committee, that there are on the shelves of the City Library 1200 volumes for medical reference. The Library have bound, at their own expense, seventy-five volumes, all of which shows favorably for the short period of a few months since the plan of establishing a medical department in this direction was begun. After various inquiries as to the last donation had been answered, the motion to thank Dr. Hurlbut was heartily and enthusiastically unanimous.

The **President** announced the following gentlemen to serve on the committee provided for in Dr. Montgomery's resolutions: —

Dr. O. C. DeWolf, Dr. R. E. Starkweather, Dr. L.

H. Montgomery, Dr. John Bartlett, Dr. J. H. Etheridge, Dr. A. R. Jackson, Dr. J. H. Hollister.

Dr. H. A. Johnson asked to be excused from the committee for the reason that he was the representative from Illinois on the National Board of Health. He extended an invitation, however, for the committee to call upon him at his library at any time when convenient to do so, and he would afford its members all that he could in the direction of his experience. His books also were at their disposal.

The invitation was accepted with thanks.

Dr. J. H. Etheridge moved, duly seconded, that this committee be authorized to present *their* resolutions to the Society for a final consideration, and then to be submitted to Congress, as expressed in the resolutions, which motion carried, and was so ordered.

The Society then adjourned.

Medical and Surgical Journal.

THURSDAY, OCTOBER 9, 1884.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

MEDICAL BEQUESTS.

How a physician in America shall bestow his money so as to give the greatest possible benefit to his fellow men is a question that arises naturally in the mind as one reads in the daily papers the accounts of the testamentary provisions of various good physicians who have left behind them a sufficient amount of this world's goods to make its disposal worthy a newspaper item. Certainly it is proper that special thought should be bestowed upon the subject, and that the matter should not be considered in exactly the same light in which a non-medical man would look upon it. A physician has ordinarily done much to alleviate individual instances of distress; it seems but natural that he should desire to continue his peculiar work after he has personally ceased from his labors, and that can best be done not by giving directly to the poor and suffering but by increasing the efficiency of the race of physicians that follows after him. This he may do by seeing them provided with better means of education, and by that we do not refer simply to the education prior to the reception of the degree of M. D., but also to the education which should follow the doctor to the very end of his career.

Other people are sure sooner or later to furnish hospitals with the funds necessary for their support, looking upon them as a refuge for the sick — let the physician take that higher view of them as congregations of the sick where numerous examples of the same disease allow that disease to be studied for the benefit of all mankind, and see to it that the doctors are provided with those things necessary for the prosecution of their studies. The doctor desirous of perpetuating his good work should also bear in mind that in this free country private liberality must furnish those funds which in some monarchical countries are provided by the government. The funds of medical schools must here be provided by private liberality, and few medical schools in America are well endowed. The individual who assists in the endowment of any of the better class of schools is sure to do an action which will extend its good work for generations, and one which seems specially called for at the present time. There is here an abundant opportunity either to endow special chairs or to increase the general funds of the institution. Provision for the chair of Pathology in the Harvard Medical School has recently been made by the will of the late Professor Ellis, and our medical schools commemorate in the names given to various professorships the liberality of various physicians.

The establishment of medical libraries, or the encouragement of those already existing, is a matter that promises very great good to the profession. One cannot expect such libraries to be founded by other than medical men, or that general libraries shall pay special attention to a medical department, but a medical department for medical men might well be joined to a general library. Of such a library, Worcester, Mass., presents a favorable example.

A library may well be joined to a hospital. It was a most liberal act of the late Dr. Treadwell, of Salem, to establish the library connected with the Massachusetts General Hospital, which bears his name, and one for which his memory is held in grateful remembrance. No other hospital in Boston possesses more than the nucleus of a library.

The Boston Medical Library Association has never yet, we believe, received a legacy of money, though its usefulness might be very greatly increased by an endowment. It has received many valuable legacies in the shape of books, but one can well imagine that it suffers for want of funds.

We hope some time to see salaries attached to certain positions connected with hospitals. The pathologists should not be allowed much longer to do their work without pay. At present the pathologist must regard his labor as a matter of public charity or a stepping-stone to something else that will eventually reward him for his labor. However conscientious he may be in his work he is not properly situated to make it of the greatest benefit to the profession and the community. It is work which is laborious and exacting, and which ought to make a man a return in a more substantial shape than the bubble reputation, but which is not repaid. To be sure that position is often held by the occupant of a chair of pathology in a medical school, when a medical school is at hand, and in such cases it is, undoubtedly, useful to the professor, but hospitals are more numerous than medical schools. It is doubtful if the profession can be more benefited than by the encouragement of the study of pathology, and certainly a vow of poverty ought not to be a necessity to those who devote themselves to it. That the pathologists themselves make no complaint does not invalidate the general truth of our statement.

The man who endows a hospital with a fund for the payment of a pathologist may not provide for its most obvious and immediate want, but he is doing that which in the end ought to make that hospital contribute to the sum total of human knowledge.

Various positions at the Johns Hopkins Hospital, which have clinical duties attached, are, we believe, to be paid: an example which may lead at some future time to a proper adjustment of the subject.

Our hospitals feel the need of funds for the furnishing of appliances without which the surgeon often feels that his work falls short of the great good he might accomplish. Few hospitals are fortunate enough to possess so elegant and complete an assortment of instruments as the Bigelow collection at the Massachusetts General, and the want of adequate means for furnishing crutches, trusses, and prosthetic apparatus is almost universal.

The lectureships which exist in England might profitably be more widely imitated in this country. They serve at once as incentives to those who aspire to hold them and to those who profit by hearing them.

Fellowships which should allow an occasional student who has given unusual proofs of ability an opportunity to increase his knowledge, by further study at home or abroad, would help to raise the standard of medical knowledge by increasing the number of well-informed individuals. The influence which a single individual possessed of an unusual fund of information may have upon a community can only be appreciated by those who have watched the career of such an individual.

Societies, of which the Massachusetts Medical Benevolent Society is an example, appeal loudly to the sympathies of those who know how few of the profession succeed in providing for their own old age or for the care of those dependent upon them.

What has been said makes it needless to add that we are not soliciting contributions for any medical charity or educational institution, but we have a feeling that medical men, with the self-abnegation which is so prominent a characteristic of the profession, feel it almost selfish to especially remember the needs of their brethren. We believe that contributions to the profession may well be regarded as contributions to the general welfare of mankind. The profession may be regarded not only as a national organization for almsgiving, but also, as we have recently been told in the pages of the Journal, as a popular educator. If one wished to convert a whole nation to certain doctrines what surer means could he find than the sending one or more disciples into every hamlet to be living examples of the principles to be inculcated. How careful would the promoters of such a scheme be to instruct their missionaries before sending them out and afterwards to keep them up to their work by supplying them with the latest information in the shape of books and periodicals, and by providing for regular meetings for consultation and social intercourse.

Such an organization exists already, and we doubt if there is a surer means of benefiting humanity than by strengthening it.

CHOLERA AND RAGS.

In April of this year the Treasury Department at Washington issued a circular forbidding the importation of rags from countries infected with cholera, and especially from Egypt, unless subjected to prescribed methods of disinfection.

In accordance with this circular an inspector was appointed at Cairo, and preparations were made at several ports of entry, — notably at Boston, — at a considerable outlay of money, for the detention and disinfection of cargoes of rags not treated at the point of departure.

August 30th the Treasury Department issued an order to collectors of ports prohibiting for three months all importation of foreign rags under any conditions. We were very skeptical of the wisdom or efficacy of the first circular, and are still more skeptical in regard to this second order.

It is not certain that cholera is never imported by rags, but we have yet to learn of an authenticated instance. Small-pox, as might be anticipated, is sometimes conveyed in this way, but even in regard to small-pox, investigations have shown that the cases caused by rags are much fewer and less frequent than would be anticipated from the character of the contagion in that disease. Dr. Bristowe, as medical officer of the Privy Council, visited eighty-six paper mills in different parts of England before making his report on this question in 1866, in which the conclusion was reached that small-pox and other infectious diseases are very rarely introduced into paper mills by rags. Even were the probability of an importation of cholera by rags much greater than it can fairly be claimed to be, why close this door and leave wide open so many others much more easy of entrance?

It would seem as if, possibly, the predictions of a general European outbreak of cholera have been made without taking sufficiently into consideration the great progress in sanitary science made in Germany and Great Britain since the last great epidemic, nearly twenty years ago, and more especially in the ten years succeeding the less widespread prevalence of cholera in 1873. Moreover, the fact that thus far, a year from the first appearance of cholera in Egypt, and six months after its recognition in Europe, its ravages have been confined to countries in which the conditions and regulations regarding the public health are a quarter of a century behind England and the greater portion of the United States, lends support to the view that the epidemic may be controlled without seriously menacing London and New York.

However, whether we need to take precautions against the introduction of cholera into this country or not, the recent regulations of the Treasury Department at Washington forbidding the importation of rags for three months into any port of the United States we regard as entirely uncalled for, and as placing serious and unnecessary restrictions upon an important industry, namely, the manufacture of paper.

The rule has, apparently, been made from a fear that some rags may contain the cholera infection in a potentially active state, that these particular rags may come to us, and that if we receive them we may get the cholera with them, in spite of the fact that in the half century that cholera has been a menace to this country and to Europe not a single case can be instanced where it was introduced anywhere through the medium of rags.

We do not at the present time argue for or against the *cholera bacillus*, but we state the simple fact that cholera prevails only under lax local sanitary care, and in conditions of excessive filth. As was said by Sir Joseph Bazalgette, chief engineer of the London sewerage works, "the places formerly most favorable to the spread of the disease became quite free from it when afterwards properly drained."

Speaking for our own State, we do not hesitate to say that there is no reason for forbidding the importation of rags, except, possibly, from yellow-fever ports during the heat of summer.

There certainly is no surer way of bringing sanitary science into disrepute than by unreasonably obstructing commerce, trade, and manufactures.

MEDICAL NOTES.

— M. Beaunis, Professor of Physiology to the Faculty of Medicine at Nancy, records an extraordinary case in the *Gazette Méd. de Paris*, August 2, 1884. The patient was a girl aged twelve and a half years, and was suffering from her fifth attack of chorea. M. Beaunis had been informed by Professor Birnheim of the result of hypnotism in a similar case and decided to have it tried. The result was that as soon as the child was hypnotized all choreic movements ceased, and when asked to write, instead of meaningless scrawls, her writing was steady and legible. The seances were continued for some days and the child was cured completely.

— John P. Hankins, C. S., Brevet Major-General, U. S. A., writes in the *American Grocer* regarding canned foods and the experience of the army therewith, and says he has never known or heard of a case of poisoning by the use of canned goods in the army. As the result of his observations he concludes as follows: "Deductions from the foregoing may be fairly made, that the reports of poisoning by eating canned food are not to be believed, or are only to be believed when it may have occurred by reason of the person having eaten from a can the food in which was evidently spoiled, and so spoiled that the appearance of the can would surely have indicated the unsound condition of its contents to a person exercising ordinary care. If a person buys tainted meat from the butcher and eats it, knowing it to be a little *off*, and is taken sick, he must blame himself for trifling with his health; and likewise, if he buys canned food of suspicious appearance, he must expect to pay in health for his carelessness or temerity. Therefore, having no apprehension as to the method of packing an article, whether in tin or in glass, whether soldered with the aid of an acid or soldered inside or outside the can, there is every reason to consider canned articles as good for food as any food can be. The experience of our army ought to be conclusive on this subject. And no person having a decent knowledge of what is good or bad, sound or unsound, could be misled into eating an improper article from a can any easier than he could be induced to eat a decayed potato or a tainted piece of butcher's meat."

— Dr. Waxham, writing in the *Archives of Pediatrics*, speaks highly of the use of bismuth in rectal injection in cases of dysentery, claiming that it greatly abridges the ordinary course of that disease. From ten to twenty grains of bismuth are administered with mucilage of acacia and water after every evacuation, and if not sufficient in itself to control the frequent stools a little laudanum is added. Recently a child suffering from a severe attack of dysentery, with prolapse of the rectum with every passage, was almost immediately relieved. Within twenty-four hours the character of the passages was entirely changed, the tenesmus and frequent desire to stool relieved, and the prolapse did not recur after the second or third administration. This is only one of many cases where this remedy has been used with gratifying result.

— At the late meeting of the American Association for the Advancement of Science, in the Section on Economic Science and Social Statistics, Dr. Charles Warren, Statistician of the United States Bureau of Education, read a paper on the learned professions and the public, 1870–1880. Deriving the number of persons engaged in law, medicine, and divinity, from the occupation tables of the census, he showed that the rate of increase for each profession during the decade was much greater than the rate of increase in the general population. He commented upon the marked increase in the number of clergymen of foreign birth, and the great increase in lawyers, particularly in States situated north of the Potomac and Ohio rivers. Admitting that the number of clergymen is within the control of the sects purely, and not subject to legal interference, he observed that there is precedent for considering lawyers as officers of the State, and eminent propriety in making physicians also unpaid State officers. When this is done, the qualifications will be under State control, and indirectly the supply can be limited to actual needs. In 1880 he believes there was a surplus of sixty-four thousand in these three professions, and that decisive measures should be taken to remedy it.

— A correspondent of *Science* (October 3d) reenforces the stories of fasting pigs with an account of a hog which, imprisoned by a heap of driftwood after a flood, received no food whatever for forty-two days. Though much emaciated, it was able to drink eagerly of thickened milk, and rapidly recovered.

— An iodoform collodion is well spoken of, consisting of iodoform, ten parts, collodion, ninety parts. To be applied with a camel's-hair brush, the edges of the wound being held together until it dries. For wounds in exposed situations.

Correspondence.

"MILITIA AMBULANCE BEARER COMPANIES."

Headquarters First Brigade,
Massachusetts Volunteer Militia,
Boston, *September* 30, 1884.

Mr. Editor, — I have read the article "Militia Ambulance Bearer Companies" in your issue of 25th inst., and should be pleased to aid in the formation of a corps such as you suggest.

Very respectfully, your obedient servant,
Nat. Wales, *Brigadier-General.*

Miscellany.

DOCTORS TRUMAN AND CROOKS.

Every member of the profession in the little city of Oldport — and there were a dozen of them, all eager for patients and for fees — felt sorry when Truman announced his intention of leaving the town to engage in a professorship in a neighboring city. To be sure it made one physician less, for a time at least, but Truman was regarded as an honorable competitor with whom all liked to labor. When Smith the carpenter fell from the new bank building, breaking his leg, Truman was called to attend him, in the absence of the family physician, Jones. For two days Truman rendered every needful attention to the unfortunate carpenter, and might have kept the case; there was nothing in the medical customs or ethics of Oldport that forbade it. He did not do this, however, and as soon as Jones returned home he drove around to his office to deliver over the patient to him; and absolutely refused to take any portion of the fee for his own trouble. This Jones always thought was doing as you would be done by.

Truman was once called in consultation with Dr. Damon, a young and struggling practitioner. He found dissatisfaction expressed which he did everything in his power to allay. The next day Truman was called on by the father of the patient, and urged to take the case. It would prove a lucrative one, and Truman certainly needed the money. The patron was ready and anxious to discharge Damon. Truman refused point blank to take the case, urging the father to continue the present attending physician, who was doing as well as anybody could do; and he so represented the case and Damon's entire competency to manage it that the family concluded to make no change, and they still employ Damon as their family physician.

Truman was never known by look or word to do anything to disparage a brother physician, and never sought to insinuate himself into other physicians' good families. And ever manifesting this excellent disposition to "live and let live," his departure was exceedingly regretted by all the medical fraternity of Oldport, who said that his name expressed his character, and that he was every inch of him a *true man.*

Far different were the feelings when Crooks arrived as his successor, and hung out his shingle in one of the prominent squares of the city. Crooks had brought with him an unsavory reputation from a neighboring town where he had been practicing. He was looked upon by his brother physicians as tricky and untrustworthy. He had a smooth speech and soft and winning manners, and seemed to your face a wondrous good friend, but when your back was turned his words proved poisoned arrows and even his gestures and his looks carried bane. He had but one end in view, to win practice, and to do it where he could by undermining other physicians. He was never known to speak unqualifiedly in praise of a brother practitioner, though he knew well how to "damn with faint praise," and "without sneering" to "teach the rest to sneer." People used to say that Crooks could express more by a look than many men could by a long harangue.

Certain it was that it was not regarded as safe to have a consultation with him, for somehow he always managed to come into possession of the case. There was a seeming agreement when the *confrère* was present, but before Crooks left the house he would manage to slip in a word of disparagement or even a hint that proved damaging to the attending physician; and there was, moreover, an air of superior wisdom about Crooks that impressed the family, and put the regular attendant at discount. He was called in consultation with Jones on a certain occasion. The case was one of simple pneumonia; there was no danger whatever. There was entire agreement as to diagnosis, and no apparent disagreement as to treatment. Jones suggested antimony, and Crooks remarked that antimony might be too depressing; the same end could be obtained by giving ipecac. Jones momentarily left the room for his medicine chest, and Crooks observed to the over-anxious family attendants, "antimony would infallibly kill that child." The two medical men walked home together, and Crooks was sweet, amiable, and condescending as usual. The next morning Jones received a message from the head of the family of his patient that his services were no longer required, as Crooks would take the case. One favorite trick of Crooks was to call on families where he had at some time been summoned in consultation. The consultation proved an excuse for a friendship and an intimacy that was undoubtedly profitable to him. The fraternity did not, however, regard this as fair dealing. In short, the opinion had more than once been expressed in medical circles that Crooks merited his name, and that he was a *bad crook.*

How best to secure one's rights in this life, and yet not infringe on the rights of one's neighbors, is always a difficult problem, but of the two men Truman came the nearest a solution.

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DIPHTHERIA SPREAD BY ADULTS.

Dr. A. Jacobi, in an article published in the *New York Medical Journal*, September 27th, expresses his opinion that the cause of most cases of diphtheria is to be found not in defective sewerage and damp walls, but in contagion from some individual sick with the disease, and expresses the opinion that many of the sore throats which do not confine their owners within doors or interfere with their business are, in point of fact, diphtheria, and capable of reproducing themselves in other individuals. While a tonsillar diphtheria is attended with scarcely any danger, the same disease in the larynx destroys a child by suffocation, and in the nasal passages is fatal by sepsis. No matter how slight a case is at first it may extend to nose or larynx, and in another person it may generate the most malignant form of the disease. It does not find lodgment in every person exposed to it any more than measles or scarlatina. While a cannon ball, however, may miss, a pistol bullet may carry destruction.

"Such a bullet," says Dr. Jacobi, "is many a case of the so-called follicular amygdalitis (tonsillitis). There *is* such an affection as deserves the name. It implies a catarrhal or suppurative condition of a tonsillar crypt or several of them. It may be obstinate and extend over years, giving rise to constant returns of the secretion or to concretions. In the acute stage, even in the chronic, it will permit of the introduction of a probe into the duct to a depth of from one to two centimetres. The *color* of the secretion is often that of a membrane, not its nature, nor consistence, nor location (still it may become diphtheritic even inside the duct), and in that condition it is not diphtheria. But the large majority of cases which are commonly called follicular tonsillitis do not belong to this annoying but innocent class; *most of them are diphtheria.* Not everything not fatal need be called by a different name. What to-day looks like a point or four or five points covering the outlets of ducts may to-morrow be a confluent membrane. Just as well you might withhold the name of variola from a case of small-pox so long as it was not confluent or did not destroy life. You have a family sick with affections of the throat and nose; a child is dying of laryngeal croup; another of nasal diphtheria, glandular swelling, and sepsis; others have severe pharyngeal affections; others but slight tonsillar tufts, which may or may not coalesce and extend into membrane. Is the first one 'croup?' are the others 'diphtheria?' is the last one 'follicular amygdalitis?' Or the first case in a family was just such a one as was denominated tonsillar folliculitis by the family physician, and no preventive measures were taken to protect the rest of the little flock. From that moment it was that extermination began in that family. We have all seen it; we ought to heed it all."

Some of the mild cases of diphtheria, according to this writer, are most prolific of danger, because they are apt to assume a chronic course without losing their contagious nature. Instances are referred to where they have continued six or even nine months. While not depreciating the importance of domestic sanitation, Dr. Jacobi lays strong emphasis on the importance of examining the nares and throats of all attendants. He says that a family with children ought to insist upon the occasional inspection of the throats of their help. Servants with chronic pharyngeal catarrh must not be hired. A seamstress, coming for an occasional day's work, ought to have her throat inspected; cooks and nurses must be looked after, the more carefully the less such people are inclined to give way to their pains or ailments or throw up their places. A sick nurse introduced into a family must be examined; she will go from one place to another and carry pharyngeal and puerperal diphtheria. Thus if there be any class of persons who are the constant transmitters of diphtheria, and require attention and caution, it is nurses and cooks, in fact all domestic help; so do sick-nurses, teachers, hair-dressers and barbers, shop-keepers, restaurant keepers, and all those people who are in constant contact with all classes and ages. The physician enjoys a certain degree of both active and passive immunity, but it depends on the number and duration of his exposures whether he becomes more or less both endangered and dangerous. *There is as much diphtheria out of bed as in bed; nearly as much out of doors as indoors.* Many a mild case is walking the streets for weeks without caring or thinking that some of his victims have been wept over before he was quite well himself.

The main points in the paper are thus condensed: —

"There is, probably, no spontaneous origin of diphtheria any more than there is a spontaneous origin of cholera or scarlatina.

"Diphtheria is contagious. Severe forms may beget severe or mild forms. Mild cases may beget mild or severe cases.

"What has been called follicular tonsillitis is *mostly* diphtheria. It is seldom dangerous to the patient, as the tonsils have but very little lymph communication with the rest of the body. But it is contagious.

"This form is frequent in the adult, in whom it loses nothing, however, of its contagiousness.

"Diphtheria in the adult proves dangerous to the community mostly because it does not restrain the patient from communicating the disease.

"It is apt to last long: firstly, because most cases occur on a surface covered with pavement epithelium (tonsils), secondly, because of the constant exposure and neglect on the part of the patient. Even without it diphtheria may last weeks and more; with it it is subject to sudden relapses. As long as it lasts it is contagious.

"As diphtheria is but a mild affection in many adults, who disregard it, and frequently do not care to mention its existence, pain in swallowing and moderate malaise being the only symptoms, the question of transmission by means of clothing, etc., on the part of third persons is capable of becoming more difficult to answer than it ever was. Many a case which has been believed to be thus carried is, probably, one of direct contagion from a patient to a second person, from this second to a third."

* * *

MENTAL ALIENATION IN YOUNG CHILDREN.

An interesting résumé is given in the *Medical Times and Gazette*, September 6th, of a paper by Prof. Max Leidesdorf, read at the Vienna Medical Society.[1] At the beginning of the present century Carus entirely denied the existence of psychical disturbances in children, and it is only of late years, by means of the works of Brière, Conolly, and Maudsley and their successors, that the subject has been placed in its proper position. The writer himself has for some years past paid much attention to it in consequence of his having so often found that a proper appreciation of certain cases and certain forms of insanity in the adult can only be obtained by investigations carried back into early childhood. But if it is now certain that psychical disturbance may occur even before the fourth year of age, yet its relative frequency cannot well be determined, the statistics of lunatic asylums simply showing that admissions take place only rarely prior to the eighteenth year of age. By the census of Prussia for 1880 it was shown that there were 66,345 insane, or one to 411 adult inhabitants, while there was but one insane child to 1400 children. These statistical returns do not give even an approximative statement of the prevalence of the affection in children; but if we abstract cases of idiocy with or without epilepsy, dependent upon anomalies in the development of the brain, it must be confessed that insanity as it occurs in the adult is rare in childhood. But separate elements of such a condition of a rudimentary and transitory nature are frequently met with in the form of shortly lasting attacks of depression or excitement, alarm, and hallucinations. Professor Leidesdorf has often met with, in children not more than five years of age, transitory but frequently recurring conditions of depression, the causes being generally hereditary predisposition, loss of blood (for example, in pertussis), or preceding severe diseases, such as typhus, measles, scarlatina, etc. He refers to the case of a girl five years of age, who, although damaged hereditarily, was, as regards her intellect, in quite a normal and satisfactory condition, and yet was frequently seized on going to bed with attacks of groundless alarm, which lasted an hour or so, but leaving her in a normal condition. Sometimes, too, a hypochondriacal disposition is observed in children four or five years old, and this is especially the case when parents pay an exaggerated attention to their children's health, magnifying every trifling ailment into a serious disease, and managing by their excessive care to transfer their own anxiety to those who are the objects of it. On other occasions it is the witnessing severe illness, or the death of relatives, which saddens the child; and Professor Steiner refers to the case of a boy eight years of age, who, having seen a sister die of phthisis, from that time was the victim of the extremest fear of becoming a similar sacrifice. On the other hand, Professor Leidesdorf has met with examples in boys from six to eight years of age of great or even maniacal excitement with destructive impulse, which, however, lasted only for some hours. In one case the maniacal attack came on at the same hour every evening, but after some months the disposition entirely disappeared. A more frequent form of transitory psychical disturbance is hallucination of a disagreeable or terrifying nature, a typical form of which is well known to children's doctors under the name of *Pavor nocturnus*. Children from three to eight years of age, in a perfectly normal condition, after some hours' sleep are suddenly awakened, a prey to the greatest anguish, with pallid face and fixed look. The entire body is bathed in sweat, they utter loud screams, do not recognize those who surround them, and are the victims of hallucinations, which sometimes take the forms of dogs or serpents threatening them. These attacks sometimes come on at the same hour. At the end of an hour or less they fall asleep again, and on awakening are quite unaware of the occurrences of the night. Another type of transitory psychical disturbance is constituted by natural somnambulism, a condition which presents a great similarity to certain disturbances of consciousness which are sometimes met with prior to, or after, fits of epilepsy. These attacks of somnambulism occur not only at night in the midst of sleep, but also in the daytime. Peter Frank relates a case of this somnambulism brought on in a little girl through the operation of sudden fear, and Professor Leidesdorf gives interesting particulars of another girl, seven or eight years old, who was liable several times a day to hypnotic attacks, during which she exhibited many actions remarkable for the regularity of their execution. At the end of some months these attacks entirely disappeared. Besides these transitory conditions other psychoses may be observed in children five or six years old, which persist with variable intensity during the rest of life. To these belong the *ideas of constraint* (*Zwangsvorstellungen*), which are psychical representations entirely independent of the will, and which those surrounding the child take for simple creations of the fancy. Dr. Leidesdorf's experience in this matter has been gathered in part from children seven or eight years old, and in part from adults, who suffering from these images traced them back to early childhood. These manifestations differ from delirious ideas, as, contrary to what happen with these last, their subjects are quite aware that they have to do with an abnormal condition. The patient tries to repel these ideas, but in the struggle between the will and the ideas it is the latter that is always victorious. Some adults have been tormented by this condition from their earliest childhood, and have found their studies and occupations greatly interfered with; so that this double mental exertion, a part of which consists in withstanding these images, may at last tire them out into alienation. Prolonged mental affection in the proper sense of the word, such as we meet with in the adult, is very rare in children under fourteen years of age, and on account of its rarity Professor Leidesdorf cites some cases from his own and others' practice, for which we have not space. The more grave forms of neuroses are frequently accompanied by psychical disturbances, which last as long as the neuroses themselves. This is observed in epilepsy, chorea, and infantile hysteria. Hysteria, accompanied by psychical disturbance, is met with in children from five to fourteen years of age; and, according to the author's observations, it is the gravest form of hysteria which usually attacks children. Another form of disturbed mental condition observed sometimes in young children is a disposition to simulation, a remarkable case of which is related, and another quoted from West. Professor Leidesdorf terminates his paper by some observations on moral insanity, which, in its rudimentary stages, is not unfrequently met with in children.

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[1] Wiener Medicinische Wochenschrift, June 28th and July 5th.

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ARTIFICIAL PRODUCTION OF LUNG DISEASE BY INHALATION.

Wargunin has just published[1] the results of an investigation which he has carried out in the laboratory of Professor Rajewsky, with the view of testing the effects of inhalation of phthisical sputa as compared with other organic matters. The experiments were performed on dogs, which were confined in a wooden box, through a hole in which a spray was directed upon the animal occupying the box. The substances to be inhaled, which were thrown into the box with the vapor, were phthisical expectoration, fresh and disinfected, emphysematous sputum, Swiss cheese, and wheaten flour. Eleven experiments were performed with unaltered phthisical expectoration, each animal undergoing several inhalations (varying from three to twenty-seven), after which it was allowed to live for some months until it died or was killed. Two of the eleven dogs, however, are still alive, being kept for further observations. Careful examination was made of all the organs after death, and in every case pathological products were found in the lungs, which to the naked eye had a close resemblance to tubercular nodules. Three experiments were made with phthisical expectoration disinfected by means of carbolic acid. In only one of these were there any morbid appearances resembling those in the former experiments, but the animals were not allowed to live so long, which may account for the difference in result. One dog inhaled the sputum of an emphysematous patient; four were experimented on with a spray of cheese emulsion; and two with a similar spray of wheaten flour. One of these dogs, unfortunately, was bitten by another suffering from rabies at the commencement of the experiment (which was conducted with cheese), and its death was too soon to allow of the progress of any disease reaching a recognizable stage. The other six, however, on post-mortem examination gave evidence of exactly the same pathological processes having taken place as those which followed the inhalation of the phthisical sputum. Wargunin concludes from this that the pulmonary disease resulting from these inhalations cannot be due to a specific poison, but simply to the mechanical and chemical influence of the substances in the spray. He examined every lung microscopically, and found that the morbid products were caused by lobular broncho-pneumonia, not by any tubercular process. The clinical features of the disease which the animals manifested had nothing in common with tuberculosis.

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[1] Archiv für Pathologische Anatomie und Physiologie und für klinische Medicin, 5th June, 1884; and Edinburgh Medical Journal, September, 1884.

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OVERPRESSURE IN SCHOOLS.

The British press is considerably agitated over a recent report by Dr. Crichton Browne on the above subject, which was accompanied by a memorandum of Mr. Fitch presenting the opposite side of the question from the stand-point of the Education Department. An abstract of each paper is published in the *Medical Times* (September 20th). Dr. Browne alludes to evidence of overwork (1) in detention after school hours, (2) from home lessons, (3) the impression of the teachers, only three per cent. of whom denied the existence of overpressure.

(4.) *The condition of the children* would settle the question of overpressure in itself. In the elementary schools the backward children were the ones who suffered from the effects of overpressure, as one teacher had forcibly observed to him, "Not only do these dull children break down in health under our manipulations, but they grow more stupid, seeming to lose in general intelligence what they gain in mere technical knowledge of reading, writing, and arithmetic." Examinations, he pointed out, were in this direction producing a rich crop in the future of nervousness. Backward children he divided into three classes, the dull, the starved, and the delicate. *Dullness* shaded off gradually into imbecility, a condition which might supervene at any point in the mental evolution. The *starved* constituted a more important section of the backward children. A not inconsiderable number of children were found to have come to school without any breakfast at all, besides a much larger number who were quite insufficiently fed. Then there were the *delicate* children, laboring from a great variety of ailments, but all were expected to get through the same amount of work and make the same progress as those who were healthy.

Overpressure had its origin in great measure in the *examination* system, and this arose from the system of *payment by results*, results proximate and partial, not the real final results, which could not be known under many years. When asked as to the effects of overpressure, the steady increase in insanity might be pointed out as an evidence of high pressure, though at present sufficient time had not yet elapsed to demonstrate its relation to education. The great increase in suicide, too, was instanced as coinciding in time with the modern extension of education, and as being most prevalent in regions where education was most widely diffused. But it was in other diseases of the brain and nervous system that the evils of overpressure were more clearly manifested, hydrocephalus and cephalitis being instanced as diseases which had become relatively more common at the school age during the last twenty years. Diabetes mellitus was specially singled out as an instance of the greater tendency to diseases of the nervous system in modern days.

The next step was to ascertain if any connecting links between these grave disorders of the nervous system and educational overpressure existed, and for this purpose he had inquired into the history of *headache* amongst some of the children. The result of this investigation was that 46.1 per cent. of the children professed to suffer from them habitually. These results were obtained after considerable cross-examination in every case where there seemed any reason to doubt the answer of the child. It was further found that in a considerable majority of cases the headache occurred in the afternoon, but that in the higher standards evening headache predominated, whilst the morning headache occurred, as might have been anticipated, amongst the half-starved. The headache was frontal in a very large proportion of the cases. Next the question of *sleeplessness* was inquired into, a subject beset with many difficulties, as various causes might intervene to produce sleeplessness besides school troubles, but *somnambulism* and *somniloquency* could be more easily proved to exist, and were found to exist in considerable proportion, and to be more or less directly associated with the school work. Of *chorea*, contrary to expectation, he met with no examples, though choreiform movements were occasionally seen.

A brief allusion was made to the relation of *neuralgia* and allied disorders and *shortsightedness* to education.

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AN OYSTER MISTAKEN FOR A MALIGNANT GROWTH.

Dr. Theobald relates the following incident at one of the Baltimore medical societies, according to the *Archives of Ophthalmology*. A patient having suffered from some obscure symptoms sought medical advice for the relief of her sufferings. A suspicious-looking mass was discovered blocking up the posterior nares. This was removed without difficulty, having, apparently, sloughed off from its former attachments. The supposed neoplasm being regarded as probably of a malignant character, it was deemed of the first importance that its histological structure should be made out. A portion of the tissue was teased out and submitted to a microscopical examination. This completed, the growth was exhibited to the Society in question, its histological characteristics were duly set forth, and the clinical facts of the case related. An animated discussion followed, and more than one hypothesis was advanced to account for the unusual features which the case presented. While this was in progress an inquisitive individual, with microscopical proclivities, inspected the tumor with more care than had previously been thought requisite. The debate was suddenly cut short by the announcement that the suspicious neoplasm was, after all, but a half-digested oyster, a harmless specimen of our should-be familiar bivalve, which, probably, during a previous spell of vomiting, had become lodged at the point where it was discovered.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 27, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	647	283	24.02	10.32	13.09	2.16	3.69
Philadelphia	927,995	330	104	21.30	16.20	6.90	3.00	8.40
Brooklyn	644,526	276	137	33.86	10.88	21.24	5.40	6.12
Chicago	632,100	225	130	29.04	9.68	17.60	2.20	5.72
Boston	423,800	201	96	25.00	13.23	9.80	4.32	4.90
Baltimore	408,520	162	61	28.60	15.60	10.40	3.90	7.15
St. Louis	400,000	154	71	37.70	11.05	13.00	6.49	7.80
Cincinnati	272,400	95	48	21.00	10.50	12.16	2.10	5.25
New Orleans	234,000	100	29	30.00	14.00	9.00	2 00	4.00
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	96	44	23.92	11.44	11.44	3.12	2.08
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	39	17	38 40	10.24	20.48	2.56	5.12
New Haven	62,882	26	8	19.25	3.85	7.70	3.85	3.85
Nashville	54,400	22	9	36.32	13.62	—	—	9.08
Charleston	52,286	35	10	22.88	17.16	11.44	2.86	2.86
Lowell	71,447	35	20	39.04	5.72	37.18	—	—
Worcester	69,442	30	15	43.33	20.00	29.99	—	13.33
Fall River	62,674	22	16	40.86	—	40.86	—	—
Cambridge	60,995	24	12	20.80	24.96	16.54	4.16	—
Lawrence	45,516	19	10	57.86	5.26	36.82	10.52	—
Lynn	44,895	10	2	20.00	10.00	—	—	10.00
Springfield	38,090	12	6	—	16.66	—	—	—
Somerville	31,350	9	6	22.22	22.22	11.11	11.11	—
Holyoke	30,515	—	—	—	—	—	—	—
New Bedford	30,144	17	5	35.28	5.88	29.40	5.88	—
Salem	29,503	12	3	—	16.66	—	—	—
Chelsea	24,347	11	6	27.27	9.09	18.18	9.09	—
Taunton	22,693	13	8	53.83	15.38	23.07	7.69	—
Gloucester	21,400	7	5	42.84	—	42.84	—	—
Haverhill	20,905	13	5	30.76	23.07	15.38	7.69	—
Newton	19,421	10	5	60.00	—	40.00	10.00	—
Brockton	18,323	5	4	40.00	20.00	20.00	—	20 00
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	6	2	16.66	16.66	16.66	—	—
Fitchburg	13,433	7	1	28.56	42.84	14.28	—	—
Eighty-eight Massachusetts towns	190,304	77	23	33.80	10.40	15.60	5.20	3.90

Deaths reported 2747 (no reports from Buffalo, Pittsburg' and Milwaukee): under five years of age, 1201; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 782, diarrhœal diseases 403, consumption 364, lung diseases 175, diphtheria and croup 144, typhoid fever 82, malarial fevers 52, whooping-cough 37, scarlet fever 27, cerebro-spinal meningitis 16, puerperal fever eight, measles seven, erysipelas five, small-pox one. From *malarial fevers*, New Orleans 13, St. Louis 12, Baltimore nine, New York seven, Brooklyn four, Nashville three, Charleston two, Chicago and Springfield one each. From *whooping-cough*, New York 11, Brooklyn six, Boston five, Chicago and District of Columbia three each, Providence two, Baltimore, Haverhill, and Lexington one each. From *scarlet fever*, St. Louis four, Chicago, Boston, and New York three each, Philadelphia, District of Columbia, Providence, and Lawrence two each, Brooklyn, New Orleans, Lowell, Lynn, Woburn, and Andover one each. From *cerebro-spinal meningitis*, New York five, Philadelphia three, Chicago, Baltimore, New Haven, Taunton, Newton, Fitchburg, West Brookfield, and Westborough one each. From *puerperal fever*, Boston five, Brooklyn two, New Orleans one. From *measles*, New York five, Cincinnati and District of Columbia one each. From *erysipelas*, New York two, District of Columbia, Mansfield, and Sterling one each, From *small-pox*, Philadelphia one.

Cases reported in Boston: scarlet fever 30, typhoid fever 40, and diphtheria 16.

In 104 cities and towns of Massachusetts, with an estimated population of 1,179,491 (estimated population of the State 1,955,104), the total death-rate for the week was 23.01 agains 20.64 and 22.09 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending September 13th, the death-rate was 21.4. Deaths reported 3588: infants under one year of age 1179; deaths in London 1373: acute diseases of the respiratory organs (London) 170, diarrhœal diseases 531, whooping-cough 71, scarlet fever 65, measles 46, fever 45, diphtheria 31, small-pox (London nine, Liverpool two, Sheffield and Hull one each) 13. The death-rates ranged from 9.2 in Brighton to 35.4 in Blackburn; Birmingham 16.1; Bradford 19.9; Leeds 26.8; Leicester 31.0; Liverpool 24.8; London 17.8; Manchester 27.5; Nottingham 21.3; Plymouth 15.2; Sheffield 27.4; Sunderland 25.8. In Edinburgh 16.7; Glasgow 24.8; Dublin 29.4.

For the week ending September 13th, in the Swiss towns, there were 21 deaths from diarrhœal diseases, consumption 20, lung diseases 12, typhoid fever four, erysipelas two, puerperal fever one, small-pox one, scarlet fever one, diphtheria and croup one. The death-rates were, at Geneva 8.2; Zurich 13.8; Basle 14.7; Berne 17.8.

For the week ending September 10th, in Paris, there were 202 deaths from consumption, typhoid fever 41, diphtheria and croup 30, measles 26, whooping-cough nine, erysipelas four, puerperal fever three. The death-rate was 22.87.

The meteorological record for the week ending September 27th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Sept., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 21	30.177	56	69	47	68	38	80	62	NW	NW	SW	13	3	8	C	C	C	—	—
Mon., 22	30.024	62	71	50	75	61	90	75	S	SW	SW	9	15	5	C	O	F	—	—
Tues., 23	30.144	52	64	50	75	79	80	78	NE	NE	NW	17	8	3	O	O	O	—	—
Wed., 24	30.145	63	72	50	89	82	92	88	E	S	SW	3	8	12	O	F	C	—	—
Thurs., 25	30.122	70	82	61	83	47	79	70	SW	NW	N	11	16	12	C	O	C	—	—
Fri., 26	30.380	59	68	54	74	58	78	70	N	SE	S	9	9	2	C	C	C	—	—
Sat., 27	30.178	62	71	50	75	39	87	67	Calm.	S	SW	0	11	12	C	C	C	—	—
Mean, the Week.	30.167	60.6	71	51.6				72.8										5.55	0.03

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM SEPTEMBER 20, 1884, TO OCTOBER 3, 1884.

HALL, JNO. D., captain and assistant surgeon. Assigned to duty at Fort Townsend, Wash. Ter., to relieve Surgeon R. S. Vickery. Surgeon Vickery, on being relieved, directed to report to commanding officer, Vancouver Barracks, Wash Ter., for duty. Paragraph 3, S. O. 140, headquarters Department of Columbia, September 15, 1884.

BIRMINGHAM, H. P., first lieutenant and assistant surgeon. Leave of absence extended twenty days. Paragraph 2, S. O. 116, headquarters Division of the Missouri, September 22, 1884.

BARROWS, C. C., first lieutenant and assistant surgeon. Granted one month's leave of absence, with permission to apply to the proper authority for an extension of one month. Paragraph 4, S. O. 86, headquarters Department of Arizona, September 13, 1884.

DIETZ, W. D., first lieutenant and assistant surgeon. Assigned to duty at Fort Selden, N. M. (post surgeon). Paragraph 4, S. O. 187, headquarters Division of Missouri, September 18, 1884.

MCCAW, W. D., first lieutenant and assistant surgeon. Assigned to duty as post surgeon, Fort Craig, N. M. Paragraph 5, S. O. 187, headquarters Division of Missouri, September 18, 1884.

BENTLEY, EDWIN, major and surgeon. Granted two months' leave of absence, with permission to apply for two months' extension, to take effect upon assignment to duty in Department of Texas of Surgeon F. L. Town. S. O. 121, headquarters Division of the Missouri, September 30, 1884.

BARTHOLF, JOHN H., captain and assistant surgeon. Assigned to duty at Fort Ringgold, Texas, as post surgeon. Paragraph 5, S. O. 129, headquarters Department of Texas, September 25, 1884.

WHITE, R. H., captain and assistant surgeon. Assigned to duty as post surgeon at Fort Winfield Scott, Cal., relieving Assistant Surgeon A. S. Polhemus, who, upon being relieved, will report to commanding officer, Alcatraz Island, Cal., for duty. Paragraph 1, S. O. 115, headquarters Department of California, September 1[illegible], 1884.

TESSON, L. S., captain and assistant surgeon. Directed to report to commanding officer, Fort Stockton, Texas, for temporary duty. Paragraph 3, S. O. 127, headquarters Department of Texas, September 22, 1884.

GIBSON, R. J., first lieutenant and assistant surgeon. Assigned to duty as post surgeon, Fort Winfield Scott, Cal., relieving Assistant Surgeon A. S. Polhemus.

POLHEMUS, A. S., first lieutenant and assistant surgeon. Upon being relieved to report to commanding officer, Fort McDermit, Nev., for duty as post surgeon.

WHITE, R. H., captain and assistant surgeon. To report to commanding officer, Angel Island, Cal., as post surgeon, relieving Assistant Surgeon C. K. Winne.

WINNE, C. K., captain and assistant surgeon. Upon being relieved to report to commanding officer, Benicia Barracks, Cal., for duty as post surgeon, relieving Surgeon C. C. Byrne. Paragraph 1, S. O. 115, headquarters Department of California, September 23, 1884.

MADDOX, T. J. C., first lieutenant and assistant surgeon. Directed to report to commanding officer, post of San Antonio, Texas, for duty. Paragraph 5, S. O. 127, headquarters Department of Texas, September 22, 1884.

BARROWS, C. C., first lieutenant and assistant surgeon. Leave of absence extended one month. Paragraph 6, S. O. 97, headquarters Division of the Pacific, September 19, 1884.

EVERTS, EDWARD, first lieutenant and assistant surgeon. Granted leave of absence for one month, with permission to leave the limits of the Department. S. O. 145, headquarters Department of Colorado, September 24, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY DURING THE WEEK ENDING OCTOBER 4, 1884.

STEWART, HENRY, surgeon. Granted leave of absence for one year, with permission to leave the United States. October 15, 1884.

EDGAR, JNO. M., passed assistant surgeon. Detached from the Nantucket and placed on waiting orders. September 29, 1884.

HARMON, G. E. H., passed assistant surgeon. To the Naval Academy. September 30, 1884.

BERTOLETTE, D. N., passed assistant surgeon. From the Naval Academy to the Dolphin. October 4, 1884.

ROGERS, BENJ. F., passed assistant surgeon. To the Naval Academy. September 30, 1884.

COOKE, GEO. H., surgeon. From the Naval Academy and placed on waiting orders. October 2, 1884.

WHITING, ROBERT, passed assistant surgeon. From the Naval Academy and placed on waiting orders. October 4, 1884.

AMERICAN PUBLIC HEALTH ASSOCIATION. 1884. TWELFTH ANNUAL MEETING. SAINT LOUIS, MO. — The American Public Health Association will convene at Saint Louis, Mo., Tuesday, October 14th, at ten o'clock, A. M., and continue four days. The meetings will be held in Liederkranz Hall, corner of 13th Street and Chouteau Ave. Papers have been promised for this meeting as follows: on I. Hygiene of the Habitations of the Poor. II. Hygiene of Occupations. III. School Hygiene. IV. Adulteration of Food. V. Water Pollution. VI. Disposal of Sewage by Irrigation or Chemical Action. VII. The Observable Effect upon the Public Health of Official Sanitary Supervision. VIII. The Work of Municipal and State Boards of Health. IX. On Disease Germs. X. Cremation as a Sanitary Measure in Times of Great Epidemics. XI. A Survey of the Present Sanitary Situation in Saint Louis.

The headquarters of the Executive Committee will be at the Southern Hotel. The first meeting of the Committee will be held Monday, October 13th, at 2.30 P. M.

The Conference of State Boards of Health will meet at Liederkranz Hall Monday, October 13th at 2.30 P. M.

After October 5th all communications to the Secretary should be sent to Southern Hotel, Saint Louis, Mo.

IRVING A. WATSON, *Secretary*

Original Articles.

EXCEPTIONAL FATTY TUMORS.[1]

BY R. M. HODGES, M. D.

If an attempt were made to enumerate the mistakes of surgery the list would be a long one, especially if surgeons manifested as much alacrity to report their failures as they do to give an account of their successes. Such a catalogue of discomfitures, however exhaustive, would not prevent errors from happening, but it might exhibit the difficulties of surgical art and inculcate that prudent reserve in the expression of opinions, want of which is a fault often condemned, and the possession of which is a virtue greatly respected by the profession, if not by the public. It might also help to repress a prevalent intellectual propensity which permits preconceived opinions to subvert deliberation of judgment.

I propose to report, in brief terms, four cases of erroneous diagnosis which have left an impression on my mind, not on account of their seriousness, as in each instance the mistake was to the patient's advantage, but because they are striking illustrations of misconception, all of them having reference to an affection usually counted one of the simplest and easiest for surgical recognition.

Case I. A. M. C., female, aged five, well developed, and, except for some slight cerebral symptoms while teething, always perfectly healthy, is the subject of a tumor of the occiput, in the median line, over the tendons of the trapezii muscles. It was first noticed at the age of three months, and has gradually increased in size; ovoid in shape, two by three inches in its diameters, regular in outline, the superior border nearly reaches the occipital ridge and protuberance. The integument is natural and slides upon the growth, which is itself apparently movable upon the muscles beneath. It has the feel of a soft solid, and is translucent when examined through a hydrocele tube. It does not pulsate with the breathing or crying, nor has the patient suffered inconvenience from the tumor, or any apparent pain when it has been handled or bumped.

More than a year before my interview the mother was advised at the Massachusetts General Hospital that an operation had better not be performed. Subsequently she again received similar advice, with the added recommendation that a shield of gutta-percha should be worn; the opinion of those who saw it being that the tumor was a meningocele, having more or less direct communication with the serous membranes of the encephalon and spinal cord. Eventually, and with a full understanding of the danger, the parents decided that they would prefer to have an operation performed and take the chances of the child's death at present rather than suffer the tumor to remain.

After etherization a fine trocar was inserted into the tumor. No fluid came through the canula, not even blood. After consultation by the surgeons present it was thought advisable to determine the character of the growth by an incision. This being done a very beautiful specimen of fatty tumor was exposed and easily removed.[2]

This particular fatty tumor happened to present features which, as a rule, do not belong to that class of growths. A lipoma, congenital, situated in the median line of an exceptional locality, and translucent, offers an assemblage of phenomena which might justify the blunder of taking it for a meningocele, properly belonging in the point described, which is of necessity congenital, and offers nothing irregular in being translucent; but the sequel proved that not enough importance was attached to the absence of fluctuation, of pulsation, or to the movableness of the tumor. I am not aware that fatty tumors are often translucent, but the delicacy of color and fineness of texture which they frequently present (as in the case under consideration), coupled with the fact of their oil-cells being much larger than those of ordinary fat, suggest that the transmission of light through their structure may not be a rare phenomenon.

Case II. S. N., a thin and anæmic man, of indifferent health, aged fifty-eight, is the subject of a smooth and rounded tumor in the median line of the neck, between the hyoid bone and thyroid cartilage. It had slowly enlarged during the four or five years it had been observed, until it reached the size of a small egg, and became annoying from its prominence. Painless, not adherent to the skin, fixed to the deep tissues, and fluctuating, it was unhesitatingly diagnosticated as a cystic tumor by more than one surgeon, and its removal recommended. By medical advice the tumor was unavailingly painted with tincture of iodine for a period of several months. Discouraged by the failure of this application, Mr. N. consented to an operation. As the growth was fixed and not small, it seemed that the dissection which would be required might present some difficulty, or at least open the way for subsequent burrowing of pus. The operation was consequently performed with careful antiseptic precautions; but the tumor was found to be an ordinary lipoma, easily removed. Rapid healing and an insignificant cicatrix followed.

Fatty tumors are always surrounded by a capsule of connective tissue which in its totality constitutes a more or less complete cystic envelope. The defined outline thus given to the one in question and its fluctuation contributed to the deception by which the diagnosis was entrapped. Its locality, moreover, is one particularly affected by cystic growths, and unusual for lipomata. Although fatty tumors may be found in any part of the body, in the bones, viscera, and beneath muscles, they are rare in certain places, and generally occur only in superficial positions abundantly provided with fat.

Case III. H. R. S., aged twenty-three, has a somewhat flattened, round, subcutaneous tumor over the horizontal ramus of the jaw, alleged to be of but a few months' duration. It is about one inch in diameter, defined in outline, slightly movable, not tender, fluctuating. The skin is little, if at all, adherent to the tumor. In short, the appearances presented are those of an indolent abscess. On looking for an explanation it was found that the lower canine tooth of that side was dead and contained a large gold filling; but it was not, nor had been recently, tender or inflamed. To avoid a scar, and in the hope of emptying the abscess internally, I advised extraction of the tooth, even though subsequently an external incision should be required for drainage of the purulent cavity, believing if it were allowed to remain that a fistulous opening and disfiguring adhesions would be sure to follow. The tooth was pulled, and some time after the patient returned with the tumor unchanged. An incision, which was then made, proved the supposed abscess to be a fatty tumor, easily squeezed out from its bed through a small opening in the skin.

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[1] Read before the Surgical Section of the Suffolk District Medical Society, June 17, 1884.

[2] M. G. H. Records, vol. lxxvi., p. 206.

Blinded by the exceptional situation and the patient's statement of its duration, which in all probability had been for years rather than months, the mistake was made of attributing this tumor to an irritation which did not exist. Hasty generalization from a first and strong impression led to an erroneous diagnosis, which closer attention might have averted. The case is also an instance, not infrequent, of the fact that a well-developed tumor may pass unnoticed by its possessor for a period of time hardly conceivable.

Fluctuation is a phenomenon often believed to be present because the surgeon thinks it should be. The impression is in the brain and not at the fingers' tips. Many an old-fashioned surgeon, in the eyes of his students "great on deep-seated fluctuation," owed this reputation to his experience rather than to his *tactus eruditus*. Genuine fluctuation is, however, an acknowledged attribute of many fatty tumors, and is due to the presence of large numbers of oil-globules and a small amount of connective tissue. At the Academie de Médecine Lisfranc once placed on the table a number of tumors covered by their integuments, and submitted them to examination. The surgeons present all agreed that there was fluctuation, and yet the tumors were in each instance fatty.[1] Therefore, neither in the case just read nor in the preceding was the existence of fluctuation any justification of the errors which were made.

Case IV. C. H., aged sixty-four, an educated man, of exceptional capacity, in perfect general health, two weeks before being seen fell on the ice, severely hurting himself about the hip. A week afterwards he first noticed a painless tumor about four inches in diameter, filling the space of Scarpa's triangle, defined, lobulated on the surface, and at its periphery slightly, if at all, movable, firm, and non-fluctuating in substance. The integument was adherent and traversed by conspicuous veins. There were no enlarged glands in its vicinity, or above Poupart's ligament. Although the patient had noticed this tumor but for one week, and only two weeks had elapsed since his fall, it plainly was not of an inflammatory character, and, from the appearances presented, it was equally obvious that the growth must have been of longer duration than supposed, and bore no relation to the accident which had befallen him.

Notwithstanding the absence of local or previous symptoms, and the patient's conviction that there had been no swelling in the region before his fall, the serious character of the growth could not be doubted. I expressed the opinion that it was a sarcoma, and gave a discouraging answer to inquiries in regard to the expediency of an operation for its removal.

During the succeeding twelve months the tumor underwent little or no change, and was examined by several surgeons, all of whom coincided in the diagnosis which had been given. C. H. finally entered the Massachusetts General Hospital, and, after much deliberation, an attempt to remove the tumor was decided upon. This was undertaken with every precaution to insure the success of what promised to be a long and dangerous operation. On exposing the growth it proved to be a lipoma, traversed by numerous fibrous bands, and closely adherent to all contiguous parts. It was evidently an old inhabitant of the situation it occupied, and a still more curious illustration than the preceding one of the fact that a tumor will long remain undetected by its possessor, even when in a palpable location.

In this case the patient's self-deception contributed to the error of diagnosis, but the tumor, from intrinsic evidence, was so clearly of long standing that his statements to the contrary should have had no influence. Its actual age had led to changes which effaced some of the usual features of a lipoma, and its situation, as in the cases of supposed meningocele and thyro-hyoid cyst previously related, was deceptive, in that it is usually the habitat of a graver class of growths. The alleged association with an injury is one commonly made or sought for in all cases of tumors, but the great source of error was an assumed rapid development, and, in the absence of inflammatory phenomena, this could be occasioned only by a malignant growth. I doubt if, under the circumstances, it was possible to have formed a correct conception of the nature of this tumor. Any one diagnosticating a lipoma would have made but a lucky guess.

I will briefly describe five other fatty tumors of which I have a few memoranda, and which were not diagnosticated before operation, their character remaining in doubt until after removal, owing to the situation in which they were developed.

A seaman, aged twenty-three, seven years before admission to the Massachusetts General Hospital, first noticed a tumor, the size of a pea, in the middle of his right palm. This grew slowly until it was one and a half inches in diameter, ovoid in shape, soft, fluctuating, painless, immovable, apparently subcutaneous, not interfering with the motion of the fingers, and only troubling him in his occupation as a fisherman by the pressure of his fish-line. An incision being made, the growth was easily enucleated by the fingers, and found to be a fatty tumor composed of many compressed lobules. No arteries were tied.

A laborer, aged forty, presented himself at the Massachusetts General Hospital with a small tumor between the index finger and thumb, which, when first detected, two years previously, he attributed to the pressure of a wood-saw. At first painless, it subsequently became painful on pressure, or when the hand hung down, the pain streaming up the arm as if a nerve were involved. The tumor was most prominent on the dorsum of the hand, and at the time of operation was as large as an egg, ill-defined, partly concealed under the palmar fascia, soft, fluctuating. The integument covering it was natural in color, and in no way involved. Its removal, requiring an incision four inches long, was accomplished chiefly by the fingers. The first dorsal inter-osseous muscle was divided to give access to the tumor, which was an ordinary lipoma. No vessels were tied.

From a position similar to that in the preceding case, between the index finger and thumb of a man aged seventy-three, a fatty tumor, the size of a potato, and of thirty-five years' growth, was removed, or rather torn out, at the Massachusetts General Hospital, through an incision in the palm. One artery required a ligature.

A female, aged fifty-five, twenty-two years before operation, observed a tumor as large as a pea on the right side of her forehead, within the hair. During the last six years it had grown to the size of an apple. It was immovable, and not sensitive or uncomfortable, except from its position and dimensions. Its removal was easy, and unattended by bleeding. It proved to be an ordinary fatty tumor.

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[1] Compend. de Chir., vol. i. p. [illegible]

A man, aged fifty-six, twelve years before admission to the Massachusetts General Hospital, discovered a "bunch" in the lower part of his right scrotum, hard, unconnected with the testicle. Seven years afterwards there appeared a second "bunch," larger than the first, and situated above it. Both were movable, and not tender. Within fifteen months these had grown rapidly, until the scrotum reached the dimensions of an infant's head. The enlargement was confined wholly to the right side, and appeared to be made up of several distinct tumors; one, at the lower part, being equal to an orange in size, while another, above it, was still larger, but flattened in shape. They were just beneath the integuments, and the interval between them fluctuated, as if occupied by a fluid. Both testicles and cords were natural. A small hernia existed on the side of the tumors, for which the patient wore a truss. An operation removed a multilobular fatty tumor. One or two veins were tied, but no arteries. The recovery was interfered with by a secondary hæmorrhage, however, of considerable amount.

In this latter group of cases the record of apparent fluctuation, noted at the time of examination, presents itself again as a conspicuous peculiarity of fatty tumors, and justifies the comments already made.

Another feature, which may be remarked upon, is the statement, three times repeated, that the tumor was torn out, or enucleated, by the fingers; a procedure not unsurgical or exceptional, but which illustrates the loosely encapsuled character of these growths, and, while familiar as a method often adopted in their usually rapid removal, it is one not commonly alluded to by surgical authors.

The infrequency with which vessels call for ligature after the removal of lipomata prompts me to speak of the exudation of serum which usually takes place, to a large amount, in the space vacated by the tumor. This formerly occasioned trouble by distending the cavity, decomposing, and finally becoming purulent, and, at the expiration of a few days, obliging an opening to be made in the line of an incision which has usually united by first intention. Such a sequel of the operation is now happily prevented by aseptic dressings and the invariable practice of inserting a drainage tube in the wound.

ANTISEPTIC HERNIOTOMY WITH SUTURE OF THE PERITONEUM.[1]

BY A. T. CABOT, M. D.

The dangers of herniotomy have been greatly reduced, no doubt, by the introduction of modern antiseptic methods, but the correct appreciation of the properties of the peritoneum learned in abdominal surgery has done, perhaps, even more to limit the death-rate of this operation.

Formerly the surgeon, in closing the wound after the reduction of a strangulated loop of intestine, brought the edges of the skin neatly together, and drained the cavity of the sac more or less perfectly with a seton or tube. If a wound treated in this manner suppurated the pus found easy access to the abdominal cavity, and fatal peritonitis was the frequent result, a result vastly more common at that time in umbilical than in inguinal hernia, as in the former the pus, naturally, gravitated directly into the abdomen, while in the latter it had to find its way up the inguinal canal, the walls of which, being held in apposition by a compressing pad, often closed by adhesive inflammation before suppuration commenced.

We now know that if the peritoneal surfaces at the ring are brought snugly together with deep stitches they quickly cohere and shut the wound off completely from the cavity of the abdomen. This cohesion of the peritoneum is very firm at the end of twelve hours, as has been frequently confirmed by autopsy after ovariotomy, and as suppuration does not commence inside of twelve hours the peritoneum is completely closed before any collection of pus and penetration of it into the abdomen can occur. After the peritoneum has thus united the outer wound may gape open, may suppurate, may even take on an unhealthy, sloughy character without implicating the abdominal cavity. Another advantage to be gained by the careful approximation of the peritoneal surfaces about the hernial ring is the very great probability of obtaining a radical cure by so doing. In order to place the stitches as advantageously as possible with this end in view the operator should draw down the hernial sac as far as possible, and place his stitches well within the ring, as in this way he brings the peritoneal side of the wound smoothly together, and avoids leaving a pocket in which a new hernial protrusion may commence. This remark applies especially to inguinal hernia, and the following case will serve as an illustration of this method of treatment: —

James H., thirty-eight years of age, entered the Massachusetts General Hospital July 9, 1882, with the following history: —

The patient has had a right inguinal hernia for many years, and has worn a truss for it, but although the truss is a good one the hernia often escapes from it. Five or six hours before entrance to the hospital he was seized with sudden pain while riding in his cart, and found that an unusually large protrusion had taken place. A physician whom he called upon tried taxis for two hours without effect.

The hernia at the time of entrance was about the size of a large fist, very hard, red, and tender. I saw the patient soon after his arrival in the hospital, and after trying taxis moderately under ether I proceeded to operation.

The sac contained about a foot and a half of deeply congested intestine. After incising the constricting portion of the ring there was still great difficulty in reducing the prolapsed intestine. This was finally accomplished by raising the pelvis and tucking it slowly in, beginning with the portion that came out last. The pillars of the ring were tightly sewn together with chromicized catgut, and the outer part of the wound brought together with silk.

The recovery after this operation was uninterrupted.

I have seen this man within the past six weeks (twenty months after the operation), and the hernia has never been down since. He still wears a truss as a precaution, but the impulse upon cough over the ring on the affected side is little, if at all, more marked than on the well side.

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[1] Read before the Surgical Section of the Suffolk District Medical Society, March 7, 1884.

In femoral hernia the proximity of the great vessels renders the placing of deep stitches a matter of considerable danger, while in umbilical hernia the stitches are readily placed through the peritoneum on each side of the opening, just as in an ovariotomy wound.

A large redundant sac often interferes seriously with a nice approximation of the wound, and should be freely cut away. This is especially important in umbilical hernia, as in this form the sac is composed largely of the cicatricial tissue of the expanded umbilical scar, which heals badly, and which if left would form a considerable cavity very liable to suppurate. If, on the other hand, the sac be carefully trimmed off the sides of the umbilical ring and of the opening through the skin can be brought together as one linear wound, which heals readily.

There are few procedures concerning which surgical opinion has changed so entirely in the past twenty years as it has in regard to the operation of kelotomy for strangulated umbilical hernia.

No longer ago than 1861 Huguier stated his opinion before the Société de Chirurgie of Paris that "in strangulated umbilical hernia, whether intestinal or omento-intestinal, it is, perhaps, better to abandon the hernia to the efforts of nature, watching and combating complications, than to attempt a regular operation of kelotomy." This opinion he sustained by statistics, and in spite of opposition by Richet and other contemporaneous surgeons the ideas of Huguier prevailed.

In 1865 Gosselin urged that the operation was by no means as grave a one as was currently supposed, and that if it was done within forty-eight hours after strangulation occurred the prognosis was no worse than in other hernias, but this view did not become a general one.

In 1875 Desprès reported a successful case after operation, and Verneuil spoke in favor of non-interference, while Perrin and Le Dentu supported the operation.

In 1881 Terrier again brought the matter under discussion in the Société de Chirurgie, reporting three cases of operation with two recoveries. Polaillon also reported three cases with two recoveries. And Verneuil admitted that in view of the advance in surgical treatment he could no longer sustain the opinion he had held in 1875, but must regard the operation as justified in these cases, with the reservation that it should only be used in small hernias, which opinion was supported by Desprès, while the other surgeons taking part in the discussion inclined to the belief that even large hernias should be operated upon if the symptoms were menacing.

This rapid change of practice among French surgeons serves as an illustration of the reversal of opinion that was taking place throughout the surgical world.

Among the Germans, in 1869 Uhde published a series of 122 cases, which underwent operation with a mortality of 46.7 per cent. And in 1879 Geissel considered that Huguier's advice to let these cases alone should be disregarded.

The English journals begin after 1875 to contain not infrequent reports of successful operations, and in 1883 Lawson Tait states that he has operated upon eleven cases, all of which recovered, and that he does not remember a case of death after the operation in his hands.

My own experience with strangulated umbilical hernia has included three cases. The first I saw some years ago in consultation with Dr. W. Symington Brown, of Stoneham. The patient was a large, stout woman. The protrusion was as large, I should say, as an infant's head. The integument covering it was red and shining in places, and the sac was evidently much inflamed, with the contained intestine, probably, held by many adhesions. Abdominal pain and vomiting were present, either from strangulation or peritonitis. Aspiration was resorted to with the hope of relieving tension, but without success. Expectant treatment was followed, and the patient died.

The second case, a hospital patient, was seen after peritonitis had set in. The protrusion was a small one, about half the size of the fist, and was very tense and painful. Poultices were applied, and the expectant method of Huguier was followed, but the patient died. There was no autopsy. This patient also was a middle-aged, fat, and flabby woman.

The third case I will report more at length: Mary C., a fat woman, forty-seven years of age, entered the Massachusetts General Hospital January 13, 1884, with the following history: She has had a protrusion at the umbilicus for the past nine years, and this, although reducible, has been down most of the time. On January 10th (three days ago) the hernia became very tense, and she suffered somewhat from pain. The morning of the 13th she began to vomit and to have intense pain through the abdomen. I saw her at about eight P. M. in the accident room of the hospital. The patient was cool and perspiring, but had a fair pulse. The protrusion situated at the umbilicus was about the size of an orange, tense, red, and glossy, and very tender when touched. I was fortunate in obtaining the counsel of Dr. Bigelow and Dr. Hodges, who advised an exploratory incision with the intention of returning the intestine if of good color, but if it were gangrenous of leaving it without interfering with the strangulating ring.

I operated by an incision over the lower part of the sac and the adjoining skin. No distinct layers could be made out in the wall of the sac. The interior was quickly reached, and the contents were found to be a coil of the intestine nine or ten inches in length, and a considerable mass of omentum, which was adherent to the inside of the sac. The ring was incised at its lower edge in the linea alba, and the intestine, which was much congested, but not gangrenous, was easily returned.

The omentum was so extensively attached to the sac that it could not be easily separated; it was therefore tied and cut off with the Paquelin cautery. The sac was then cut away and the wound brought together with silk sutures, which included the peritoneum.

The operation was done under carbolic spray with all antiseptic precautions, and a gauze dressing covered with cotton batting, and held in place with a swathe, was applied. The patient bore the operation well. On the following day she had considerable pain in the right side of the abdomen on a level with the umbilicus, for which she took morphine in moderate doses. She passed wind from the bowels on the third day after the operation, and on the fifth day her bowels moved naturally. She was now free from pain and seemed well in every respect. The wound was dressed for the first time nine days after the operation, and was found to have united by first intention. It gave no subsequent trouble, remaining firmly healed with apparently entire obliteration of the ring. On the ninth day she took a little solid food for the first time, having been kept upon liquid nourishment until then. This change in diet was followed by considerable pain in the abdomen, referred to the neighborhood of the umbilicus, and colicky in character. A little hardness and fullness was to be felt just to the right of and above the umbilicus. This region was tender to pressure. The bowels being rather constipated several small doses of castor oil were given, with the effect of producing a free, easy movement and relieving the pain.

Several times during her subsequent stay in the hospital the same course of events was noticed, namely, that when the bowels were constipated she suffered from cramps with occasional vomiting, which symptoms were relieved by a mild cathartic.

It seemed from these symptoms that the bowels were somewhat obstructed, probably owing to adhesions contracted by the loop of intestine that had been returned while somewhat inflamed, and had set up a local peritonitis in its neighborhood. The seat of this mischief was thought to be in the colon, to the right of the umbilicus, where the slight hardness and tenderness existed.

Under the use of poultices and laxatives these unpleasant symptoms disappeared, the tenderness and hardness vanished, and she was able to be up and to partake of ordinary food. Finally towards the middle of March she was walking about nearly all day without discomfort, and being anxious to get home to South Boston permission was given her to go home in a carriage.

She wished to leave March 17th. Upon that day, before the arrival of the carriage, the idea occurred to her to surprise her sister who lived at a considerable distance. With this intention she left the hospital on foot. I have since learned that contrary to all advice she walked more than a mile, and after great fatigue reached home in a very poor plight, and died about a fortnight or three weeks later. From Dr. P. F. Gavin, of South Boston, who was called to see her after she reached her friends, and who attended her until her death, I learn that the symptoms when he saw her were pain and tenderness about the umbilicus, tympanites, and vomiting. The bowels were constipated, but moved slightly after enemata. These symptoms increased in severity up to the time of her death. The treatment was with opiates and without laxatives. No autopsy was obtained. The death of this patient, though probably an indirect consequence of the strangulation, cannot be set down to the operation, which was thoroughly successful, and restored her to a state of health which nothing but folly as great as her own could have destroyed.

The wound left by an operation done in this manner for umbilical hernia differs in no essential particular from the simple incised wound of an ovariotomy, which almost invariably heals readily. If, therefore, inflammation has not already begun in or around the sac, it seems reasonable to expect a very fair measure of success from antiseptic umbilical herniotomy, and the experience of modern operations shows that even when inflammation is present a carefully aseptic operation will give the patient many more than even chances of recovery.

As inflammation when started introduces the greatest element of danger in these cases, it certainly seems well to adopt the rule given by Gosselin, that the operation should be done as soon as possible after strangulation has occurred.

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FUNCTIONAL AFFECTIONS OF JOINTS.

BY E. H. BRADFORD, M. D.

In contrast to cases with definite organic changes and the resulting impairment of usefulness, a class of joint affections presenting impairment of function without evidence of organic change is of interest.

The term "hysterical" is commonly used to describe this class, a term which, meaning nothing, frequently misleads, implying as it does a group of concomitant symptoms not always present. The compound word "neuro-mimesis" has also been employed, but suggests feigning, which is frequently not the case. "Functional," used in this way, signifies simply what is known to exist, namely, an impairment of the usefulness of the member without any hypothesis as yet problematical as to the cause of the disorders.

A few cases will serve as illustrations.

Case I. A well-nourished girl, seven years of age, entered the Children's Hospital for a right-angled contraction at the left hip-joint, which was said to have persisted for over a year, and to have followed what had been termed trouble at the hip. The child was, apparently, of a nervous, excitable disposition, but complained of no pain. The contraction at the hip-joint was persistent, and the limb was not seen to assume at any time a normal position. The patient walked about with crutches. The distortion was so marked and characteristic that I, on a casual examination, considered it an ordinary case of the contraction following hip disease. Dr. Langmaid, however, under whose care the case fell, recognized the nature of the affection, etherized the patient, and easily, under the anæsthesia, restored the limb to its normal position, and fixed the leg in a plaster-of-Paris bandage. The patient fell under my care, and it was found that, on removal of the bandage, the leg resumed its vicious position. A lighter stiff bandage was applied and worn for a month, but the result was the same. On removing this a light steel support was then applied, fastened to the shoe, reaching from the heel to the upper part of the thigh, and by a strap, which passed over the knee, prevented flexion at the knee and contraction at the hip. The child walked about readily with this without crutches, and at night wore a ham splint. Demonstrating the effect of mental influence in causing the distortion, it was found that while the splint was worn no contraction took place even when the strap (which alone prevented the contraction) was taken away; if, however, the splint itself were taken off the limb recontraction instantly occurred. At the end of two months the patient left the hospital, but was brought back as an out-patient. At the end of six months, however, she was reported to have developed a similar distortion in one of her other limbs.[1]

Case II. A girl of healthy appearance, well nourished, nine years of age, fell, striking upon her knee. She was placed in bed, and kept in bed for two months, the family dreading hip disease, an acquaintance having suffered from hip disease, a result of a slight fall. When the girl was allowed to walk about she complained of pain in her right hip, and limped when walking. This persisted for a month. In the meanwhile the child was allowed to go about but little.

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[1] For a somewhat analogous case vide Jahrbuch. f. Kinderheilkunde, Band xv., 1 Heft. See also Riegel, Zeitschr. f. klin. Med., 1883, Band vi., Heft 5.

On examination absolute freedom of motion was found at the hip-joint as compared with the normal side; no atrophy was present, and it was inferred that no disease of the joint existed. The patient was furnished with crutches, the shoe of the well side raised, and the patient allowed to walk about upon crutches, but directed to bear no weight upon the affected limb. The mother was directed to rub the limb well twice a day. In a short time, as no further evidence of joint trouble manifested itself, although the child continued to complain of slight pain in walking, the lift on the shoe was removed, and the child directed to walk without crutches, at first only a short time in the house, the length of time being gradually increased, and finally crutches were removed altogether. No trouble has followed up to the present time, thirteen months.

Case III. S., a school-mistress, twenty-six years of age, with a history of a severe attack of "spinal irritation" two years before, presented herself with the statement that she was suffering from "hip trouble." Her hip had felt "weak" for three months, and the patient thought she had strained it three weeks before, but had sustained no fall. The patient limped badly in walking, held the limb flexed at the thigh, did not put heel to the ground in walking, complained of pain in the hip and knee, chiefly at the hip. In a recumbent position the left thigh was held flexed, and on any motion or jar the patient complained of pain in hip and knee, also of great tenderness about the groin and hip. No atrophy of the thigh was present. The patient slept well, and was free from morning stiffness. Hip disease was excluded from the absence of atrophy, the extreme tenderness coupled with an ability to walk about with comparative freedom (although with a limp); further, the limp did not resemble the usual limp seen in hip disease, and although on passive motion of the hip extreme pain was complained of the patient moved the limb rather more freely than is usual in cases of hip disease in a stage of extreme tenderness. The patient was evidently of a nervous temperament, and had worked constantly in charge of a large public school, allowing herself but little or no rest.

The treatment consisted of absolute recumbency for a short period, followed by gradually increased motion. But little or no improvement in the patient's condition followed for a few weeks. At the end of six or eight weeks she was allowed to get up, and improved noticeably. The patient left home for a few weeks' stay at St. Margaret's Home, where the treatment consisted in giving a required task of motion, increasing each day, and a routine of occupation. In a fortnight the patient became able to walk about freely with crutch or cane, and without complaint of pain to go up and down stairs, and in two months was able to walk quite long distances. She has since resumed her position as school teacher, and during the past year she has reported that she has been free from any pain or limp, and is able to be about as freely as any one, except that she occasionally has slight pain in the hip if overtired.

Case IV. Woman, thirty years of age, presented herself with the symptoms of commencing hip disease. The characteristic flexion, limping in gait, stiffness at the hip were present, and there was a complaint of pain at the hip and knee, which was aggravated on moving the hip. The patient stated that she had pain at night in the limb, and that the symptoms had persisted for eight months. A diagnosis of functional rather than organic trouble at the joint was made on a second examination (though beginning hip disease was suspected at the first), based on the fact that the limb was moved by the patient herself much more freely than would be consistent with any active inflammation at the hip-joint, that no muscular atrophy of the thigh was present although the affection had persisted for eight months, and that although there was stiffness in the direction of flexion and extension of the right thigh, as compared with the left the stiffness in abducting the limb was not marked. Confirmatory of this opinion was the fact that the patient had been for some time under the observation of Dr. C. F. Folsom for what was manifestly hysterical stiffness of the right arm, the symptoms of which had disappeared as those of the hip became prominent. The patient entered a hospital, and the report of the attending physician as to the subsequent course of the case tends to confirm the diagnosis.

Case V. S., girl, twenty years of age, a domestic, complained of some pain and tenderness on the outer side of the right knee. The pain was located, not in the joint proper, but to the outer side, and was not severe enough to keep the patient awake during the night, but was constant whenever weight was thrown upon the limb. The patient had evidently been overworked, and was in rather a nervous condition, though no evident exaggeration of symptoms was noticed. Her appetite and digestion and general nutrition were good. There was no swelling at the knee, and no stiffness or limitation to motion.

The patient was taken from her work, put in the Samaritan Hospital for a few months, sent out to the country for a month, and returned somewhat improved in general symptoms, but still complaining of pain at times in her knee. She was allowed to resume her work as a domestic, taking lighter work, and her pain gradually disappeared. On resuming harder work she began to complain again at times of pain at the knee.

Case VI. B., a young lady, thirty years of age, a school-teacher, of healthy appearance, was referred to me through the kindness of Dr. Wing. Three years before the patient was suddenly seized with a spasm of the left lower limb, causing it to be drawn up on to the abdomen, and flexed strongly at the knee. There was intense pain at the time in the thigh, knee, and hip, and the limb could not be drawn into a normal position. This condition remained unchanged for three weeks, when some improvement was noticed. Her regular medical attendant discovered a uterine displacement, and applied a pessary, which relieved her almost immediately, so that she could move her limb freely without stiffness. If, however, the uterine supporter was removed or not properly fitted she was liable to frequent attacks of spasm in the limb and pain in the knee. She has been obliged to travel about, and has been in the hands of several physicians, and has worn various pessaries, and she finds that if the uterus is well supported no "cramps" of the leg take place. If not she is liable to frequent attacks of tonic or clonic spasm at the knee. Pain in her knee is worse just before her menstrual attack. The patient was found to walk without any limp, and could stand on the affected limb; could flex to a right angle, but not beyond; could extend fully, though the motion was slow and accompanied by some muscular tremor. Marked superficial tenderness was observable over the knee, but there was no swelling and no muscular atrophy of the muscles of the thigh. The tenderness was not localized. The condition of the limb had remained about the same for two years, and was not found changed on a subsequent examination several months later. The patient did not come under treatment.

Case VII. Mrs. F., a widow, fifty years of age, was seen by me at the request of Dr. Bixby. She had been under treatment by Dr. Bixby for several months for nervous prostration, with hysterical manifestations. She had suffered from attacks of severe pain in the left side, and her left leg had been drawn up and flexed at a right-angled position and had remained in this position for one and a half years. There was no history of arthrites or of pain or swelling of knee. Under ether the limb was forciby straightened, a few slight adhesions giving way. The limb was kept in a straight position by a plaster-of-Paris bandage, and later a ham splint. The patient subsequently was allowed to walk about with crutches, using a ham splint at first, and at the present time, two years later, walks about with a straight limb without crutches or splint, but complains still of occasional pain and weakness in the left side and limb.

Case IX. A boy, twelve years of age, was referred to me by Dr. Doe for examination. Before he had been put off a horse car by a conductor, and claimed to have fallen and struck his right side. A few weeks afterwards he complained of pain in his limb. He was kept in bed for a short time, and then urged to go about. He limped badly, with the foot turned out to a marked degree, and this had continued for two months. On examination no evidence of disease at the knee, hip, or ankle, and no paralysis of muscles could be found. The foot, however, assumed the position of a valgus deformity, causing him to limp as if suffering from valgus of the foot following infantile paralysis or disease of the tarsus. He was in a nervous condition, and cried immoderately during examination. His condition, however, improved under tonics and exercise, and he was finally reported six months later to have entirely recovered.

This class of cases is of course analogous to the well-known affection which has been termed spinal irritation — characterized chiefly by a tenderness in the spine and disability to a greater or less degree. The two following cases will serve as an illustration: —

Case X. A young girl, eighteen years of age, on account of great pain in her back, took to her bed, being unable to walk about. Her previous history had been one of good health, and she gave no evidence of an excitable temperament. Her mother had died in an insane asylum, but the girl had been sensibly brought up; she had grown very rapidly in the three preceding years, was tall, rather thin, and without much color. Her general condition was otherwise good. On examination of the back nothing abnormal was observed, except extreme hyperæsthesia all along the spine. The patient stated that she was unable to stand, but could sit up in bed.

The family physician had, recognizing the nervous nature of the affection, endeavored to oblige her forcibly to stand, but without success. The patient was treated at home and advised to remain entirely recumbent for a short time and then given slight exercises, increasing in amount each week. At the end of a month she requested to be allowed to sit up; at the end of a few months she began to walk about; in a year she had entirely recovered her strength; and a year later took her position as an active member of society.

Case XI. A girl, fourteen years old, had had caries of the spine in the lower dorsal region when five years old, from which she appeared to have recovered fully after three years, being able to run about readily and attend school; at about the age of puberty she, however, began to complain of pains in her legs, and her physician, fearing a return of her symptoms from caries, advised her to be kept in a recumbent position in the way in which she had been before successfully treated. This was scrupulously done, and for a year the girl neither sat nor stood up. At the end of this time she was unable to stand up but was able to sit up. She complained of a burning sensation in the back and intense hyperæsthesia, of pain and weakness in the legs, and of occasional severe headaches. The patient was gradually taught to stand and to walk with crutches, this being brought about by placing her flat upon a frame which each day was raised more and more, so that she was gradually put upon her feet, supporting herself from her arms with crutches. She was then taught to walk, and soon learned to walk with crutches quite freely.

She was then taken home from the St. Margaret's Home where she had been staying. Her condition remained substantially the same; she remained absolutely wedded to her crutches, though in walking she did not practically use them, bearing no weight upon them; if, however, they were removed she sank to the floor. She was in good general condition. She had worn a leather jacket as a support for her condition of caries of the spine, and felt herself unable to sit up without it. In this condition she was induced to visit a shrine at a Catholic church and offer prayers daily, walking to the church from her house (a comparatively short distance). In the midst of her prayer on the ninth day she exclaimed that she felt strong, and discarded her crutches and jacket, and has since walked without them. She is said to have had no relapse since then.

The above cases are undoubtedly examples of slight conditions of that peculiar state or temperament which has been misnamed hysteria. Whether any local strain has been in any way influential in determining the local manifestations in the limb of the peculiar condition of the nervous system remains a field for speculation. The writer will not venture on any theory as to the pathology of this class of disorders. The symptoms certainly appear sometimes in patients manifesting few of the usual characteristics of well-marked hysteria; certainly in all which have come under the writer's observation a well-balanced nervous system did not appear to be present. It was inferred that an undue sensitiveness to external irritation was present. A distinct feigning was not observable in the cases here reported. The fact that the consciousness was directed unduly upon certain sensations, and that the importance of these sensations was unconsciously exaggerated, undoubtedly plays an important part in producing this hypersensitiveness, but another factor must coexist. The sound of an electric bell varies not only with the quality of the enunciation, but also with the circumstances making the electric current strong or weak. The sensation of pain may be acute from a slight irritation, either because the mental attitude may be one of exaggerated expectancy or because the ganglionic cells of the cord receiving and transmitting the irritation are in an unduly sensitive condition. How far the state is due to a cerebral condition or to one of the spinal cord will not be discussed here.

The diagnosis, it scarcely need be said, is sometimes quite difficult, and the details vary necessarily in each case. In some cases a diagnosis cannot be made on a single examination. As a rule, however, the recognition of purely functional affections can be based on the absence of the positive symptoms of joint disease and on the medical inconsistencies of the symptoms present.

Muscular atrophy is present in an early stage of true affections of a joint, even when the disability of the limb is slight. A marked diminution of faradic electrical contractility of the muscles is also present in joint affections at a comparatively early date in the history of the disease. In the so-called hysterical affections atrophy is only seen where there has been a marked disuse of the member, and the diminution of the faradic electrical contractility corresponds to the amount of muscular atrophy. Furthermore, in true joint affections a certain proportionate relation exists at the different stages of the affection between the symptoms of pain, tenderness, position of the limb, amount of stiffness, and the way in which the limb is moved. This can be readily recognized by any one who has watched a number of these cases. In the functional troubles of the joints this relative proportion is not preserved. More limping, or muscular spasm, or pain is present than would be expected at a certain stage of a 'true arthritis indicated by the position of the limb or the limp in gait — or the reverse may be true.

The treatment should be the reverse of routine, and necessarily equally good results will be brought about by impressions produced in different ways. Of cases here reported where treatment was attempted the basis of treatment was the acceptance of the fact that the symptoms indicated to the patient an actual and not an assumed condition. This condition was met with the enforcement of rigid rules, followed by a gradual relaxation of these rules and a gradual enlargement of the scope of action as the patient accepted the ability of freer action. In the severer cases absolute isolation from the indulgent atmosphere of sympathizing friends is essential. The patient must be reduced to an infantile state and gradually trained to exertion and endurance. Of course in lighter cases such extreme discipline is not necessary. Massage, electricity, ice, and heat to the spine, forced feeding are of undoubted value in certain cases, but the writer is doubtful whether they are to be looked upon as direct remedial agents and not rather as mental alteratives, supplying new sensations, or temporizing agents, while the nervous system is gaining its poise. Purely local treatment, such as cauterization, counter-irritation, is usually harmful as it concentrates the patient's attention upon local sensations, and appliances are to be avoided except in certain cases to temporarily correct vicious positions.[1]

A CASE OF STRANGULATED UMBILICAL HERNIA.[2]

BY H. L. BURRELL, M. D.

On December 12, 1883, H. K., aged fifty-two, a woman weighing 230 pounds, entered the Carney Hospital with a strangulated umbilical hernia. The tumor was livid in spots, had a doughy feel and tympanitic resonance. The hernia had existed for years, but the patient had always been able to reduce the mass until sixty hours before entrance. There was no impulse on coughing, and the tumor presented a median raphe not unlike that existing on the scrotum. At the juncture of the skin of the dependent portion of the tumor with that of the abdomen an ulceration existed not unlike that which takes place at the junction of the scrotum with the perinæum in extravasations of urine. Since the hernia "had been caught" the patient has had intense abdominal pain, continuous vomiting, and no dejection. The temperature was 101° F.; the pulse 150, small and wiry; the face was pinched, and patient was very anxious. The dangers of operating and the probabilities of non-interference having been clearly explained to the patient she was etherized, and taxis was tried without avail.

Operation. An incision was made, three inches in length, at the junction of the superior part of the tumor with the abdomen, extending well up on the abdomen. The division of the skin, which was very thin, was followed by a serous exudation, showing that a few more hours would have produced sloughing. The hernia was liberated, after some difficulty, by dividing the constricting ring. Owing to the depth of the incision, and the teneness of the overlying tumor, it was found impossible to divide the constriction from within outwards; it was, therefore, divided with much care from without inwards. The peritonæum was, from necessity, opened. The hernia was reduced, leaving considerable adherent omentum remaining. This was removed by ligating it in pieces. The redundant skin which had covered the hernia was then removed, leaving an abdominal section four or five inches in length. The hæmorrhage was slight and easily controlled. Small sponges were kept in the bottom of the wound to prevent the blood from trickling into the abdominal cavity. The wound was brought together by three wire sutures, which included the peritonæum and whole abdominal wall with intervening superficial sutures. The wound was dressed with bichloridized gauze, a binder was adjusted, and patient was placed in bed.

December 13th. Came out of ether well. No pain. Free movement of the bowels during the night. Pain to be controlled by morphia.

December 14th. Had a loose dejection during the night. No morphia necessary. Has taken a fair amount of nourishment, and vomited but once. Patient is very stupid.

December 15th. This A. M. patient lies on back; face flushed; pupils contracted; very stupid. Temperature 100° F.; pulse 122. Abdomen not tender. On removing the dressing the wound was found to be united superficially, but on pressure an offensive, sanious fluid exuded from the lips of the wound. This came from the large abraded surface which existed owing to the removal of the adherent omentum. All the superficial and two of the deep wire sutures were removed. The wound was thoroughly syringed out with chlorinated soda, and a drainage tube was introduced into the depth of a cavity which the hernia had formed by insinuating itself into the adipose tissue, and which extended upward and to the left, external to the recti muscles. Wound packed with iodoform.

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[1] [illegible] Shaffer, The Hysterical Element in Orthopædic Surgery, [illegible] Hip [illegible] P. Putnam's Sons, New York, 1880. V. P. Gibney, Bermingham & Co., New York, 1884.

[2] Read before the Surgical Section of the Suffolk District Medical Society, May 7, 1884.

The wound was syringed out night and morning, and packed with iodoform, the patient having numerous dejections daily, taking a fair amount of nourishment and stimulants, requiring no opiates, and sleeping the greater part of the time until December 21st, when the remaining wire suture was removed. On taking out the drainage tube a mass of necrosed tissue was removed. Flaps were much undermined.

The temperature remained practically normal, and the wound looked very well at each morning dressing, but an area on the left side seemed to remain *in statu quo*. On January 5th, in dressing the wound, on introducing the dressing forceps to remove a supposed piece of necrosed tissue a small piece of sponge, the size of a chestnut, was removed. This sponge had been packed beneath the flaps to check hæmorrhage at the time of the operation, and to my chagrin had been inadvertently overlooked in uniting the wound, and explains the persistency of the discharge.

On January 28th the temperature rose to 102° F.; the following day it reached 103.5° F., and the patient had headache and nausea. The iodoform which had been used in dressing the wound was omitted, and the following morning the temperature was normal, and the headache and nausea had ceased.

The patient's convalescence was delayed, but she left the hospital on March 5th with a perfectly united abdominal wall. She was advised to wear an abdominal support for a time.

The justifiableness of further operative interference arose when the strangulated intestine had been liberated and returned to the abdominal cavity. Had the case been left to itself at that time we can readily see how difficult it would have been with practically a punctured wound of the abdominal parietes, through which the operator had been able to relieve the constriction, to have prevented the natural drain of fluids into the abdominal cavity. For this penetrating wound of the abdomen was substituted an abdominal section, five inches in length, in the median line, the adherent omentum was removed, the abdominal walls, including the peritonæum, were subsequently brought accurately in apposition, thus making an effort which, in this instance, was successful, to render permanent the relief to this ever-present danger.

— According to the *Lancet*, at Bridgewater, England, on the 5th of September, a laborer fell into a trance, and his wife, thinking he had died suddenly, made preparations for the funeral. The vicar, however, on being informed of the facts, inspected the supposed corpse, and refused to allow it to be buried, since it was not cold enough to satisfy him that actual death had taken place. The body was placed in a coffin and conveyed to the church, where it was frequently visited by the vicar and others. On the 8th of September a slight movement occurred, the man was removed to bed, and has since slowly recovered.

THE CURE OF CROOKED NOSES BY A NEW METHOD.[1]

BY JOHN B. ROBERTS, M. D.

I present this patient to the Society to show the manner in which I treat the very disfiguring lateral deformity of the nose, so often seen after falls or blows which have fractured the septum and cartilages. The method is, I believe, original. It is certainly attended with very little inconvenience to the patient, who, after recovering from the anæsthetic, can at once attend to his occupation without wearing any apparatus to call attention to the surgical procedure by which his crooked nose is being made straight and shapely. The usual advice given to patients with deformed noses, from nasal fracture sustained in childhood or later, is to undertake no surgical treatment, but to become reconciled to the disfigurement of feature as best they may. This is, I am sure, improper advice. The cosmetic objection to a crooked nose is cogent; and, moreover, obstruction of one nostril, from the displaced cartilages, is a frequent accompaniment of such lateral deviation of the tip of the nose.

This man sustained, ten years ago, a fall upon his face, from which he recovered with the end of the nose bent to the right, and with considerable obstruction of the left nostril. I operated on him day before yesterday. You see now a straight nose, and nothing to call attention to the operation except a small piece of black court-plaster a little to the right of the nasal bridge. Just within the right nostril close inspection reveals the head of a pin, situated on the side of the septum, near the columella. The method of operation, therefore, is certainly not objectionable on account of making the patient unpleasantly conspicuous during treatment. This evening I merely wish to show the man, and refer to my method of dealing with such cases, because at a later time I hope to bring the subject of curing nasal deformities before the Society in a more formal and elaborate manner. Then, I may have no patient undergoing straightening of the nose to illustrate the remarks.

Replacement of the deformed structures in this case was very simple. With a scalpel introduced through the left nostril I perforated the cartilaginous septum at its upper and back part, and made a long incision through it in a direction downwards and forwards. This permitted me to push the whole cartilaginous portion of the nose to the left, and overcome to a great extent the lateral deformity. To retain the parts in this position I introduced a steel pin, about one and one fourth inch long, into the right nostril, and passed it completely through the anterior and upper segment of the divided septum, near the columella. Having the movable portion of the septum thus transfixed, I was enabled, by carrying the head of the pin to the left, to move the anterior part of the nose to the left, and retain it there by imbedding the point of the pin deeply in the immovable cartilaginous septum and mucous membrane at the back of the left naris. In other words, I incised the deformed cartilage, and pinned it in position very much as you would pin a flower in the button-hole of a coat. There still remained a little deflexion of the end of the nose to the right, which seemed to be due to mal-position of the lateral cartilage close to the right nasal bone. With a tenotome in the right nostril, I pared the cartilage loose, without perforating the skin, and pinned the parts over to the left by a second pin inserted from the cutaneous surface of the dorsum on the right of the median line. The point of this pin was fixed by having its point imbedded in the tissues of the left naris. It is the head of this second pin that is covered by the small square of court-plaster. The correction of the angular deformity of the septum removed most of the occlusion of the left nostril, which had greatly annoyed the patient.

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[1] Read before the Philadelphia County Medical Society, September 17, 1884.

I have thus given an idea of the method, which has, I believe, great capability for relieving unsightly nasal deformities. The novelty consists merely in pinning the parts in position until cicatrization takes place. Endeavors have occasionally been made, as by Mr. Adams, Dr. Weir, and others, to hold deflected noses in position, after operation, by the use of clamps, rods attached to the forehead, adhesive plaster plugs, and similar devices. All of these are objectionable, because so conspicuous and troublesome, and would probably be adopted only in instances of great deformity. The pin method, however, leaves no noticeable scar, is not troublesome to the patient, and is applicable, therefore, even to those slight deformities, whose chief annoyance is an æsthetic and cosmetic one. I leave the pins in position for about two weeks.

A few years ago Dr. Mason, of Brooklyn, recommended the use of steel needles to hold the nasal bones in position. when, after recent comminuted fracture, it was difficult to keep the fragments sufficiently elevated. He transfixes the nose below the depressed fragments, and carries a piece of plaster or a rubber band across the external surface of the bridge from one end of the needle to the other. The needle acts as a girder to tie the base of the nasal arch and prevent its falling in. This is a different use of the pins or needles from that which I am describing, and for a different purpose.

I have pins of lengths varying from one inch to two and one fourth inches, and with flat heads, so that there will be little projection under the court-plaster to attract attention when the patient is in public. The heads are square, that the pins while imbedded may be, if necessary, readily rotated by the fingers.

When the deformity is in the osseous portion of the nasal bridge section with small chisels is usually necessary. Discussion of this topic, however, would carry me beyond the limits of the present subject.

Free incisions are essential in obtaining good results in cases of nasal deformity such as was exhibited by this patient. The surgeon must not spare the knife and thereby spoil the nose. Secondary operations may sometimes be required to get the best results. If a simple incision did not allow proper adjustment I should excise portions of the cartilage with the oval punch or the scalpel, or make multiple stellate incisions with the stellate punch, and so produce general flexibility of the cartilage.

Recurrence of deformity would, I think, be less likely to occur after free incision, pinning, and cicatrization than after simple dilatation with or without incision with the stellate punch.

A recent writer in the *Medical News* (August 30th) speaks of a case of urticaria causing miscarriage.

NOTES OF A CASE OF POISONING FROM MRS. WINSLOW'S SOOTHING SYRUP.[1]

BY A. B. HIRSH, M. D.

With the object of adding my quota to the list of serious accidents resulting from the indiscriminate sale of secret medical preparations, I have gathered the notes of the following case: —

Mrs. A. H. L. took her twenty months' old boy to visit some friends, and while there they (all unknown to her) fed him some unpeeled apple and other indigestible material. Being colicky all that night and next morning she was persuaded by a "friend" to purchase a two-ounce vial of the nostrum sold as "Mrs. Winslow's Soothing Syrup," and of this gave him half-teaspoonful doses, as the directions called for, although she insists half of each quantity was spilt through his struggling.

He took, therefore, the first dose at four o'clock on Sunday afternoon (August 24th) and, there being no effect, another at eight; then dozing but not sleeping from this time till three next morning, the pain starting him again to whining, he was dosed at five; still crying on, three quarters of an hour later the final similar amount was administered. The mother soon became alarmed at the marked stupor which had now set in. He would touch none of the breakfast placed before him, Mrs. L. said; although sitting upright in his high chair, his head hung listlessly, and he recognized nobody.

I saw him at 7.45 A. M. and found marked symptoms present of poisoning by some narcotic drug. The pupil was contracted down to the typical pin head; stupor was unmistakable; respiration was very slow, gasping, and shallow, while at irregular intervals he would take two or three rapidly succeeding deep sighs; the pulse was rapid and small; the extremities were cold throughout the case. Taking all these symptoms into consideration, and the fact that the breath bore the peculiar odor of an opiate, I felt warranted in treating the case for one of poisoning by some preparation or derivative of that drug.

The stomach and bowels were emptied at once; frequent cold sponging was ordered, with wet cloths placed on the nape of the neck whenever great trouble existed in keeping him awake. Tr. belladonna was given hourly in aqueous solution. The parents were directed to keep him awake by all means.

By noon he would begin to lift the eyelids a little, but relapsed into a sort of doze by two P. M. Despite all their efforts he fell once more into a stupor by six. Calling about this time, I insisted on the mechanical exercises being continued, feeling encouraged by the somewhat improved breathing, and that I succeeded, a little while later, in arousing him. As the pupil had now slowly begun to dilate, the medicine was ordered to be given every half hour, or twice as often as before. By eleven he began to lighten up, and on calling, half an hour later, I found him languidly trying to push his ball around the table upon which he sat. The pupils were widely dilated, and respiration free. He was allowed to sleep, with slight interruptions, from midnight until six A. M., after which the child showed his great thirst by frequent demands for ice-water. Incoordination of the voluntary muscles now became noticeable, and continued until next morning. A typical belladonna rash was now likewise beautifully shown, also to disappear in time. He slept for two hours about noon, being exceedingly irritable afterwards, but, excepting the use of a tonic, required no other treatment.

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[1] Read before the Philadelphia County Medical Society, September 17, 1884.

As stated in the beginning of the notes this case is merely placed on record to help expose an existing evil, believing that continuous agitation will finally induce the intelligent public to demand the regulation of the sale of patent medicines, a fact concerning which there never was any doubt in the profession.

A fatal result would inevitably have here occurred had no treatment been instituted, and I feel convinced that many such cases happen in our midst which should be reported.

The case is the more pertinent at this time when any fakir or shop-keeper may legally retail unlabeled poisons in the guise of patent medicines, while one of our inconsistent laws is now being so interpreted as to inform the patient that, in very many cases, his doctor has prescribed him medicine containing poison.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

S. J. MIXTER, M. D., SECRETARY.

May 7, 1884.

Drs. A. T. Cabot and H. L. Burrell reported

CASES OF STRANGULATED UMBILICAL HERNIA.[1]

Dr. Hodges said that there was no doubt that the operation for the relief of strangulated umbilical hernia was more successful now than formerly. At the time when the paper referred to by Dr. Cabot was written the speaker took a much more conservative view of the operation than now, as the advance in antiseptic methods of operating has probably greatly lessened the mortality. Bringing the peritoneal surfaces of the abdominal wound in apposition when sewing up was often done in former times, to his certain knowledge as early as 1852, when the operation was followed by a much greater percentage of deaths than now. Hence we must infer that this method of uniting the edges of the abdominal incision is of less importance than strict antisepsis. Dr. Hodges also spoke of a method of treatment of reducible umbilical hernias, first suggested by Dr. H. J. Bigelow. The hernia is reduced, the sac invaginated and held in place by a small stick fastened at right angles to the surface of a small board, the end of the stick being wrapped with cotton and pushed through the ring. The whole is then firmly held in place by means of a swathe. This is worn for two days, and then fresh cotton saturated with caustic ammonia is applied in like manner, the sac becomes excoriated, and on withdrawing the stick the cutaneous surfaces unite and the ring is closed with a mass, probably shaped like a shirt stud. The speaker had that day discharged from the hospital a patient, a very fat woman with a large hernia, cured by this method. This case and the case reported by Dr. Bigelow are the only two on record.

Dr. Cabot called attention to the fact that the best reported results in umbilical herniotomy were those of Lawson Tait, who disregards antiseptic methods in his operations.

Dr. Greene spoke of the difficulty in making any mechanical appliance which will keep a large umbilical hernia in place, and the great value of any operation that shall, without danger to the patient, radically cure the hernia.

Dr. H. L. Burrell read a paper on

UNILATERAL ATROPHY.[2]

Dr. Hodges remarked that cases of asymmetry were probably much more common than is generally supposed. It is often noticed in the face, and he could recall three persons among his acquaintances where it is quite marked.

Dr. Jeffries Wyman called attention to the fact that the legs were very frequently of different lengths, and this should be remembered when looking for shortening after fractures.

Dr. R. M. Hodges read a paper on

EXCEPTIONAL FATTY TUMORS.[3]

Dr. Cabot mentioned a case sent in from the out-patient department for operation, supposed to be a ganglion on the back of the middle finger, which proved to be a fatty tumor.

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NEW YORK ACADEMY OF MEDICINE.

THE THREE TONSILS, SOME PRACTICAL SUGGESTIONS IN REGARD TO THEIR STRUCTURE, FUNCTION, AND DISEASES.

At a stated meeting of the Academy held Thursday evening, October 2d, Dr. J. H. Bosworth read a paper on the above subject. By the three tonsils are to be understood the two glandular masses found between the pillars of the fauces, to which the name tonsil is usually applied, and the mass of glands found in the vault of the pharynx, sometimes designated the pharyngeal tonsil. He then pointed out several errors in the description of the faucial tonsils as usually given in the books. Thus, he said, they were not covered by a fibrous sheath; though underlying them there was a more or less dense connective tissue layer, continuous with the submucous layer, which underlies all mucous membranes. The tonsil was not an "almond-shaped organ," as a rule, but was of whatever shape the morbid process which had caused its growth might give it. It was not an organ of the body in the sense that the liver and spleen were organs, and, therefore, in this sense had no especial function to perform in the economy. In the healthy throat there were virtually no tonsils, these so-called organs being merely the result of a morbid process. In a condition of health the normal aggregations of glands in the pharyngeal vault and between the pillars of the fauces did not project prominently from the mucous membrane, and hence in a perfectly healthy state their existence was not easily demonstrated by gross inspection. The mucous membrane of the upper air-passages, however, was peculiarly liable to be the seat of morbid action. It was a very noticeable clinical fact also that while in adults it was the mucous membrane proper which was most liable to be the seat of disease, in children it was the glandular structures which were especially susceptible. The tendency of chronic inflammatory processes was towards hypertrophy, and hence it was found that a moderate hypertrophy of these glandular masses was of exceedingly frequent occurrence in the young, constituting in the one position so-called enlarged faucial tonsils, and in the other an enlarged pharyngeal tonsil.

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[1] See pages 363 and 368 of this number of the Journal.

[2] To be published hereafter.

[3] See page 361 of this number of the Journal.

The pharynx, he went on to say, was really composed of two cavities, differing materially in structure and function, the upper pharynx belonging to the air-tract, and the lower pharynx to the food-tract. The lower pharynx was very scantily supplied with glands. and yet in the performance of its function it demanded an abundant supply of mucus. In order to compensate for the deficiency it was surrounded on three sides with large aggregations of glands, constituting the three tonsils referred to. The sole and only function of these masses of glands was, he believed, to supply mucus to moisten and lubricate the lower pharynx. The resemblance of the faucial and pharyngeal tonsils was so strong that the only difference in structure was easily accounted for by the fact that the pharyngeal tonsil was protected from any impact of foreign substances, and was, therefore, of a more soft and spongy consistence than the faucial tonsils, which, being subjected to much harsher usage in the act of deglutition, contained a greater amount of, and more firmly organized, connective tissue.

From a pathological point of view still further grounds for grouping the three tonsils together were found, for the same morbid processes which occurred in the faucial tonsils were met with in the pharyngeal tonsil, namely, acute inflammation, chronic inflammation, resulting in hypertrophy, acute follicular inflammation, croupous inflammation, and diphtheritic inflammation. Acute tonsillitis was a name generally given to quinsy, but quinsy, he claimed, was not a disease of the tonsil, but an inflammation of the cellular tissue of the soft palate or neighboring parts, phlegmonous inflammation, in his opinion, not occurring in the tonsil. As a matter of fact, therefore, the only form of acute inflammation met with in the tonsil was a catarrhal inflammation, namely, one attended with hyperæmia, swelling, and hypersecretion. This was usually described under the term subacute inflammation, and it occurred in the pharyngeal with the same frequency as in the faucial tonsil, being attended with the same mild constitutional disturbance, and caused, as a rule, by exposure to cold. The main predisturbing cause was an enlarged pharyngeal tonsil, just as enlarged faucial tonsils were the main predisposing cause in subacute inflammation of the faucial tonsils. It could easily be understood how, in the case of a mild inflammatory process occurring in the pharyngeal tonsil, the symptoms would be mainly nasal. The attack was usually regarded as an acute coryza, but this, he believed, was an error, since acute inflammation of the nasal mucous membrane in children was very rare. As before remarked, in children the glandular structures were the parts generally attacked, and not the mucous membrane proper, so that their colds, if in the throat, were in the faucial tonsils, and if in the nasal passages were in the pharyngeal tonsil.

He then described acute follicular tonsillitis, in which the constitutional symptoms were very much more severe than, in his opinion, could be accounted for by the amount of local inflammatory action, and claimed that this disease was an essential fever, with a local manifestation in the throat, something in the nature of one of the exanthemata. The same affection, he had found, frequently occurred in the pharyngeal tonsil. Croupous tonsillitis he regarded as identical with follicular tonsillitis, except that the eruption was more marked or efflorescent. The exudation, which in the latter confined itself to the crypts of the glands, in the former filled and overflowed them, forming a continuous membrane. If this were detached from the surface there would be found beneath it the appearances of the follicular disease. A similar membrane, with its appearance attended with the same general symptoms, he had frequently observed on the pharyngeal tonsil.

Having referred to diphtheritic tonsillitis as always occurring in connection with the blood-poison of diphtheria, he went on to speak of hypertrophied tonsils. Hypertrophy of the faucial tonsils, he said, gave rise to a train of symptoms, which were mainly due to the mechanical presence of these glandular masses in the fauces. They occurred mostly in young people, and their development was attended by the occurrence of repeated attacks of subacute inflammation or ordinary catarrhal sore throat, while they showed a tendency to subside at puberty. Hypertrophy of the pharyngeal tonsil had been described by many writers, usually under the heading of adenoid tumors or vegetations at the vault of the pharynx, and in all its aspects, except in its location, it was identical with the faucial disorder. In this view, then, enlarged tonsils in either region were simply masses of diseased glands, whose function had, in the main, been abolished or perverted by the morbid process which had fixed itself upon them. If the hypertrophic process was limited, and the tonsils were of small size, giving rise to no untoward symptoms, they required no treatment, but if the hypertrophy had gone to the extent of developing a glandular mass, which by its presence interfered with the function of the parts, or which in any way gave rise to serious symptoms, he thought that there could be no question as to the proper remedy. They were diseased structures, and ought to be extirpated, for as regards any local medication he believed it to be absolutely inert in reducing genuinely hypertrophied glands. It was sometimes said that nature placed these tonsils in the throat, and that they should not, therefore, be removed, but the fact was that nature never did put them there. He then went on to speak of the operation of tonsillotomy, maintaining that the entire mass, and not merely a portion, should be removed. In children hæmorrhage never occurred, but in adults it was liable to be met with, although literature recorded not a single fatal case, with the exception of those in which the inexcusable blunder of cutting the carotid artery had been made. The best means of arresting hæmorrhage was the application of a wire heated to a dull red heat.

For three years he had maintained that quinsy was not a disease of the tonsil. The latter, it was true, often presented a red and angry appearance, but this was always secondary, and due to the fact of its nearness to the phlegmon. Again, the tonsil was occasionally very prominent, being lifted from its bed, and at times projecting far toward the opposite side of the fauces, but this was because the phlegmon was situated behind it. The cause of quinsy he believed to be in very many cases the rheumatic habit, and the connection between the two diseases seemed to be confirmed by the results of the treatment which he had resorted to. For the last three years he had treated all his cases of quinsy by salicylate of soda, and of those which he saw within the first thirty-six hours the attack was thus aborted in a majority of instances, while in those in which the attack was not aborted suppuration seemed to be very much hastened. In several cases in private practice in which the quinsy habit had existed he had directed the patients to use this remedy immediately upon experiencing any symptoms of these attacks, and in no one of them had an attack occurred. He had also used, with success, in connection with the salicylates, the local application of bicarbonate of soda, as recommended by Dr. Barker. If in any instance the attack was not aborted by medication, or if the case was seen too late for this, the abscess was to be treated on general surgical principles, and the constant resort to digital examination was recommended as of material assistance to the medical attendant. The suggestions which he had ventured to advance in the paper were based on convictions which were the result of a somewhat large experience, and in acting upon them he felt confident that he had obtained better results in the treatment of throat diseases than in following the older doctors.

The discussion of the paper was opened by the President, **DR. BARKER**, who said that he had formerly been in the habit of using large doses of quinine, in connection with opium, for the purpose of aborting attacks of quinsy, and that for the past four years he had employed, in addition, the local application of bicarbonate of soda. He regretted that he could not now recollect how or by whom this remedy had been suggested to him; but since he had resorted to its use he had not seen a single case which went on to suppuration, although in a number of instances he had not been called upon for advice until comparatively late in the attack.

DR. DOUGLAS said he was firmly convinced from his experience that quinsy was intimately associated with gout and rheumatism. He had met with it, however, more frequently in connection with the former than the latter, and had, in a number of instances, seen attacks of quinsy alternating with those of gout, one occurring one year and the other the next year. For many years he had been in the habit of using bicarbonate of soda in the treatment, not only in the manner suggested by Dr. Barker (applied on the end of the finger), but also as an injection thrown into the posterior nares. He believed that Dr. Bosworth was correct in his statement that the tonsils did not appear at all to the eye in the healthy throat, and the same was true of the group of glands at the base of the tongue, which were also liable to become hypertrophied as the result of disease. He could not agree with him, however, that these abnormal structures could not be removed except by means of the knife. By a course of mild and gentle treatment they could be effectually removed, though the process was a long and somewhat tedious one. He was in the habit of using for this purpose a combination of camphor with salt and ammonia; employing five parts of the mixture to the hundred of sugar of milk.

DR. FRANK HAMILTON was inclined to think with Dr. Bosworth that these excrescences ought to be removed, and that this could be best accomplished by means of the knife. But at the same time the fact was not to be forgotten that they were only exceptionally met with after the age of twenty-one; and it had occurred to him that perhaps the good results which Dr. Douglas had noticed in cases where the operation was not performed were in reality due more to the lapse of time than to the remedial measures adopted. Except in cases where the tonsil was in a state of acute inflammation, and in those where the hæmorrhagic diathesis was present, he agreed with Dr. Bosworth that the operation was unattended with danger. When hæmorrhage did occur, however, the best and promptest way of controlling it was the application of cold in the form of the ice or snow cravat.

DR. A. JACOBI made some remarks on the subject of tonsillotomy, in which he said that when tonsils had become permanently enlarged they were amenable to no other treatment than by the knife, and that the only satisfactory way of controlling hæmorrhage when it occurred after the operation was the compression of the bleeding surface by means of the finger. In regard to follicular tonsillitis he could not agree with Dr. Bosworth that the disease was an essential fever, and in conclusion he pointed out the danger to the community of mistaking mild cases of diphtheria for it.

DR. WEBER had never met with any cases of quinsy in which there appeared to be any connection whatever with rheumatism or gout, and was inclined to believe there was danger of following out the English idea too far in this respect. As to the treatment by internal medication he had had no experience, being always accustomed to evacuate the abscess as soon as possible. Hence he was in the habit of making frequent digital examinations.

DR. BARKER mentioned the papers on the use of guaiac in quinsy published in the early numbers of the *London Practitioner*, and stated that he had tried the remedy faithfully, but without any satisfactory results; after which **DR. FRUITNIGHT** said that in three cases he had succeeded in aborting attacks of the disease by giving one drop doses of tincture of aconite root every hour for several hours, as suggested by Sidney Ringer.

DR. BRANDEIS had also used the latter with success, but in connection with fifteen or twenty drop doses of ammoniated tincture of guaiac. In regard to the tonsils, he was satisfied that these organs served a purpose in the economy, and yet at the same time he did not doubt that a diseased tonsil was worse than none at all. Hence he believed that it ought to be removed, and he then proceeded to speak of the advantages of the tonsillotome over the ordinary knife for this purpose.

DR. JARVIS spoke of the danger from hæmorrhage of removing with the knife hard or cirrhotic tonsils, such as were frequently found in syphilitics, and advised that the snare or cautery should be used in such cases. As a rule, he thought it best that the entire body should not be removed, as he believed that the tonsil served a useful purpose in forming a pad for the protection of the carotid artery from injury.

Remarks were also made by **DRS. ALFRED C. POST** and **J. L. CORNING**, and the discussion was brought to a close by **DR. BOSWORTH**.

— The Pope has given $200,000 for the erection of a new hospital at Rome, near the Vatican.

Recent Literature.

Text-Book of Medical Jurisprudence and Toxicology. By John J. Reese, M. D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, etc. Philadelphia: P. Blakiston, Son & Co. 1884.

Professor Reese sets forth the scope and aim of his book with sufficient clearness in his preface. Having become convinced by an "experience of over twenty years as a public teacher of this branch of science, that students who desire to acquire a knowledge of medical jurisprudence are too often deterred from their purpose by being confronted by the ponderous works of recognized masters," he has "endeavored to condense in a handy volume all the *essentials* of the science and to present the topics in a simple and familiar style." Under these limitations, deliberately established, the author has produced an excellent book. All the subjects usually included in a treatise on legal medicine are considered with more or less fullness and always attractively. But it is a fair question whether, in thus confining himself, the author has done himself or his themes the fullest credit. The main defect of the volume seems to us to be this intended leanness; in the steady purpose to "condense," the author has trimmed his composition too often to an extent that suggests unpleasant emaciation. It is as if one of a class of bright students taking well-written notes of the professor's own lectures had published those notes and called the product a text-book. In other words, the book is suggestive rather than exhaustive. One would hardly seek these pages first of all in the list of works on medical jurisprudence, if occasion demanded of him a preparation for creditable appearance in a medico-legal case; he would naturally turn to other authorities whose writings are the substance of which this volume is a thin shadow. Both the lawyer and the doctor, when "compelled to cram for the occasion" of an impending trial (as the author expresses it), would scarcely rest satisfied if limited to the "essentials" here provided. And we meet repeatedly in the book such clauses as, "These [topics] cannot be farther enlarged upon here;" and "In a work like the present it would be impossible to enter into a full discussion of the subject;" as if the author himself felt hampered by his self-imposed barriers.

Nevertheless, within the limits described, an attractive and instructive volume is the result. The phenomena and signs of death, the details of the medico-legal autopsy, the means of identification of the living and the dead, deaths from wounds, burns and the various forms of asphyxia, by lightning, heat, cold, and starvation, — these are discussed in the first third of the book. In an introductory chapter on the relations of medicine and law, the author describes the "coroner's inquest" without a word of comment on its uselessness or a single reference to the successful measures which have been taken to supersede it with something better. "In all civilized countries," he writes, "a special officer, named the *coroner*, is appointed to investigate" deaths occurring under suspicious circumstances; there is no hint that uncivilized communities, like Scotland, France, Germany, and even benighted Massachusetts, get on very well without the services of the coroner.

The section on poisons, as might be expected from the author's enviable reputation as a toxicologist, is admirably written. Statements have occasionally crept into the text, however, which invite criticism. It is declared that "poisoning is the most frequent of all the causes of violent death (the casualties of war excepted)," and that the statistics of various countries show this to be true; this seems a most extraordinary declaration, and we hope that in future editions the statistics will be given in a foot-note. A poison is defined as "a substance which, when introduced into the body by swallowing, or by any other method, occasions disease or death; and this, as an ordinary result, in a state of health, and not by a mechanical action." We cannot but believe that a medical witness, using this definition in court, would find himself in trouble, if cross-examination were faithfully conducted.

In the sections relating to the vegetable poisons there is sometimes a want of definiteness; thus, the fatal dose of strychnia is given as from half a grain to a grain; that of tincture of aconite, from half a drachm to a drachm; while of atropia it is stated that "used hypodermically even in doses of one fiftieth to one tenth of a grain it occasions, at times, violent symptoms." Greater preciseness might have been expected.

Fœticide and infanticide, pregnancy, impotence, and rape receive clear and able treatment. The chapter on infanticide is particularly good.

Insanity, malpractice, and life insurance comprise the concluding portions of the book, and their medico-legal relations are well described. The author has no words of comfort for those who believe in "emotional insanity," and he analyzes with much skill the shortcomings of the legal doctrines and distinctions concerning mental disease and criminal responsibility.

A word of cordial praise should be bestowed upon the volume as a specimen of fine book-making; its typographical excellences impress the reader continually. The text is without the usual wood-cut illustrations, but these are scarcely missed in the presence of such clear type and tasteful execution. We heartily second the author's hope that his treatise may "encourage an increasing interest in the students of both medicine and law for that most important, but too much neglected, subject, forensic medicine." D.

Shakespeare as a Physician. Comprising every Word which in any Way Relates to Medicine, Surgery, or Obstetrics found in the Complete Works of that Writer, with Criticisms and Comparison of the Same with the Medical Thoughts of To Day. By J. Portman Chesney, M. D., etc., etc. St. Louis: J. H. Chambers & Co. 1884.

Dr. Chesney's book may be classed under the head of the "Anatomizing of William Shakespeare." He has endeavored to present "truly and faithfully every line and precept in Shakespeare's complete works which in the remotest sense bears upon the science and practice of medicine." The value of the conception seems to us more fairly open to criticism than the manner of execution. We think it would be better for Shakespeare and for the world of letters if the Shakespeare literature had never reached its present proportions, and were to receive no further additions other than such as might drive into complete obscurity much of that already in existence.

The following passage from the pen of Richard Grant White, with which, in the abstract, we coincide, may be not inappropriately quoted in this connection: —

"More inflated nonsense, more pompous platitude, more misleading speculation, has been uttered upon Shakespeare and his plays than upon any other subject but music and religion. The occasion of which calamity is that of all subjects which are of general interest these are the most remote from reason, the most incomprehensible. Wherefore it is that certain men wish to show the world that they are the high-priests of this mystery, and can prophesy of it, and utter fine sayings about it, apocalyptically, by way of revelation. And there be literary scribes and pharisees whose function it is to stone prophets, and, by a sort of reverse action of nature, to build their tombs when they are dead and buried. Of which the result in this case is a mountain cairn of rubbish above the poet's remains, which tells little but of the multitude who have thrown their missiles there. Each, however, has written his name upon his stone, as who should say, Lo, it is I who have glorified the name and perpetuated the memory of this prophet.

"Besides these critics, and beside them, there arose enthusiasts who began to found a new literary religion, and to proclaim, Shakespeare is Shakespeare, and I am his prophet. Unlike the prophets of other religions, however, they did not accept and proclaim their divinity pure and simple, but set themselves to dissecting and anatomizing him, and telling the world what a marvelous mystery they had discovered this Shakespeare to be: how he saw more than eyes could see, and said more than words could mean; how wise he was, how great, how good; how grand in purpose, how absolute in execution; how perfect, how blemishless, because what would be blemish in others in him was beauty."

Nine chapters, under the following headings, make the volume: Obstetrics, Psychology, Neurology, Pharmacologia, Ætiology, Dermatology, Organology, Chirurgery, Miscellaneous. There are no separate chapters on gynæcology, laryngology, or otology.

The most that can be said of a book of this sort is that it may divert the compiler, and prove curious to some of those who consult it.

Practical Manual of Diseases of Women and Uterine Therapeutics, for Students and Practitioners. By H. McNaughton Jones, M. D., etc. New York: D. Appleton & Co., Bond Street. 1884.

Dr. Jones can hardly be said to have written a great work, nor does he profess to have done so. He has, however, given to the profession a useful little manual which will undoubtedly fulfill the purpose for which it was written. It will, we think, be of more value to the student than to the practitioner, for as it is necessarily so condensed as to contain only the most important facts, the points about which a practitioner would be in doubt would need a more extended treatise for their solution.

The author treats the subject of gynæcology from the stand-point of the general practitioner, and it is for him, and not for the specialist, that he writes. The result is a book more practical than technical. The first chapter, which treats of "anatomical facts bearing on gynæcological practice," is filled with practical hints which have suggested themselves to the writer, and which are very interestingly interspersed among the necessary anatomical descriptions.

The pathology, differential diagnosis, and treatment of the various diseases are very satisfactorily given, and on the whole there is very little to object to. The author figures Sims' semi-prone position drawn from life fairly well as regards the patient, but lying in the middle of a couch in such a way as to render a satisfactory examination impossible. The book is neatly bound, but the plates are often poorly executed. Not a few of them have nothing but their antiquity to recommend them.

The Theory and Practice of Medicine. By Frederick T. Roberts, M. D., etc., etc. With Illustrations. Fifth American Edition. Philadelphia: P. Blakiston, Son & Co. 1884.

The present edition of Robert's Practice of Medicine is in a single octavo volume of 1000 pages. The work has been revised and enlarged by the incorporation of new material upon many of the subjects treated.

Especial attention has been devoted to the chapters upon diseases of the nervous system.

In one respect this edition is illustrative of the continued and rapid march of study and debate in the sphere with which it occupies itself. The author congratulates himself upon being able to lay before his readers the results of the discussions of the International Medical Congress of 1881, and the readers are already estimating the value and effect of the transactions of its successor, the International Congress at Copenhagen of 1884.

Medical Diagnosis with Special Reference to Practical Medicine. A Guide to the Knowledge and Discrimination of Diseases. By J. M. DaCosta, M. D., LL. D., etc., etc. Illustrated with Engravings on Wood. Sixth Edition, Revised. Philadelphia: J. B. Lippincott & Co. 1884.

The appearance of the sixth edition of this valuable and popular hand-book of medical diagnosis is coincident with the twentieth anniversary of the first year of its publication. The volume combines those qualities which have been reflected in an eminent degree in the career of the author as at once a successful teacher and practitioner of medicine. It has been translated into German, and issued in Berlin, where its reception has been a flattering one, and a translation into Spanish is projected.

To the American student and practitioner Dr. DaCosta's book requires no further recommendation than the statement that the chapters have been revised, and new matter introduced, with additional wood-cuts, wherever the advances of recent investigations indicated this in order to place the present edition on a level with progress in medical knowledge.

— M. Charcot has been elected a member of the French Academy of Sciences in the place of the late Baron Cloquet.

Medical and Surgical Journal.

THURSDAY, OCTOBER 16, 1884.

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THE FIFTH VOLUME OF THE INDEX CATALOGUE.

THE author of an article on Cataloguing, in the *Library Journal*, commences his essay by a quotation from Thomas Carlyle: "A library without a catalogue is the most strange conceivable object; the worst catalogue that was ever drawn up by the hand of man is preferable to no catalogue at all;" and he closes by saying that the conviction seems to be increasing and deepening that libraries, if they are to fill their full measure of usefulness, must make their treasures accessible to the public. And he pertinently asks whether, if books are worth storing and preserving, with all the additional expense of library maintenance, it is not worth while to put a mere fraction of their whole cost into such a record of them as shall be permanently useful?

The affirmative answer to such a question which the authorities of the Surgeon-General's Office would give would evidently be an emphatic one, enforced by the production of its five magnificent volumes of the Index Catalogue. The fifth volume resembles its predecessors in size and appearance, and alphabetically extends from Flac. to Hearth. It contains in its 1055 pages 15,555 names of authors, representing 5755 volumes and 12,596 pamphlets. It also includes 8069 subject-titles of separate books and pamphlets, and 34,127 titles of articles in periodicals. Eleven pages are needed to contain the recent additions to the list of medical periodicals employed in the Index-Catalogue, most of these additions being newly established journals and recent reports and annuals.

The present volume, like its predecessors, affords an almost childlike pleasure to one who turns its pages with a love for the medical profession and an interest in its literature. One stumbles almost unawares upon the name of Garfield (where he is requested to see Guiteau), and glancing down the long list of writers on these subjects matters are recalled which have already most fortunately begun to slip from the memory. The amenities of literature, if one may venture to speak of them so, are also illustrated in the list, as the following title may show: AUTOPSIA *de Mr. Garfield practicanda por el doctor Longbranch.* [Sic.]

We imagine most men who have occasion to turn to the subject will be surprised to find that the index to articles descriptive of a fœtus in fœtu covers a little over a page and a half. The different editions of Galen, together with the Commentaries and Lives, fill up four pages, and the list will furnish ample entertainment to the bibliographer.

The connection of the Library with the army is brought to mind by the collection of blank forms of the Medical Department of the Army of Great Britain and the Reports on the topography of various forts with more or less familiar names.

As the value of a catalogue as a general work of reference depends upon the character of the library which it represents, it will certainly not detract from the value of the Index Catalogue to recall some observations of Dr. Billings on the comparative merits of the American library with the medical sections of the national libraries of England and France: —

"From a comparison of the catalogue of the medical library of the Surgeon-General's Office with the fasciculi of the catalogue printed by the British Museum in 1881–1882 I have found that on 1140 pages, containing about 34,000 titles, exclusive of cross-references, there were the titles of 657 books and 880 inaugural theses relating to medicine. Taking the corresponding portions of the Washington catalogue it is found that the British Museum has 262 medical books, 372 medical theses, and 118 different editions which are not in the Washington library, while, on the other hand, the Washington library has 285 books, 342 theses, and 88 different editions which are not in the British Museum. There are common to both libraries 277 books and 508 theses. The two libraries are, therefore, nearly equal as regards medical books, exclusive of medical journals, transactions, and reports, in which the Washington library is much the richer."

A similar comparison with the catalogue of the medical section of the Bibliothèque Nationale in Paris shows that the Washington library contains a greater amount of medical literature, and "also covers a wider field, representing better the medical literature of the world. Each library is, as might be expected, richer than its rivals in the literature of its own country, but the French library is comparatively poor in English and German, has almost nothing in American medical literature, while the English library is also poor in American literature, and comparatively weak in German medicine of the present century.

"The two great national libraries of London and Paris are supposed to be the largest collections of printed books in existence. They have been collected during a period of over three hundred years, and have practically had almost unlimited funds and opportunities."

We we may then feel not only that we have in the Index Catalogue an addition to our works of reference which any nation might be proud to have originated, but also that it is the only possible index that could properly represent American medical authors, and that from the character of the Library it comes nearer to being an exhaustive index of all that is valuable in the medical literature of the world than would any similar index and catalogue of any other existing library.

Another writer, in the same number of the *Library*

Journal from which we have already quoted, considers that it will be a chief glory of the nineteenth century that it has organized knowledge, so that the man of the future who will have more to learn will learn it more easily. The isolated facts are fast becoming types. Knowledge increases, but there is no longer confusion, and in this work of organization the librarian has his part. It is for him to classify and catalogue the records of ascertained knowledge, the literature of the whole past, and so to bring the books to readers and readers to books.

In this busy generation, when the hurried man grumbles that "all the time there is" is not enough for him, the librarian makes time for his fellow-mortals by saving it, for a minute saved is a minute gained. And this function of organizing, of indexing, of time-saving, and of thought-saving is associated peculiarly with the librarian of the nineteenth century, and for the medical profession it is associated peculiarly with the librarian of the Library of the Surgeon-General's Office of the United States army.

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TWO CASES OF HUMAN ACTINOMYCOSIS.

Attention has been drawn several times in these columns, editorially and otherwise, to a fungoid disease common to various animals — especially cattle — and man, to which the Germans have given the name of actinomycosis. In an editorial, September 11th last, we stated that the disease, although occasionally observed in cattle, had not to our knowledge been found in man in this country.

We now learn from Chicago that Dr. J. B. Murphy of that city has recently operated on two cases of human actinomycosis. One patient was a woman about thirty years of age, who had suffered for a number of months with a hard swelling at the angle of the jaw. The swelling had begun to extend down upon the neck. It was slightly tender, evinced slight fluctuation at one point, and was only to a limited degree movable; it was more or less fixed to the deep tissues. The swelling being opened, a watery, puri form fluid, containing minute bright yellow granules of the size of millet seeds flowed from it. These were at once suspected to be actinomyces, a suspicion promptly confirmed by the microscope. The patient had a number of decayed teeth opposite the point of the swelling on the jaw.

It was afterwards learned that she had, a few weeks before her visit to the doctor, lost by death a pet dog, which had died of starvation from inability to swallow owing to a large swelling connected with its lower jaw.

The operation for the relief of the patient consisted in laying open the swelling freely in all directions and carefully scraping out every particle of tissue that appeared to be abnormal. This and subsequent dressings were done with antiseptic precautions, and the wound healed promptly and completely. The operation seems to have been successful in exterminating the fungus, although too short a time has elapsed to make this positive.

The other patient was a lad, perhaps eighteen years of age, on the right side of whose lower jaw was a swelling of the size of a small walnut. The tumor was opposite a much decayed molar tooth. The patient said the swelling appeared several months before, was quite small at first, and had steadily increased in size. On puncturing the enlargement the yellow granules of the actinomyces were found. The tumor was then freely opened and scraped out. The operation was done only a few days ago, and the wound is not fully healed, but is reported as doing well.

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THE SAFETY OF CANNED FOODS.

A sufficient number of instances of poisoning from the consumption of canned foods continue to be reported from time to time from various parts of the country in the daily press, and at times under cover of a certain degree of medical sanction, to seriously interfere with a very important American industry. We do not doubt that many of these reported cases are greatly exaggerated, and that in a still larger number, whether exaggerated or not, something else than canned food, which is now so readily accused, is really guilty of the effects observed.

It is one thing for a physician to pronounce a case to which he may be summoned one of poisoning, it is quite another and often far more difficult thing to designate the precise article at fault, and before incriminating any individual substance too much care cannot be exercised upon a thorough examination of all the premises —especially where such substance happens to be an article of daily consumption for which, in some parts of the country, it would be difficult if not impossible to provide an equally satisfactory substitute.

There are no food products, whether in the fresh or preserved form, which may not at times be met with in an unwholesome state, but we believe the preserved forms are really less frequently *poisonous* than the so-called fresh forms. Notwithstanding the vigilance of food inspectors in our large cities there can be no doubt that no inconsiderable quantities of "fresh" meats, fruits, and vegetables unfit for consumption escape detection and go into use among some classes of the population. The instances in Europe where large numbers of partakers of fresh meat from diseased animals have been seriously and fatally poisoned thereby are by no means few.

The average annual production of canned foods in the United States is now estimated to be upwards of 500,000,000 of tins, or about ten for every inhabitant of the country. It is not alone a great article of commerce at home and abroad, but, as we have remarked, furnishes a cheap, transportable, and indispensable food-supply in many places and under many circumstances. It is frequently not a question between fresh roast beef or mutton and canned meats, but between these latter and smoked or salted meats; not a question between fresh or canned vegetables and fruits, but between these latter and none at all. We are not arguing that the canned articles are as nutritive or as toothsome as the fresh, but merely that with the exercise of ordinary care on the part of the consumer the likelihood of being *poisoned* by the former is certainly as small as by the latter. The appearance of the head of the can is generally a pretty safe index to the condition of the contents.

Among other testimony as to the quality and reliability of American canned foods we notice, very recently, that of Gen. J. P. Hawkins, chief of commissary, United States Army, who, during an extended experience of the use of such foods in a military department, never knew of a case of poisoning, nor could he learn of any from inquiry of the medical director.

A striking example of the keeping qualities of canned fish is found in the fact that the American canned salmon, which was awarded the first prize at the Fisheries Exhibition in Berlin, in 1880, was packed in 1875, and had previously been exhibited and took the first prize at the Centennial Exhibition in 1876. The same permanency may be found in many other articles when the can remains sound, and has not been accidentally or purposely tampered with.

Whilst desirous that those engaged in this important national industry should be protected from unjust suspicions and untenable charges it is, as we realize, no less necessary that the more numerous consumers should be protected from fraud or injury, but we imagine the laws of trade are still quite competent for that end without any medical or sanitary crusade.

* * *

MEDICAL NOTES.

— Steps have recently been taken in Boston towards the formation of an American society for psychical research, modeled somewhat upon the English society of similar name. At the first meeting Prof. W. F. Barrett, vice-president of the English society, gave an account of the work being done in that country in this line, and mentioned that since the operations of the society began there had been a marked decrease in the activity of the so-called spiritualists in London. The speaker said that in the investigation of cases of "mind-reading" the results showed generally that there was an unconscious physical guidance on the part of the person whose mind was being read, but that there were some cases in which this explanation was not admissible. The committee appointed for organization of a society have held a meeting in furtherance of their work.

— The effect of the embargo upon the importation of rags is likely to be badly felt by the consumers of white paper. The fact that rags are not arriving in this country has already decreased the supply of paper stock, as the mills are not making as much as formerly, and one very prominent paper manufacturer says that 84,000 of the 260,000 tons of rags used in the manufacture of paper in this country are imported, and as this import has ceased the effect upon trade is to put up the price of paper, lessen the working hours in mills, and cause a stagnation in trade unprecedented. Penny papers especially, will probably be affected.

— Dr. Macan, Master in Rotunda Hospital, Dublin, states that during the year sixteen cases of abortion were admitted to the hospital. The treatment was expectant as long as possible, and in none was the vagina plugged, but in case of excessive hæmorrhage before the cervix was sufficiently dilated to allow removal of the ovum the cervix was plugged with a tupelo tent, or dilated with Hegar's instrument, and the ovum removed. When any part of the ovum remained, causing putrid absorption or hæmorrhage, the uterus was well washed out with the corrosive sublimate solution, the curette used, and then the corrosive sublimate again, and in septic cases, in addition, an iodoform suppository was introduced.

— Prof. S. W. Gross, says the *Medical Bulletin* (August), brought a case of gumma of the breast before the class last season, which was interesting, both because of the infrequency of its occurrence, and of its resemblance to malignant disease. Gumma of other parts of the body are met with almost every day in hospital practice, but it is extremely uncommon to find this manifestation of the syphilitic poison on the female breast. The patient, who was twenty-eight years old, and appeared to be in good health, complained of trouble in the left breast. Examination showed a cake-like superficial tumor involving the skin and subcutaneous connective tissue. The skin over the tumor was livid in color, and the nipple was retracted into it. These signs apparently pointed to superficial scirrhus. But from the absence of pain and axillary involvement, as well as the history of a dissolute husband and three miscarriages, Professor Gross concluded that it was a gumma. The woman was put on the mixed specific treatment, and the tumor disappeared in a short time.

— Dr. Koch has recently received a call to the University of Leipsic as successor to the late Professor Cohnheim. It is said that he has declined this honorable call, and resolved to stay in Berlin. It is believed that he will soon be appointed professor of hygiene in Berlin University.

— A correspondent of the *Lancet*, writing of a Roman villa, bath-room, and other ancient remains recently discovered at Lincoln, says that the miners, in clearing away the soil immediately outside the villa, came upon a skull and some human bones, among which he found a tibia presenting a united fracture. He thinks that there is hardly a pathological museum in the United Kingdom which can boast of anything like this specimen of ancient surgery — a united fractured bone of an old Roman who lived, and certainly limped, seventeen or eighteen centuries ago.

CHICAGO.

— The new Presbyterian Hospital has been opened for the reception of patients. One wing only of the contemplated structure is completed ; this will accommodate about eighty patients. Owing to lack of endowments of free beds the hospital at present only takes paying patients, but it is expected that before long it will be possible to receive a number of free patients. The building is very complete in every particular, and in its sanitary arrangements is well-nigh perfect. Steam is used to heat the building, there being one or more steam coils in each room. The fresh air is admitted to each room independently by an opening through the outer wall, so arranged that in entering the room the air must first pass among the steam pipes and be warmed. The exit of foul air is effected through a fireplace and flue with which each room is provided. The laundry, while within the building, is disconnected from every other part of it, and can be reached only by going out of doors. The building is provided with a water elevator.

— The medical colleges have opened with their usual number of students. The Chicago College of Dental Surgery, which, with its present name and plan, is new, inaugurated its first full course as a dental college on the 1st inst. with a class of about forty. This institution was first known as the Chicago Dental Infirmary, and till this year has received as students only such gentlemen as had already received the degree of M. D., and of course it gave no instruction in Anatomy, Physiology, Materia Medica, or Chemistry. But the attendance was so small, and the number of ordinary dental students applying was so great, that it was last spring determined to change the scope of the organization and its name and make it in every sense a dental college. Its quarters at No. 6 Washington Street are ample, and its clinical material is greater than is necessary. Drs. Belfield, McArthur, and Copeland have been chosen to teach, respectively, Physiology, Chemistry, and Anatomy.

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MEDICO-LEGAL NOTE.

— Dr. Nobiling, of Munich, has, according to the *British Medical Jouranl* (June 14th), recently described in the *Aerztliches Intelligenzblatt* the necropsies which he made a year or two since on the bodies of two suicides by hanging. The first case was that of a young man, aged twenty-four, short, thin, and sickly, who destroyed himself after a disappointment in love. He tied the two ends of a large cotton handkerchief, folded diagonally and not twisted into the form of a cord, and fixed them on to the latch of a door, put his head through the loop of the handkerchief, and then drew up his knees. The latch was only three feet seven inches from the ground, and the man was found quite dead, with his knees bent to a right angle, his shins almost touching the floor, against which the toes actually rested. The weight of his head and shoulders pressed the front of his neck downwards against the handkerchief, which did not touch the back of the neck at all. As the handkerchief had been folded very broad, no line of constriction was found on the front of the neck. The hyoid bone, with the root of the tongue and larynx, had been forcibly and firmly drawn upwards and backwards against the posterior wall of the pharynx, so that all access of air to the glottis was excluded. There were small points of subconjunctival, subpleural, and subpericardial hæmorrhage. What appeared most remarkable to Dr. Nobiling was that the otherwise healthy endocardium of all the chambers of the heart was thickly spotted with small points of extravasated blood. The lungs were very œdematous. There were evidences of old pachymeningitis. The second case was that of a very corpulent man, aged forty, subject to melancholia, who had mounted on a stool, attached the ends of a stout cord, made of a piece of vine branch strengthened by hempen twine, to the cross-piece of a high window, put his head through the loop, and kicked the stool from under him. He was found quite dead, with the tips of his toes far from the ground, and his thick neck completely constricted above the thyroid cartilage by the cord, which made a deep mark round the neck. So deep was this constriction that the muscles attached to the hyoid bone, the sterno-mastoids, and the superficial layer of the muscles at the back of the neck were all very deeply indented, and hæmorrhage had occurred into their substance. There was also much extravasation of blood into the connective tissue within the sheath of the great vessels of the neck, but the common carotids and the internal jugular vessels were uninjured. The larynx was pressed upwards and backwards against the back of the pharynx, the mucous membranes of the larynx, trachea, and bronchi were deeply congested, and there were circumscribed hæmorrhages under the right vocal cord, the cellular tissue beneath the pleura on both sides, and in the pulmonary tissue. Aortic stenosis, great hypertrophy of the heart, nutmeg liver, contracted kidneys, chronic gastro-adenitis, and colloid degeneration of the pancreas also existed.

Miscellany.

MR. J. NETTEN RADCLIFFE.

Mr. J. Netten Radcliffe, lately deceased, was unquestionably one of the ablest of the staff of men attached to the Medical Department of the English Privy Council and of the Local Government Board. The annual reports of those bodies are the best monument to his learning, zeal, and industry in contributing to the progress of State Medicine. His former chief, Mr. John Simon, writes to the *Lancet* in regard to the character of Mr. Radcliffe's work as follows: —

" Among reports which he made on the subject of particular local outbreaks of disease investigated by him there are especially three which I count classical. (1.) The Report on the very remarkable Outbreak of Cholera at Theydon-Bois, near Epping, in 1865. (2.) The Report on the East London Cholera Epidemic of 1866, and its relation to the use of the East London Company's Supply of Water. (3.) The Report on the terrible Epidemic of Enteric Fever which prevailed in and about Marylebone in 1873, in consequence of a Dairy Company's Distribution of Infected Milk. These Reports ought to be familiarly known to every officer of health, not only for the tremendous significance of the lessons which they teach, but as examples to be studied and remembered of the minutely cautious and complete way in which local epidemics require to be investigated by any one who aspires to advise on them.

Equally classical in the literature of preventive medicine, though in another direction than the above, are the expositions which he made in matters of epidemiological history, more particularly in 1866 and 1875, with reference to the successive steps by which cholera had advanced from India and had been diffused to various countries of Europe; and in various late years with reference to the diffusions of Levantine plague. His acquaintance with the 'time and place' relations of epidemic and endemic diseases was unusually large and accurate, particularly in respect of cholera and plague, and of the therewith connected questions of traffic between places and countries. It was, I believe, quite unique; it was like the familiar knowledge which a Charing-cross policeman is supposed to have of the omnibuses which pass his beat; and in the distribution of the work of the Medical Department I used always to look to him as a specialist in that branch of information.

"In 1875, when, as you may remember, there had been considerable cholera alarms in Europe for the last year or two, and when an International Conference on Cholera had been held at Vienna, I found it desirable to reëxamine our scientific stand-point in relation to the opinions of other countries; and the occasion was also taken for Radcliffe to extend his cholera paper of 1866 into a report for the whole decennial period. For the guidance of European opinion on the question of Red Sea quarantine, and other such questions, the mass of evidence given in that report with regard to the many ways by which cholera, so often as it grows in India, tends to reach Europe, is, in my opinion, the most instructive document in existence; and the man who can resist that kind of evidence must be either an idiot or a quarantine employee. To the ordinary medical reader it might be too laborious to study the paper, but as a *pièce de résistance* for the English Government when it has to confer with other governments about their quarantine proposals the report is simply invaluable, and worth even the immense labor which Radcliffe bestowed on its compilation."

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SANITARY CONDITION OF NICE AND THE RIVIERA.

The following "declaration of the consuls residing at Nice, Cannes, and Menton," was made public at Nice the 16th of last September: —

Firstly. That the town of Nice and the neighboring winter resorts on the Mediterranean coast, owing to the excellence of their climate, and the careful precautions for the preservation of health, promptly and effectually taken by the municipal authorities, have entirely escaped the epidemic, and that the public health has never been in a more perfect condition.

Secondly. That the quarantine which had been enforced as a preventative measure at the western extremity of Nice, in the Var district, has ceased to exist since the 6th instant, which allows of travelers entering the town without having to undergo any formalities or being subject to any delay.

We therefore feel it a duty and a pleasure to declare publicly and formally, with a view to the general interest, and that our countrymen may be accurately informed of the real sanitary condition of these sunny regions, that the foreign colony who, on the return of the cold season, are wont to take up their winter quarters in these parts may, as usual, with safety come to Nice, Cannes, Menton, and, indeed, anywhere along the Mediterranean shore from Hyeres to San Remo. The consuls have accordingly signed the present declaration.

The above will have an interest for the medical advisers of that large class of our countrymen whose health or pleasure annually attracts them to these towns in Southern France or along the Italian Riviera. The drainage in most of these places is justly suspected, and we hope may not betray the confidence reposed by the foreign consuls in the good features of these localities.

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ABSTRACT OF THE REPORT OF THE COMMISSIONER OF EDUCATION FOR 1882-83.

The thirteenth annual Report of the Commissioner of Education, just issued, is fully equal to its predecessors in point of interest, in the importance of subjects discussed, their methodical arrangement and treatment, while the information presented is of much more recent date than that usually given in reports whose information is collected from such a vast territory and through so many instrumentalities, covering, as it does, the year closing June 30, 1883. In this respect the report under review has made a decided gain over its predecessors, made possible, we are informed, by the fact that a larger number than usual of educational systems and institutions have been able to bring their reports up to date.

Little space is given in the report to a statement of the general work of the office aside from the summary of educational data which is prepared annually, as anything like a full statement of such general work would require more space than the Commissioner has at his disposal.

The communications sent out numbered 30,745, and those received 67,875. The documents distributed numbered 323,592, and were usually mailed in separate packages. One document was asked for by as many as ten thousand persons. This distribution of documents has its influence upon many educational methods and appliances. The teachers' institutes have been much more freely supplied than before. Circulars and bulletins were sent to 406 institutes held in twenty-three different States. Seventy-eight of these teachers' gatherings in a single State were furnished these publications.

The following circulars of information have been printed and distributed since the enumeration in the previous report: No. 1, 1882. The Inception, Organization, and Management of Training Schools for Nurses. 28 pages. No. 2, 1882. Proceedings of the Department of Superintendence of the National Educational Association at its meeting at Washington, March 21–23, 1882. 112 pages. No. 3, 1882. The University of Bonn. 67 pages. No. 4, 1882. Industrial Art in Schools, by Charles G. Leland, of Philadelphia. 37 pages. No. 5, 1882. Maternal Schools in France. 14 pages. No. 6, 1882. Technical Instruction in France. 63 pages. No. 1, 1883. Legal Provisions Respecting the Examination and Licensing of Teachers. 46 pages. No. 2, 1883. Co-education of the Sexes in the Public Schools of the United States 30 pages. No. 3, 1883. Proceedings of the Department of Superintendence of the National Educational Association at its meeting at Washington, February 20–22, 1883. 81 pages. The following bulletins have also been issued: Instruction in Morals and Civil Government. 4 pages. National Pedagogic Congress of Spain. 4 pages. Natural Science in Secondary Schools. 9 pages. High Schools for Girls in Sweden. 6 pages. Comparative Statistics of Elementary, Secondary, and Superior Education in Sixty Principal Countries. Sheet. Planting Trees in School Grounds. 8 pages. In addition to these publications a special report of three hundred and nineteen pages on Industrial Education in the United States was prepared and printed in compliance with a resolution of the Senate. The number of copies of each circular or bulletin issued has been increased to supply the correspondents of the office, and several of those most in demand have been reprinted.

The American correspondents of the office at the head of systems or institutions of education furnishing the information contained in the report numbered 10,128, an increase for the year of 1354, and since 1872 of more than 7500. This system of voluntary statistical information, depending on co-laborers so widely scattered, is believed to be the most extensive of its kind in existence, and it is constantly improving in completeness and exactness. The blanks sent out by the office to its 10,000 correspondents and gratuitously filled and returned by them form the basis for the twenty-five tables presented in the appendix. The only return the office is able to make its friends for all this labor is to send them its publications, and hitherto the number allowed the office by Congress has not been sufficient to supply them all.

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A CASE OF SCARLET FEVER IN A CANARY.

A supposed case of scarlet fever in a canary bird is reported in the *British Medical Journal* by Dr. F. Ogston as follows: —

"A few months ago, while attending a family in which scarlet fever had attacked two children, my attention was called to a cage containing four young canaries. I remarked that they seemed ill, as they were sitting moping on their perches, with their feathers ruffled up. The mother of the children said to me, 'Doctor, I think they have gotten the fever. The grandmother (who had undertaken the nursing of the children) gave them some bread which the children had been eating.' The children were then desquamating freely.

"Two days afterwards, when seeing the children, I found the canaries quite well and lively, all but one, which drooped more than before, and now could hardly stand. On examining the bird its skin, under the feathers, was of a bright scarlet color, unlike that of the others, which was of a yellow color, like old parchment. It died the following day, after making efforts to swallow as if its throat had been painful and swollen.

"On inquiring why this one should have suffered so much, and the others so slightly, I was told that it had eaten greedily of the bread left by the children, which the others had hardly touched, and that it had pecked away some of the loose epidermis from the lips of one of the children.

"It certainly seemed to me that the bird had scarlet fever, and it at least should give us the caution that our domestic pets may not only spread this disease by conveying the infected epidermal scales on their fur or feathers, but also by taking infection from their owners, and directly infecting individuals of the human species in their turn."

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DYSTOCIA FROM COILING OF THE CORD ABOUT THE NECK OF THE FŒTUS.

Dr. Rachel in the September number of the American *Journal of Obstetrics*, details five cases of this complication occurring in his own practice, and gives some reflections upon its occurrence and treatment. He cites a report on the subject made to the Obstetrical Society of Edinburgh, January, 1883, giving the means for diagnosis as follows: —

"(1.) Retraction of the fœtal head during the pains, with sufficient uterine action and a roomy pelvis.

"(2.) Gradual cessation or long abeyance of the pains; and

"(3.) Insufficient head flexion, followed by over-rotation of the occiput; all pointed to coiling of the cord round the child's neck. The second factor above stated he believed to be the most important.

"For diagnosis of this condition when the head was in the pelvis, he held that it could be made out by digital examination when the pelvis was roomy. If he suspected its occurrence in the first stage he would employ sedatives; in the second stage he would hasten the labor in the usual way, or cut the cord with a pair of probe-pointed scissors, and then employ forceps."

The writer joins issue with the statement of the first point; it should be just the reverse, for the sentence as it stands applies to the normal conditions of labor, the head in normal labor, it is almost superfluous to mention, being retracted somewhat during a pain while it descends on its cessation by the force of gravity. This advance of the child during the pain and retraction when the pain ceased was noticeable in every one of Dr. Rachel's five cases, and is in accord with Cazeaux's observations.

Regarding the degree of embarrassment from a coiled cord, Dr. Rachel says that his measurements of the circumference of the neck in every child he has delivered for the past year give as the lowest figure six inches and the highest a little over eight inches. He at the same time measured the distance from the umbilicus to the side of the neck, and found that it averages seven inches and a half, the lowest figure being six and a half and the highest a little over eight and a half inches. Taking the lowest figures found, a threefold circle — which in reality requires, in face presentations, only two and a half circumferences —

Would give	15 inches.
Length from umbilicus to side of neck . .	6½ inches.
	21½ inches.

The remaining portion of the cord from the neck to the placenta is not taken in account, and be it ever so short, it would still add several inches to the calculated figure. He thinks that even the tightest constriction around the neck, coupled with the strongest traction short of rupture of the cord, would be unable to reduce the number of inches by one half, that is, to eleven inches. In one of the writer's cases he gives the following figures: —

From umbilicus to neck	8 inches.
Two full coils	15 inches.
Together	23 inches.

which leaves for the length of cord from neck to placenta: $29\frac{1}{2}-23=6\frac{1}{2}$ inches. This would about correspond to the distance from the vulva to the placenta, which was situated anteriorly to the left of the median line.

In another case the figures were:

From umbilicus to neck	$6\frac{1}{2}$ inches.
One full circle	6 inches.
Together	$12\frac{1}{2}$ inches.

which would leave for the length of cord from neck to placenta: $16\frac{3}{4}-12\frac{1}{2}=4\frac{1}{4}$ inches.

The shortest cord ever measured (Cazeaux) was two inches long, and it was torn just before the expulsion of the child; but, of course, in this case the cord went directly from the umbilicus to the placenta. The shortest cord measured by the writer was ten inches, and there being no coil about the neck it gave little convenience during labor.

The writer's conclusions are summarized as follows:

Diagnosis. 1. Descent of the head during the pains and retraction during the intervals.

2. Insufficient head flexion and over-rotation of the occiput.

3. Variability of the position of the head within narrow limits.

4. Distressing pain at the seat of the placenta.

5. Discharge of some blood immediately after each pain.

If rigid perinæum, dorsal displacement of an arm, or head and arm presentation can be excluded the first symptom, especially when combined with some or all others given, point to true or accidental shortening of the cord.

Treatment. 1. Anæsthetization of the patient.

2. Extraction of the head by the forceps and division of the cord to allow the delivery of the body. Or, in extreme cases,

3. Division of the cord within the vagina, followed by the application of the forceps.

The early division of the cord may be urgently required to save the life of the child, as is illustrated by Dr. Lusk's case, and by a case cited by Cazeaux, where it was delayed two hours after the birth of the head. It also militates against two other formidable accidents, namely, inversion of the uterus and flooding.

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INTRA-UTERINE THERAPEUTICS.

Dr. Thomas More Madden contributes an article on the above subject to the *Medical Press* (September 24th) emphasizing the importance of this method of treatment. His statement will, perhaps, cause some surprise that among 3800 patients under observation in the gynæcological department of the Mater Misericordiæ Hospital during the last six years, including almost every variety of disease peculiar to women, intra-uterine exploration or treatment was found necessary in about thirty per cent., and was resorted to in them when not specially contra-indicated by pregnancy or pelvic cellulitis.

The importance of adequate dilatation is emphasized, and laminaria bougies are considered, on the whole, the best agent for this purpose. Before making applications to the endometrium that surface must be prepared (if not found at the period of post-menstrual denudation) by scraping either by a dull wire curette, or, as the writer prefers, by his intra-uterine scoop, which he considers more effective in removing the granular, softened, or diseased mucous membrane so as to expose the true inner surface of the uterus to the medicaments. The local depletion of congested or hypertrophied parts, especially in cases of endometritis, is also of value.

The most active of all the various agents employed for intra-uterine medication is fuming nitric acid, introduced into modern gynæcological practice by Dr. Kidd in the Coombe Hospital, and subsequently employed by Dr. Atthill in the Rotunda, and by Dr. Madden in the Mater Misericordiæ Hospital, Dublin, long before it was thus applied elsewhere. For the intra-uterine use of nitric acid it is necessary that the os uteri should be dilated and exposed to view, the vaginal wall properly protected from injury with the acid, and the uterine wall drawn down to the vulva. For this purpose he has designed and uses a uterine tenaculum, shown, which can be set at any angle, and instantly released from its firm hold on the cervix by merely turning the screw set in the handle. In this way the uterus may be easily swabbed out with strong nitric acid, the whole charge of which is thus expended on the endo-uterine surface so as to avoid the risk of injuring the vaginal walls or external parts, although, as an additional precaution, these should be well smeared over with vaseline beforehand. Immediately after the application the uterus should be thoroughly washed out until no trace of acid is discoverable in the returning water; and finally, if any pain is complained of, a morphia suppository should be introduced. When thus employed nitric acid may generally be as safely and effectively used in those cases of intra-uterine disease in which its application is really called for, and to which it should be carefully restricted.

Solid nitrate of silver was formerly in some vogue as an intra-uterine application, a small bit of it being occasionally introduced and left in utero in cases of subinvolution, and even endometritis, even without any preliminary dilatation of the os internum. This practice, however, is liable to give rise to local inflammation or metro-peritonitis. Iodoform, in suppositories containing from seven to ten grains, will be found useful, after more active treatment, in some instances of congestive hypertrophy of the uterus. Carbolic acid, and above all iodized phenol, as well as the various other preparations of iodine, are, however, probably the most generally useful of all intra-uterine applications, and of these Churchill's tincture, or a solution of iodine in glycerine of the same strength as the ordinary tincture, may be locally applied freely with advantage in many cases of congestive hypertrophy, and also in some instances of intra-uterine tumors in which operative treatment will not be submitted to or is not advisable. Of the injection of tincture of iodine through the undilated canal, which has been recently again recommended for the same purpose, Dr. More Madden speaks with some caution from his own experience of its use.

Regarding the removal of intra-uterine growths the writer is quite enthusiastic. In the past few years he has removed such tumors from the uterus in forty-two cases. Of these four were intra-mural, eighteen were submucous fibroids, and twenty were either pedunculated tumors or intra-uterine polypi. In one case six of these tumors were removed from the uterus at one operation, and in another instance two large tumors which had, apparently, coalesced from opposite sides of the womb were taken away. And finally in three of these cases the patients died, and in thirty-nine they recovered.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 4, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	609	255	27.84	13.44	13 60	2.08	5.96
Philadelphia	927,995	347	137	18.27	11.60	5.80	5.80	3.19
Brooklyn	644,526	271	135	29.97	10.36	18.13	1.11	5.55
Chicago	632,100	—	—	—	—	—	—	—
Boston	423,800	211	103	29.61	13.63	12.22	4.23	2.82
Baltimore	408,520	154	66	22.40	10.40	10.40	1.30	9.10
St. Louis	400,000	138	57	26.28	7.30	9.49	2.92	4.38
Cincinnati	272,400	102	43	16.66	13.72	12.74	—	1.46
New Orleans	234,000	115	29	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	90	34	22.22	12.22	14.44	5.55	—
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	76	53	23.76	6.50	21.12	2.64	—
Providence	119,405	37	17	24.30	8.10	8.10	2.70	5.40
New Haven	62,882	20	7	20.00	20.00	5.00	15 00	—
Nashville	54,400	30	13	56.66	16.66	13.33	10.00	20.00
Charleston	52,286	43	21	25.66	4.66	6.99	4.66	6.99
Lowell	71,447	35	14	54.34	8.58	37.18	8.58	—
Worcester	69,442	25	11	36.00	4.00	12.00	16.00	8.00
Fall River	62,674	24	17	37.44	4.16	33.28	—	—
Cambridge	60,995	21	10	9.52	23.80	—	—	—
Lawrence	45,516	20	8	10.00	25.00	—	—	—
Lynn	44,895	6	3	—	16.66	—	—	—
Springfield	38,090	11	4	27.27	9.09	18.18	—	9.09
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	17	8	41.16	16.66	29.40	5.88	—
New Bedford	30,144	20	11	5.00	20.00	5.00	—	—
Salem	29,503	10	2	10.00	10.00	—	—	10.00
Chelsea	24,347	9	5	44.44	22.22	22.22	—	22 22
Taunton	22,693	—	—	—	—	—	—	—
Gloucester	21,400	8	3	25.00	12.50	12.50	12.50	—
Haverhill	20,905	9	5	11.11	11.11	—	11.11	—
Newton	19,421	6	4	50.00	33.33	33.33	—	—
Brockton	18,323	9	6	44.44	11.11	11.11	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	7	1	—	28.56	—	—	—
Fitchburg	13,433	9	8	11.11	—	11.11	—	—
Ninety-two Massachusetts towns	419,868	57	24	22.75	21.00	8.75	1.75	—

Deaths reported 2546 (no reports from Chicago, Buffalo, and Pittsburg): under five years of age, 1104; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 631, diarrhœal diseases 307, consumption 294, lung diseases 184, diphtheria and croup 113, typhoid fever 79, malarial fevers 42, whooping-cough 38, scarlet fever 23, cerebro-spinal meningitis 15, erysipelas seven, measles six, puerperal fever one. From *malarial fevers*, New York 17, St. Louis 11, Brooklyn seven, Nashville three, Charleston two, Cincinnati and West Springfield one each. From *whooping-cough*, New York 19, Brooklyn and Boston six each, Philadelphia, Baltimore, District of Columbia, Nashville, Cambridge, Brockton, and Milbury one each. From *scarlet fever*, Boston five, Philadelphia three, Baltimore, St. Louis, Providence, and Woburn two each, Brooklyn, Cincinnati, District of Columbia, Lowell, Cambridge, Lawrence, and Newton one each. From *cerebro-spinal meningitis*, Philadelphia four, New York and Lowell two each, Boston, Baltimore, Fall River, Lawrence, Holyoke, Woburn, and Milbury one each. From *erysipelas*, Philadelphia three, New York two, Providence one. From *measles*, New York five, Philadelphia one.

Two cases of small-pox were reported in St. Louis; typhoid fever 59, scarlet fever 62, diphtheria 31, and measles one in Boston.

In 109 cities and towns of Massachusetts, with an estimated population of 1,412,907 (estimated population of the State 1,955,104), the total death-rate for the week was 18.58 against 23.01 and 20.64 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending September 20th, the death-rate was 21.0. Deaths reported 3518: infants under one year of age 1051; acute diseases of the respiratory organs (London) 159, diarrhœal diseases 413, fever 91, scarlet fever 82, whooping-cough 52, measles 41, diphtheria 29, small-pox (London six, Sheffield one) seven. The death-rates ranged from 14.9 in Portsmouth to 29.9 in Leicester; Birmingham 25.4; Blackburn 28.3; Bradford 21.9; Leeds 21.8; Liverpool 26.8; London 17.1; Manchester 23.4; Nottingham 22.1; Sheffield 27.6; Sunderland 25.8. In Edinburgh 19.2; Glasgow 23.7; Dublin 26.6.

For the week ending September 20th, in the Swiss cities, there were 29 deaths from consumption, diarrhœal diseases 20, lung diseases 16, typhoid fever five, diphtheria and croup three, whooping-cough two, small-pox, scarlet fever, and erysipelas each one. The death-rates were, at Geneva 12.2; Zurich 9.8; Basle 10.8; Berne 16.7.

The meteorological record for the week ending October 4th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Sept.–Oct., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 28	29.839	71	81	60	90	62	90	81	SW	SW	SW	10	7	7	O	C	O	—	—
Mon., 29	29.898	72	83	66	81	46	73	67	W	W	NW	13	[illegible]	10	C	C	F	—	—
Tues., 30	30.159	65	73	61	72	57	76	68	W	SW	SW	3	4	5	O	O	O	—	—
Wed., 1	30.135	70	83	61	86	47	50	61	SW	W	NW	9	12	14	O	C	O	—	—
Thurs., 2	30.372	54	64	52	55	67	60	61	N	E	SE	9	8	7	O	O	O	—	—
Fri., 3	30.315	51	55	48	60	58	79	66	E	SE	SE	20	4	12	O	O	R	—	—
Sat., 4	29.811	70	80	49	89	61	88	79	W	W	W	16	18	19	F	O	R	—	—
Mean, the Week.	30.076	64.6	82.7	56.7				68.9										16.25	0.43

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY FROM OCTOBER 4, 1884, TO OCTOBER 10, 1884.

Clements, B. A., major and surgeon. In addition to present duties to take charge of the office of the Medical Director of the Department during the temporary absence of that officer. Paragraph 1, S. O. 195, Department of Missouri, September 29, 1884.

Happersett, John C. G., major and surgeon. Will be relieved from duty in Department of the East, and ordered for duty at Willet's Point, New York.

Woodruff, Ezra, captain and assistant surgeon. Granted leave of absence for four months. S. O. 235, A. G. O., October 7, 1884.

Cronkhite, Henry M., captain and assistant surgeon. Assigned to duty as post surgeon, Fort Reno, Ind. Ter. S. O. 197, Department of Missouri, October 2, 1884.

Crampton, L. W., captain and assistant surgeon. Granted leave of absence for one month and ten days. S. O. 60, headquarters Division of the Atlantic, October 2, 1884.

Powell, J. L., captain and assistant surgeon. Granted leave of absence for one month on surgeon's certificate of disability.

Spencer, Wm. G., captain and assistant surgeon. Granted leave of absence for one month. S. O. 204, headquarters Department of the East, October 8, 1884.

McCreery, Geo., first lieutenant and assistant surgeon. Assigned to duty at Fort Meade, D. T. S. O. 115, headquarters Department of Dakota, October 6, 1884.

Taylor, A. W., first lieutenant and assistant surgeon. Assigned to duty at Fort Omaha, Neb. Paragraph 3, S. O. 87, headquarters Department of the Platte, October 3, 1884.

Black, C. S., first lieutenant and assistant surgeon. Granted leave of absence for fifteen days to take effect this date. Paragraph 3, S. O. 131, Department of Texas, September 29, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY DURING THE WEEK ENDING OCTOBER 11, 1884.

Lippincott, G. C., passed assistant surgeon. Granted sick leave. October 4, 1884.

Whiting, Robert, passed assistant surgeon. To the Naval Hospital, New York. October 6, 1884.

Brown, S. A., passed assistant surgeon. Resignation accepted. October 7, 1884.

Brush, George R., surgeon. Detached from the Vandalia and placed on waiting orders. October 8, 1884.

Craig, Thos. C., passed assistant surgeon. Detached from the Vandalia and placed on waiting orders. October 8, 1884.

Ayres, Jos. G. Leave of absence for one month. October 10, 1884.

Oberly, A. S., surgeon. To the Naval Hospital, Portsmouth, N. H. October 10, 1884.

Cleborne, C. J., medical inspector. Detached from duty at Portsmouth, N. H., and placed on waiting orders. October 10, 1884.

Steele, Jno. W., passed assistant surgeon. Detached from the Brooklyn and placed on waiting orders. October 10, 1884.

Boyd, Jno. C., passed assistant surgeon. To duty at Navy Yard, Washington, D. C. October 10, 1884.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, JULY 1, 1884, TO SEPTEMBER 30, 1884.

Bailhache, P. H., surgeon. To proceed to Delaware Breakwater Quarantine Station as inspector. September 10, 1884.

To investigate reported pollution of Potomac River water supply. September 20, 1884.

Miller, T. W., surgeon. Granted leave of absence for fourteen days. July 10, 1884.

Detailed as president Board of Examiners. September 2, 1884.

Wyman, Walter, surgeon. Detailed as member Board of Examiners. September 2, 1884.

Long, W. H., surgeon. Granted leave of absence for twenty days. July 30, 1884.

Purviance, George, surgeon. Detailed as recorder Board of Examiners. September 2, 1884.

Stoner, G. W., passed assistant surgeon. To proceed to Lewes, Del. (Delaware Breakwater), as inspector. July 25, 1884.

To act as quarantine officer at Delaware Breakwater. July 31, 1884.

Fisher, J. C., passed assistant surgeon. Granted leave of absence for thirty days. August 21, 1884.

Goldsborough, C. B., passed assistant surgeon. Granted leave of absence for thirty days. July 12, 1884. Leave of absence extended thirty days on surgeon's certificate of disability. August 11, 1884. Leave of absence extended thirty days without pay. September 11, 1884.

Heath, W. H., passed assistant surgeon. Granted leave of absence for thirty days. September 8, 1884.

Guitéras, John, passed assistant surgeon. Granted leave of absence for thirty days. September 24, 1884.

Banks, C. E., passed assistant surgeon. Granted leave of absence for thirty days. August 27, 1884.

Bennett, P. H., assistant surgeon. To proceed to Buffalo, N. Y., for temporary duty. September 19, 1884.

Glennan, A. H., assistant surgeon. To proceed to Mobile, Ala., for temporary duty. July 7, 1884.

RESIGNATION.

Fisher, J. C., passed assistant surgeon. Resignation accepted by the Secretary of the Treasury, to take effect September 30, 1884. August 21, 1884.

Died. — At Shelburne, Mass., October 4, 1884, Charles Morris Duncan, M. D., M. M. S. S., aged seventy-six years.

Original Articles.

WEIGHT AS AN INDICATION OF THE CHARACTER OF RISKS FOR LIFE INSURANCE.[1]

BY JOEL SEAVERNS, M. D., OF ROXBURY.

The Royal Arcanum, a beneficiary organization, which has to-day nearly 50,000 members, in all the States of the Union except the Gulf States, and has paid out since January, 1868, over $3,000,000 in life insurance to the families of its deceased members, has among its records up to March 1, 1884, details of the deaths of 974 men between the ages of twenty-one and sixty. These details include, together with the family and personal history of the individuals, statements of their age, occupation, height, weight, rate of pulse and respiration, results of auscultation and percussion of chest, and an examination of the renal secretion, certified to by a medical examiner on their entrance to the Society. At their deaths is added to these facts a certificate signed by the attending physician, giving the duration of the fatal illness, its supposed cause, symptoms, and diagnosis, and the results of the autopsy if one is held.

From this store-house of facts, to which I have been allowed access, many important generalizations may be drawn, bearing upon the selection of lives for life insurance. On only one point to-day, that of weight, and its relation to height, I address you.

You are all aware that for life insurance purposes tables have been constructed giving what is considered the natural standard of weight and height. These tables vary but little in different works on this subject, and that which I shall refer to to-day is embodied in the tables on page 386.

The general directions in companies and societies are that while this proportion is the natural one, a variation of twenty per cent. from it in either direction is not to be deemed a cause for rejection. I am inclined to think that as regards the candidates of light weights (those whose weight is below the standard) less latitude should be allowed, and that a variation of even fifteen per cent. in that direction makes the risk hazardous, and that every applicant whose weight is materially below the standard, even ten to fifteen per cent., should be examined with the utmost care, not only to ascertain whether he has actually at that time any *disease*, but whether there may not be some tendency to disease, some weakened, malformed, or imperfectly developed organ, some functional ill performance of the vital processes of digestion, assimilation, or absorption, which if conditions of life should be unfavorable may prove to be the starting point of constitutional disease.

Men are thin for various reasons: some because in their families is a hereditary tendency to be so; some because they have diseased lungs, heart, or digestive organs; some because they have recently been sick or are over-worked, or have too much anxiety and care, or are illy fed; and the examiner should in each instance gravely scrutinize the problem to see what is in *that* case the special cause of this effect, and whether it may not be a cause that threatens to shorten a man's years, or at least an influence, which shows in what direction to look for future illness or death. And thus, for instance, if there has been in the family history any case of hereditary disease, — especially of constitutional wasting disease, — or if there has been in the personal history any of those symptoms or diseases that so often precede tuberculosis, such as impaired digestion, hæmorrhoidal tumors, fistulas, etc., and the applicant is at what may be called the consumptive age (under thirty-five or forty years old), he should be unhesitatingly *rejected*, as one who is not likely to live out his estimated expectancy.

With reference to this question I have made an examination of these 974 deaths with this showing: Amongst them were 138 men, who at their admission were fifteen per cent. or more below the standard of weight that we have referred to, and of this 138 eighty-five, or about sixty-two per cent., died of chronic disease, seven from accident or suicide, and only forty-six of acute diseases. Of the eighty-five chronic cases, forty-two were from phthisis, tabes mesenterica, or pulmonary hæmorrhage; seven died of organic disease of the brain or medulla, caries of the vertebræ, progressive muscular atrophy, and general paralysis of the insane; six died from cancer; three from diseases of the liver; nine from urinary diseases (five of Bright's disease, two from diabetes mellitus, one from chronic cystitis and abscess of the kidneys, and one of stone in the bladder); five died of organic disease of the heart; one of pernicious anæmia, and one of "general debility." The acute cases included pneumonia and other lung diseases, typhoid fever, and diseases of the digestive organs.

Ninety-one of these men were under forty years of age when admitted, thirty between forty and fifty, and only seventeen more than fifty.

Twenty-two died in less than a year after admission, twenty-nine in between one and two years, thirty-four in between two and three years, thirty-six in between three and four years, thirteen in between four and five years, and but four lived more than five years. The average duration of their membership was about thirty-one months.

Now of these 138 only thirty-three were twenty per cent. below the normal standard, 105 being in that border-land between what is usually considered safe and the line which I claim should be the dividing boundary; twenty-four of the thirty-three lightest ones were cases of chronic disease, thirteen being of phthisis.

Only nine were more than twenty-five per cent. below the standard, and all but two of these died of some organic disease, four from phthisis.

This is, in brief, a summary of the deaths of such of the 974 deceased members as were at the time of their admission fifteen per cent. or more *below* the usual weight, and in order that the results may be shown more clearly to you I have drawn them up in tabular form and printed them, that you may at a single glance see how extraordinarily prone to constitutional disease are such candidates. And I feel confident that the table will prove conclusively that such risks ought not to be accepted in life insurance.

Let us now reverse the picture. Among the 974 deaths were those of 122 members who, on joining the Society, were fifteen per cent. or more *above* the weight assumed to be the normal one.

Of these, leaving out fifteen who died of casualties and five who committed suicide, fifty-six, or about forty-

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[1] Read before the Massachusetts Medical Society, June 11, 1884, and recommended for publication.

LIST OF 138 DEATHS AMONG PERSONS WHO WEIGHED FIFTEEN PER CENT. OR MORE BELOW THE NORMAL STANDARD.

Height. Feet, Inches.	Standard Weight. Pounds.	Fifteen Per Cent. less.	Twenty Per Cent. less.
		Pounds.	Pounds.
5 0	120	102	96
5 1	124	105	99
5 2	128	108¾	102
5 3	132	112	106
5 4	136	116	109
5 5	140	119	112
5 6	144	122	115
5 7	150	127	120
5 8	156	133	125
5 9	162	138	130
5 10	168	143	135
5 11	174	148	140
6 0	180	153	144

Number.	Age.	Height, Feet and Inches.	Weight, Lbs.	Lived, Months.	Cause of Death.
21	56	5 6½	121	7	Abscess of Liver.
27	38	5 10	136	3½	Marasmus.
33	33	5 10	136	5½	Acute Bronchitis.
34	28	5 8	127	4	Brain.
36	28	5 9½	130	11	Melancholia (Suicide).
37	36	5 9¼	140	11½	Ulceration of Bowels.
46	29	5 9	130	4	Cholera Morbus.
58	43	5 10	135	21	Diabetes Mellitus.
75	34	5 10	135	17	Chronic Laryngitis.
89	24	5 9	128	9	Phthisis.
104	33	5 9	122	26	Tuberculosis of Intestines
105	31	5 8	125	20	Phthisis.
118	21	5 8	125	9	Typhoid.
122	36	6 0¼	136	13	Organic Disease of Medulla.
144	42	6 4¼	148	28	Congestion of Lungs.
154	29	5 6½	118	14	Pyæmia.
160	26	5 10	130	6	Typhoid Fever.
166	43	5 11	145	23	Bright's Disease.
178	31	5 10	123	21	Ulceration of Bowels.
193	47	5 10	140	21	Pneumonia.
195	42	6 2¼	155	8½	Pneumonia.
201	54	5 9	135	11	Pneumonia.
211	28	5 8	120	11	Pneumonia.
215	23	5 10	140	28	Pneumonia.
220	48	5 10½	145	33	Heart (Organic).
230	35	5 11½	125	29	Phthisis.
239	32	6 0	148	25	Peritonitis.
249	31	5 10	140	19	Phthisis.
253	35	5 8	125	31	Cystitis.
254	22	5 10	120	35	Ulceration of Bowels.
265	51	5 9	120	26	Rheumatism of Heart.
270	31	5 5	116	21	Empyema.
274	24	6 0	152	29	Cancer.
282	34	5 9½	135	40	Pneumonia.
286	40	5 7	125	3	Asthma and Nervous Exhaustion.
288	42	5 8	125	3	Dysentery.
293	43	5 9½	136	42	Cancer
305	46	5 9	135	38	Disease of Liver.
310	35	5 10	136	7	Typhoid Fever.
311	27	5 9	135	29	Pulmonary Hæmorrhage.
317	53	6 0	150	23	Pernicious Anæmia.
329	27	5 9½	130	40	Phthisis.
378	32	5 7	122	20	Phthisis.
381	31	5 8	123	33	Cancer.
383	24	5 6	115	8	Typhoid.
386	25	6 0	137	33	Phthisis.
391	21	6 2	150	35	Phthisis
394	58	5 4½	115	48	Bright's Disease.
398	32	5 8½	135	37	Phthisis.
401	22	5 10½	132	22	Phthisis.
409	52	5 8½	130	7½	Drowned
411	46	5 10½	140	58	Accident.
421	22	5 10½	130	52	Phthisis
425	50	5 8½	128	17 dys.	Cerebral Congestion.
429	29	6 0	150	58	Typhoid Fever
430	32	5 10½	140	22	Typhoid Fever.
436	20	5 11	145	48	Phthisis
438	44	5 9	135	30	Chronic Diarrhœa.
440	30	6 1½	156	13	Otitis Interna, etc.
443	22	5 7	116	25	Phthisis
445	39	5 6	120	34	Phthisis
451	33	5 8½	134	22	Gastritis.
453	27	5 7	121	40	Bronchitis
461	40	5 10	130	51	Pneumonia
462	28	5 6	120	35	Cerebro-Spinal Meningitis.
471	41	5 4	115	16	Bright's Disease
474	48	5 11	145	32	Ulceration and Perforation of Bowels
475	25	5 10	135	35	Typhoid Fever
481	34	5 8	130	43	Phthisis
487	30	5 4½	115	23	Pneumonia.
493	33	6 0	150	40	Phthisis
502	42	6 0	145	42	Psoas Abscess, etc
510	58	5 10	135	69	Phthisis
[illegible]	49	5 10	135	38	Carbuncle.
552	52	5 10½	135	48	Cancer.
[illegible]	38	[illegible]	110	42	Cerebro-Spinal Meningitis

Number.	Age.	Height, Feet and Inches.	Weight, Lbs.	Lived, Months.	Cause of Death.
556	31	5 6	120	28	Phthisis.
569	34	5 11½	150	15	Valvular Disease of Heart.
595	52	6 0	150	47	Pneumonia.
606	28	5 10	130	32	Chronic Gastritis.
612	40	6 1	150	43	Phthisis.
616	44	5 8	127	32	Bright's Disease.
619	22	5 10	140	45	Phthisis.
621	54	6 0	145	30	General Debility.
625	48	5 9	125	48	Intussusception.
628	31	5 6	120	20	Phthisis.
629	50	5 8	125	39	Pneumonia
644	49	5 11½	145	59	Phthisis following Pneumonia.
653	23	5 10	134	56	Catarrho-Malarial Fever.
664	49	5 9	135	9	Diabetes Mellitus.
666	34	5 10½	144	44	Phthisis.
690	37	5 8½	135	55	Phthisis.
696	24	5 9½	136	18	Cancer.
699	25	5 6	120	37	Phthisis.
703	27	5 10½	126	27	Phthisis.
707	42	5 6	120	53	Typhoid Pneumonia.
709	35	5 8	130	43	Stone in Bladder.
713	24	5 10	138	24	Phthisis.
716	42	5 10	140	57	Disease of Lungs and Heart, Chronic.
719	27	5 10	135	28	Phthisis.
722	23	5 10	140	19	Measles
730	28	5 10	130	15	Phthisis
762	51	5 9½	125	29	Typhoid Pneumonia.
769	35	5 9	135	48	Pulmonary Hæmorrhage, Phthisis.
773	40	5 8½	125	57	Softening of Brain.
779	21	5 3	110	18	Phthisis.
780	51	5 8½	135	16	Apoplexy.
784	38	5 10½	145	40	Congestive Chill.
789	32	6 0	150	35	Typhoid.
790	31	6 0½	150	41	Bright's.
791	35	5 11	136	43	Phthisis.
792	59	5 6	122	41	Cerebral Hæmorrhage.
797	22	5 10½	128	23	Phthisis.
801	28	5 10	135	31	Marasmus.
807	32	5 11	127	47	Phthisis.
812	38	5 10	140	45	Softening of Liver.
816	47	5 10	130	57	Progressive Muscular Atrophy.
819	34	5 7½	125	7½	Typhoid.
828	28	5 11½	143	48	Phthisis.
839	46	5 9	135	32	Paralysis of Heart.
842	50	5 8½	130	44	General Paralysis of Insane.
846	33	5 10	140	10	Caries of Spine.
860	23	5 11½	148	46	Inflammation of Brain, Acute.
874	22	5 10½	140	44	Typhlitis.
898	48	5 11	147	34	Apoplexy.
902	49	5 10	125	31	Congestion of Liver, Acute.
903	28	5 11	145	62	Casualty.
920	34	6 0	143	14	Pneumonia.
922	38	5 10	135	31	Pleuro-Pneumonia.
923	43	6 0	145	48	Pneumonia.
929	28	5 10	135	2	Suicide.
937	31	4 11	98	69	Drowned.
940	25	6 0	145	56	Phthisis.
944	22	5 10	140	19	Pneumonia.
945	50	6 0	150	66	Cancer.
955	36	5 9½	125	65	Drowned.
960	28	5 9	135	63	Typhoid.
972	21	5 5½	111	40	Paralysis of Heart.

LIST OF 122 DEATHS AMONG PERSONS WHO WERE MORE THAN FIFTEEN PER CENT. IN EXCESS OF THE NORMAL STANDARD WEIGHT.

Height, Feet and Inches.	Standard Weight	Fifteen Per Cent. Excess.	Twenty-five Per Cent Excess.
	Pounds.	Pounds.	Pounds.
5 0	120	138	150
5 1	124	142½	155
5 2	128	147	160
5 3	132	152	165
5 4	136	156	170
5 5	140	161	175
5 6	144	166	180
5 7	150	172	187½
5 8	156	178	195
5 9	162	186	202½
5 10	168	193	210
5 11	174	200	218
6 0	180	207	225

Number.	Age.	Height, Feet and Inches.	Weight, Lbs.	Lived, Months.	Cause of Death.
2	26	5 11	245	8	Brain (Congestion).
6	57	5 6	175	7	Heart (Cardiac Asthma).
11	36	5 10	235	8	Heart (Embolism).
14	36	5 10½	200	1	Yellow Fever
17	36	5 10	210	3	Brain (Paralysis).
20	50	5 11½	260	4	Heart (Fatty).
41	35	5 8	225	10	Bright's.
78	43	5 8	200	11	Ulcer of Stomach.
92	44	5 6	192	18	Casualty.
97	45	5 6	190	17	Gastric Ulcer.
99	46	5 9	198	21	Suicide.
115	41	5 6½	190	12	Cholera.
134	54	5 10	215	29	Rheumatism and Heart.
135	35	5 8	180	4	Cerebritis.
145	56	5 10	200	19	Brain Congestion.
162	39	5 9½	194	34	Spinal Injury.
163	59	5 4	160	9	Apoplexy.
169	57	6 1	220	4	Brain (Softening).
191	34	5 9½	195	27	Typho-Malaria.
194	53	5 4½	175	20	Cystitis.
204	40	5 10½	215	28	Narcotism.
210	41	5 7	185	18	Lungs, Congestion.
212	59	5 4½	165	24	Heart, Valvular Disease.
213	42	5 5½	193	30	Bright's Disease.
216	46	5 8	200	20	Casualty.
217	25	5 8½	200	10	Suicide.
219	36	5 8	185	2	Casualty.
223	42	5 11½	245	12	Pneumonia.
236	45	5 10	210	9	Pneumonia.
251	48	6 3	240	9	Brain Inflammation.
252	59	5 6	200	14	Heart, Valvular.
262	45	5 8	191	20	Hepatitis (Acute).
266	54	5 8½	190	17	Atheroma.
273	47	5 9	205	21	Brain (Congestion).
289	43	5 5½	182	22	Hæmatemesis.
291	45	5 8½	212	15	Jaundice (Acute).
294	41	5 8½	185	12	Heart Hypertrophy.
300	30	5 8½	200	15	Casualty.
312	37	5 9½	195	11	Myelitis.
313	43	5 7	176	38	Heart.
315	30	5 10	210	45	Typhoid Fever.
316	37	5 7½	195	29	Bright's Disease.
323	37	5 7	180	17	Endocarditis.
324	28	5 7½	195	11	Typhoid Fever.
332	54	5 8½	185	14	Casualty.
334	41	5 7	175	28	Bright's Disease.
372	45	5 8	180	44	Heart.
373	36	5 11	235	44	Aortic Aneurism.
374	40	5 7	180	53	Bright's Disease.
389	43	5 9	198	[illegible]	Bright's Disease.
404	59	5 9	191	34	Typhoid Fever.
422	50	5 8	190	34	Pneumonia.
439	35	5 10	195	22	Bright's Disease.
457	52	6 0	248	28	Heart Fatty.
460	48	5 4½	193	29	Apoplexy.
465	38	5 10	235	33	Typhoid Fever.
468	53	5 10½	220	15	Apoplexy.
469	44	5 10½	225	31	Carbuncle.
480	36	6 0	229	1	Suicide.
483	46	5 8	180	41	Heart (Rheumatism).
491	58	5 7½	186	22	Bright's Disease.
506	58	5 5½	195	36	Apoplexy.
512	38	5 4½	185	4	Brain (Congestion).
513	39	5 3	157	31	Rheumatism (Acute).
514	44	5 11	215	59	Bright's Disease.
515	36	5 8	180	44	Caries of Spine.
521	44	6 0½	235	10	Heart (Paralysis).
523	52	6 1	220	4	Casualty.
524	32	5 7	180	2	Bowels (Congestion).
531	40	5 10½	206	27	Liver (Atrophy).
534	46	5 9½	250	33	Abscesses.
535	40	5 8½	190	51	Brain (Softening).
539	37	5 9½	200	20	Typhoid Fever.
548	56	5 9	200	5	Cerebritis.
549	48	5 8	179	42	Bright's Disease.
550	59	5 5½	180	37	Casualty.
565	45	5 8	185	8	Casualty.
573	51	5 8½	194	22	Spinal Sclerosis.
577	45	5 6	187	30	Pneumonia.
578	23	5 9	200	30	Malarial Fever.
582	54	5 11½	240	35	Heart (Rheumatism).
585	43	5 8	185	47	Bowels (Hæmorrhage).
588	59	5 7½	176	52	Liver (Degeneration).
591	33	6 2	234	57	Pneumonia.
596	32	5 6	172	56	Casualty.
599	53	5 8	196	3	Bowels (Inflammation).
601	37	5 10½	204	13	Suicide.
603	54	5 11	223	21	Pneumonia.
614	51	6 6	169	20	Apoplexy.
615	56	5 8	210	24	Heart (Paralysis).
626	49	5 11	225	44	Heart (Paralysis).
649	35	5 9	200	21	Enteric Fever.
669	52	5 5	185	51	Apoplexy.
671	52	5 8	185	21	Suicide.
679	43	5 10	200	45	Apoplexy.
682	57	5 10	200	57	Bright's Disease.
683	47	5 8½	185	12	Casualty.
688	58	5 8½	214	10	Brain.
689	59	5 10	205	22	Brain (Paralysis).
694	50	5 9¾	200	21	Cancer.
698	41	5 3	160	26	Casualty.
725	36	5 8	187	51	Nephritis.
742	37	6 1	230	13	Bowels.
755	54	5 8	192	16	Heart.
759	54	5 9	190	54	Bright's Disease.
760	59	5 10	220	31	Brain (Softening).
799	34	5 7	180	43	Cancer.
804	31	5 7	182	53	Bladder.
823	47	5 6	170	7	Heart (Paralysis).
825	38	5 6½	180	43	Nephritis (Acute).
831	58	5 8½	236	17	Apoplexy.
838	48	5 6	174	72	Apoplexy.
845	36	5 8¾	235	41	Œdema of Glottis.
852	57	5 4	182	45	Heart (Fatty).
863	51	5 5	165	21	Suicide.
872	37	5 6	170	67	Liver (Atrophy).
906	54	5 7	212	60	Bright's Disease.
915	38	5 6½	170	52	Tetanus.
935	50	6 0	245	66	Heart (Valvular).
962	33	5 7½	193	42	Diabetes.
969	50	5 7	175	74	Apoplexy.
971	51	5 4	180	54	Cancer.

six per cent., died of some lingering illness, and forty-six of acute attacks.

Twenty-six of the deaths were from disease of the brain or spine (twelve being apoplectic); twenty-four from disease of the heart and circulatory system; sixteen from disease of the kidneys and urinary organs (including twelve of Bright's disease); eleven died from diseases of the abdominal organs; fourteen from zymotic diseases; and seven of acute lung diseases. None died of phthisis, and but three of cancer.

It will be remembered that among the *light* weights ninety out of 138 were under forty years of age on joining, but of these *now* under consideration eighty-three of 122 were *over* forty when admitted, forty-three between fifty and sixty, and only four were less than thirty. Their average age was forty-five years.

Twenty-eight died in less than a year after being taken into the Society; thirty-six in between one and two years; twenty-four in between two and three years; seventeen in between three and four years; twelve in between four and five years; and but five lived more than five years. The average duration of their membership was twenty-seven months.

Now in that border-land, as I have called it, between fifteen per cent. and twenty per cent., among the heavy weights there were but forty-seven who have died (whilst there were, it will be remembered, 105 of the light weights), and of this forty-seven twenty died of cerebral or cardiac affections, eleven from casualties and suicides, eight of zymotic and intestinal disease, six from urinary complications, and two from cancer.

It is not until we get beyond the twenty per cent. line in this class that the principal part of the deaths occur, namely, seventy-five, thirty being from brain or heart disorder. Going still farther, it appears that there were forty-nine whose weight was more than *twenty-five per cent.* in excess of the standard, some of these exceeding forty per cent., and a few reaching even fifty per cent. beyond that rate. But of these excessive weights the cause of death was hardly what might have been anticipated, for there is no increased preponderance of brain or heart disease, the figures of those over twenty-five per cent. being twenty-two in those diseases, six of diseases of the kidneys, six casualties, nine zymotic and digestive diseases, and all other causes six, the character of the changes which proved fatal seeming to be rather those peculiar to senile degeneration than those of fatty changes, it being borne in mind that more than a third of the men of excessive weight were over fifty years old, and more than two thirds over forty.

If, in summing up, the results of the two classes of cases be compared, it is to be noticed, first, that the *number* of those dying who are deficient in weight is greater than of those who have a superabundance of adipose tissue. This point cannot be accurately tested, of course, without knowing how many of each class have been admitted to the order, and this could only be done by too great labor, but I am satisfied that the number of those admitted who are fifteen per cent. or more *above* weight is greatly in excess of those fifteen per cent. or more *below* the standard, while the deaths, as has just been said, are more frequent among the latter.

It further appears, too, that as to the character of diseases to which they succumb there are more of those light in weight who die of chronic constitutional diseases, and more of those heavy in weight who die of accident, zymotic or acute diseases, though many of the latter fall victims to diseases of the arteries and the heart. *Sudden* deaths also are much more frequent with the heavy weights.

Still farther, it seems that the deaths are not so frequent of the heavy men who are but little (fifteen to twenty per cent.) *above* the standard as among the light weights who are fifteen to twenty per cent. below.

The conclusion which I have therefore reached from these observations is, very briefly, this: that for life insurance purposes men whose weight is above that laid down in the usual tables are better risks than those whose weight is less; that among the latter (light weights) the usual variation of twenty per cent., which is assumed to be within safe limits, is not safe, and that if we accept men, especially young men, whose weight is fifteen per cent. below the standard, we are approaching dangerous standing ground, and inviting, as it were, deaths from phthisis and wasting diseases; and when we reflect how great is the mortality from phthisis in all insurance organizations we cannot too strongly emphasize the necessity of constant vigilance in this direction, and of not only exploring most carefully the chest of such men, but also of taking into account all these other features which I think often precede the changes in lung tissue discernible by the ear, and may be observed at what may be called the pre-tuberculous stage.

With the heavy weights the case is different; free from danger of phthisis, we must, to be sure, take the greatest care to see that the heart and kidneys are healthy, and that the family history does not point to cerebral disease. With these points well guarded I am satisfied that an excess of twenty-five per cent. in weight is not dangerous in men who have not injured or are not injuring themselves by alcohol.

It may be said very truly that much in both classes must depend on the family history and inborn tendencies to disease of the parties, and that in this resume I have not dwelt on this subject, but in *most* of the cases here cited the family history did *not* indicate danger from constitutional disease, because the greater number of such applicants as have anything unfavorable in those respects are rejected when they apply. These tables, therefore, have been made up largely and almost entirely of men whose deficiency or excess of weight was the *only* unfavorable feature at the time of their being accepted, this feature not having been then regarded as sufficiently important to have a determining effect on the question of rejection.

EXTIRPATION OF A RETRO-RENAL SARCOMA BY ABDOMINAL SECTION.[1]

BY JAMES R. CHADWICK, M. D., BOSTON.

MRS. A. M. E., aged fifty-two, a widow, had had two children and five miscarriages. For twenty years she had occasionally had functional urinary disturbances. Since the birth of the last child, ten years ago, she had been in fair health except that for a year she had been having night sweats, chills, and been losing flesh and strength. In January, 1884, she had a very severe backache, attributed to cold, which was finally relieved by Dr. C. E. Stedman, who recognized no special cause until the fullness of her abdomen led him to the discovery of a tumor in the region of the left kidney early in April.

Early in May I was called by him in consultation, when the left side of the abdomen was found to be filled by a rounded, slightly nodular growth, which extended from the lumbar region to the median line laterally, and from the ribs down to the anterior superior spine of the ilium. Dr. Stedman and I (as did Dr. G. H. Lyman, and Dr. J. C. Guptill, of Northborough, subsequently) concurred in the diagnosis of enlarged kidney, probably malignant, which was apparently confirmed by a report from Dr. E. G. Cutler, that a specimen of the blood was "apparently not leucocythemic," and by the following result of an analysis of the urine by Prof. E. S. Wood: "Albumen, very slight trace. Considerable pus, some of which is in clumps; little blood; small round cells; an occasional small granular cast; no excess of bladder or vaginal epithelium." Dr. Wood appended these remarks, of which the accuracy was remarkably verified subsequently: —

"There is certainly some trouble high up in the urinary passages, but I cannot tell its exact nature. The absence of any excess of bladder or vaginal epithelium shows that the pus does not come from those membranes, and the absence of any large number of casts shows that it probably does not come from the kidney itself. The only other place is the pelvis of the kidney, and your tumor may be a dilated pelvis or *a morbid growth somewhat affecting the mucous membrane of the pelvis of the kidney.* But I cannot make a positive diagnosis. All that I can say is that the urine is not inconsistent with such a theory, and that there is probably some chronic inflammation of the pelvic mucous membrane."

On learning the desperate character of the growth the patient imperatively demanded the small chance of recovery held out to her through extirpation of the diseased kidney. On May 27th she accordingly entered my private hospital for operation.

In studying the literature of the subject, especially the recent papers by Drs. Harris[1] and Homans,[2] I was impressed by the idea, as I now think unduly, that one of the chief immediate dangers of the operation is deficient secretion of urine, for quite a number of the deaths, reported by these writers in their tables, were apparently attributed to "anuria" or "uræmia." In order to diminish the danger to my patient from this source I sought to stimulate her kidneys to secrete double the normal amount, and to reduce the amount of urea by restricting her diet to food containing but a small amount of nitrogen. By discontinuing the daily small amount of morphine (half a grain) upon which she had become dependent, by administering half a drachm of acetate of potash three times a day, I so far succeeded in my purpose as to increase the daily amount of urine passed from one pint to four pints, although it again decreased to two pints on the day before the operation. By a diet of milk and gruels I assumed that the excretion of urea was reduced to one half the normal amount, as has been demonstrated to result from such a diet. In other respects the woman's condition was fairly good, though she was much reduced in strength and flesh.

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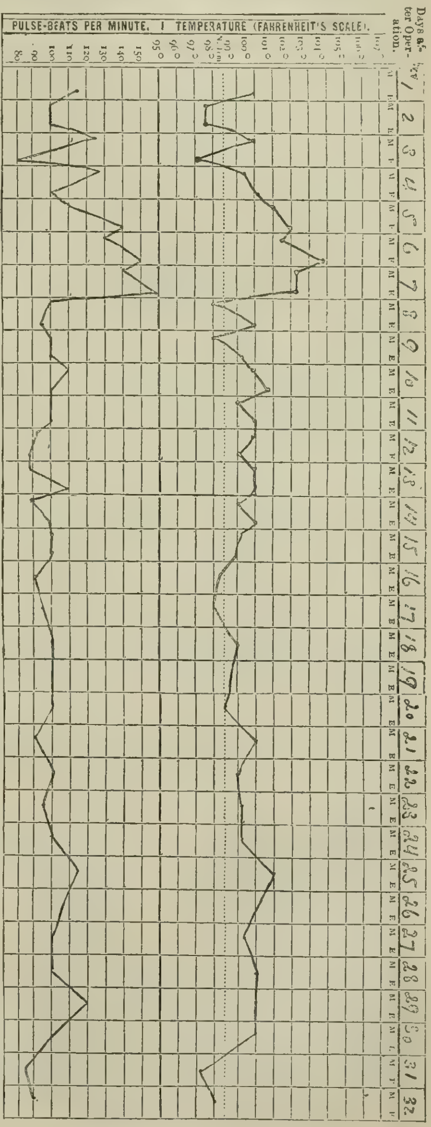
[1] Read before the Obstetrical Society of Boston, June 14, 1884.

Tuesday, June 3, 1884. Operation at eleven A. M., assisted by Drs. C. E. Stedman, J. W. Farlow, and C. M. Green, in presence of Drs. B. Cushing, J. E. Kelly, R. T. Edes, and C. P. Putnam. Ether administered by Dr. F. H. Lombard. An incision about nine inches long was made in the median line of the abdomen, this location being selected because the tumor was manifestly too large for extraction through a lumbar incision, because for the same reason it was thought that an incision in the linea semilunaris would give a less easy access to the renal vessels, which it was my wish to ligate before I raised the kidney from its bed. The left rectus muscle was so rigid that it was found necessary to make a transverse incision, two inches long, through it at the level of the navel in order to expose the tumor. The stomach was found overlying the upper part of the tumor and was pushed upwards. The transverse colon crossed the tumor at its middle, its mesentery investing the lower portion of the tumor and containing many large vessels. The peritonæum investing the portion of the tumor about the colon was devoid of large vessels, and was consequently selected as the place for incision through which to enucleate the tumor. While incising this peritoneal layer every fine bleeding point was tied with silk sutures. The tumor was seen to be about the size and shape of an ostrich egg. Its lower rounded end was entirely invested with peritonæum, which was slowly peeled off with the fingers, every vessel which ran into the tumor being tied on both sides before being cut. The ureter, which passed to the right of the tumor and was not involved in it, was carefully avoided. The kidney rested upon the upper end of the tumor on its inner side, having been lifted from its bed by the tumor; it was closely bound to the tumor by adhesions, which were separated with but one slight laceration of the renal tissues, the oozing of blood from which was checked by the benzine cautery. At this point the pulse failed and respiration ceased, although not more than six to eight ounces of blood had been lost. Subcutaneous and rectal injections of brandy together with artificial respiration slowly revived the patient. The only remaining attachment of the tumor was to the subrenal cellular tissue; this, which could hardly be called a pedicle, was transfixed with a curved needle and tied in two halves. The tumor was now lifted out of the abdomen. The kidney, which was uninjured, except for the small lesions alluded to, and unimplicated in the growth, was put back in its proper site. All blood-clots were carefully wiped from out the peritoneal cavity, which subsequently remained dry. The two in-



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[1] American Journal Med. Science, N. S., vol. lxxxiv. pp. 109–118, July, 1882.

[2] Boston Medical and Surgical Journal, vol cx., pp 73–77, January 24, 1884.

cisions were rapidly closed with silk sutures and the abdomen covered with borated cotton. The carbolic spray was not used, but otherwise the full antiseptic method was pursued. The room had been thoroughly disinfected on the day before the operation by burning sulphur in it.

The tumor was sent to Dr. W. F. Whitney, curator of the Warren Museum, who reported as follows: "The weight 650 grammes; it is an oval shape, being of the dimensions of 16 × 8 × 5½ centimetres. The structure shows it to be a large round-cell sarcoma, but its origin and finer histology will have to be made out after hardening."

The operation was completed at one P. M. The curves of the pulse and temperature exhibit the changes in her condition for the thirty-two days subsequent to the operation. There was much pain and vomiting during the first week, and a tendency to collapse, which was met by morphine, stimulants, beef juice, champagne, coffee, quinine, etc., chiefly by the rectum. The bowels were moved by an enema on the eighth day. After the eighth day the food was given entirely by the mouth. On the thirteenth day a small abscess near the anus was lanced and some pus evacuated. From this incision a constantly increasing amount of pus escaped until her death, besides numerous large sloughs of the rectum and cellular tissue, constituting a large rectal fistula and pelvic abscess. The abdominal wound healed chiefly by first intention. The silk sutures were removed on sixth to ninth day. After the twentieth day a tumor began to form in the left hypochondriac region, from which six ounces of pus were drawn off by the aspirator on the twenty-ninth day. A second insertion of the aspirator obtained only fresh blood, presumably from the substance of the kidney. The tumor did not entirely disappear, but remained quiescent. The attempt was made on the fortieth day to make a permanent opening in the lumbar region at the point of the previous aspiration. No pus could be reached, but only blood smelling plainly of urine. The urine, for two days after, contained blood, and subsequently pus, until her death, which occurred from exhaustion at the end of the tenth week, owing to lack of recuperative power, and to the drain of the fæcal fistula, which never showed any disposition to heal. An autopsy was accidentally lost.

Before closing I must say a word about the secretion of urine and its character. The following table shows the amount passed in successive periods of twenty-four hours terminating at nine A. M.: —

Day before the operation . .	32	fluid ounces.
First day after the operation . . .	7½	fluid ounces.
Second day after the operation . .	9	fluid ounces.
Third day after the operation . .	36	fluid ounces.
Fourth day after the operation . .	40	fluid ounces.
Fifth day after the operation . .	33½	fluid ounces.
Sixth day after the operation . .	40	fluid ounces.
Seventh day after the operation .	56	fluid ounces.
Eighth day after the operation . .	45	fluid ounces.

Analyses of the urine, made by Prof. E. S. Wood: —

Day before the operation. "Specific gravity 1008. Very slight trace of albumen. Considerable pus, some of which is in clumps. Little blood. An occasional small granular cast. No excess of vaginal or vesical epithelium. Total amount of urea = 12.98 grammes. Total amount of phosphoric acid = 0.88 grammes. Total amount of chlorine = 2.535 grammes."

First day after the operation. "Specific gravity 1027½. A trace of albumen. Numerous granular, brown granular, and fibrinous casts. Very little pus and blood. Renal and pelvic epithelium."

Fourth day after the operation. "Specific gravity 1028. Very slight trace of albumen. Brown granular and fibrinous casts. Large brown renal epithelium, and very little blood. Better than the urine of the first day."

Seventeenth day after the operation. "Specific gravity 1016½. Very slight trace of albumen. *Very* little blood. An occasional blood corpuscle. An occasional hyaline cast and patch of pelvic epithelium. Slight excess of renal epithelium. There is very great improvement so far as the renal hyperæmia is concerned. There is a little pyelitis which, probably, will not last long."

This record shows that the immediate effect of the operation was to produce an acute hyperæmia of one or both kidneys and some pyelitis; that during the forty-eight hours immediately following the operation the amount of urine was greatly reduced, but after that fluctuated within normal limits. That the decreased excretion of urine was not due to the congestion of the kidney is evident from the fact that the amount of urine became and remained normal after the second day, although the hyperæmia persisted, with but gradual abatement, for three weeks and over. I have searched the daily bulletin of this case to explain the diminution and increase of the renal excretion.

Scarcely any liquid was taken by the mouth until after she had a dejection, on the seventh day. During that week she had frequent small enemata of concentrated beef juice, brandy, etc., the total volume of liquid absorbed into the system being small. She had, during the week, from half a grain to a grain of morphine subcutaneously each day. There was no special vomiting attributable to the ether, but frequent regurgitation of fluid throughout the week. The only possible clew which my record shows is derivable from the pulse and temperature curves. On these it will be noticed that the temperature was depressed for the first three days (which includes the day of the operation); that the pulse, though subject to fluctuations, ranged lower than on the subsequent days. For the week of observation before the operation the pulse had never been lower than 110, or the temperature than 100° F. These facts seem to me entitled to great significance in connection with the fluctuations in the amount of urine, and impel me to the belief that the marked deficiency in the amount of urine passed during the forty-eight hours following the operation is in this case attributable to the depressed state of the patient's system, that is, *shock*, and not to the fact of the interference with the kidney and the hyperæmia shown to exist. Applying the same reasoning to the cases of death after extirpation of one kidney, attributed directly or by implication to "anuria" or "uræmia," I feel justified in entertaining a doubt as to the correctness of the assertions. I have hitherto kept no exact measurement of the urinary excretion after severe abdominal operations, but recall distinctly several cases in which the volume of urine passed in the first few days was very small.

I do not believe that a dangerous deficiency of urinary secretion should be regarded as one of the perils of nephrectomy.

SICK HEADACHE.[1]

BY FRANCIS F. BROWN, M. D.

Sick headache, migraine, is a neuralgia. This is not the popular impression. Sufferers from it attribute it to "biliousness." The nausea and vomiting is proof positive to them that their trouble is due to derangement of stomach and liver, and that the headache is consequent upon it. This is not only the popular belief, but it was the doctrine of the systematic works until not many years since. In Wood and in Watson sick headache is discussed under the head of the digestive derangements.

That this disorder is a neurosis is evident from the behavior of the attack, its change in subsequent years into ordinary neuralgia, its local effects in some cases, and its hereditary character and connections with other neuroses.

First. I think no one can watch closely an attack of sick headache, especially if in his own person, without seeing evidence of its neuralgic character.

To begin with, there may be up to the time of the onset not the slightest symptom of gastric or hepatic derangement. The digestion may be perfect, the tongue clean, the bowels regular, there has been no error of diet; in short, evidence of indigestion or faulty digestion may be entirely wanting, and, the attack over, the digestive organs resume their functions perfectly, and continue to do their duty well until temporarily suspended by another paroxysm. Some feel unusually well on the eve of an attack. One gentleman tells me, "I never feel better in my life than the evening before I have sick headache. I go to bed feeling first rate." Persons subject to sick headache have usually premonitory symptoms which tell them an attack is impending. This is important to notice, because treatment, to be of avail to ward it off, must begin before the storm is in full blast. These premonitory symptoms are different in different persons, but are usually the same in the same person, so that the patient, although he cannot, perhaps, give a very clear description of his feelings, is made certain that one is coming. Some of them are sudden noises in the head, flashes of light or globes of fire before the eyes when they are closed, black spots, an appearance like a gauze veil quivering, ability to see only half an object, sleepiness, etc. Whatever they are the patient knows very well what they mean. Gradually or suddenly the pain comes on; it may be like a blow or in great waves advancing and receding. The pain may be principally in one eye or on one side of the head; it usually is worse on one side than the other, even when the whole head suffers. The pain deepens, nausea and vomiting occur, usually at first of mucus, and finally, if severe and prolonged, bile. This vomiting indicates the lowest point of depression of the vital forces. In some cases there is a tendency to sleep, from which the sufferer wakes only to retch and vomit. After a time the vomiting ceases, the nausea subsides, the headache diminishes, and if not gone by bed-time a good night's rest, in a majority of cases, finishes the cure. Soreness of the scalp at the seat of greatest pain may remain the next day if the attack has been severe, and soreness of the abdominal muscles if the vomiting has been prolonged is, naturally, to be expected. In a large majority of cases the whole course of the attack is passed through between sunrise and sunset or a little later. Some, however, and these are usually the hereditary and severer cases, suffer for two or three days of extreme wretchedness before the storm blows over. It is evident that this is something very different from the headache which is consequent upon gastric and hepatic derangement only.

Second. The neurotic character of sick headache is shown by its gradual change with the increasing age of the patient into ordinary neuralgia, preferably of the ophthalmic branch of the fifth nerve. These attacks, as one approaches fifty, become less severe, the nausea and vomiting less pronounced and less common, and what is left as a substitute is an occasional period of neuralgic pain through or over one eye or over one side of the head. At sixty sick headache ceases, as a rule. Anstie[2] says it begins at the age of from fifteen to twenty-five. I think sometimes we see it — or something like it — in young children of neurotic ancestry.

Third. Another fact, as given by Anstie, showing its neuralgic character, is the results which sometimes follow on the track of the fifth nerve, which is the nerve most affected, and the seat of greatest pain, namely, iritis, ulceration of the cornea, blanching of the hair or eyebrow, local anæsthesia and periostitis of the frontal bone. The four latter of these occurred in Dr. Anstie's own person; the local anæsthesia remained permanent.[3]

Fourth. Another point showing its character is the family relations of the disease. That it is often hereditary we all have had opportunities of observing, and the most intractable cases are among those who have had neurotic ancestors. It is closely allied with asthma and epilepsy, and is sometimes the precursor of the latter. It often occurs in persons among whose ancestors epilepsy has made its appearance. Careful inquiry shows that persons suffering from one of these frequently have had one or more of the others. These are the statements of Anstie in the very instructive article already referred to. I have under my own observation a case illustrating the close connection of migraine and asthma. The patient, a lady, has always been a great sufferer from sick headache, and cannot remember when she did not have it. Her mother was a like sufferer. For six years previous to 1882 she resided in Maine, and while there was comparatively free from migraine, but had asthma severely, from which she had been previously free. Since returning to Reading the migraine attacks have resumed their old frequency and severity, while the asthma has nearly but not wholly left her.

Sick headache is more frequent in women than in men, in those who are the subject of other neuralgias than the opposite, and in general is a disease of debility. To this latter statement there are apparent marked exceptions. Occasionally we find a subject of it who carries the appearance of robust health. My impression is that these cases usually belong to families who are subject to it or the allied neuroses. Notwithstanding these apparent exceptions it still remains true that the subjects of migraine, as a class, are below par in health, and apt to be ill nourished and anæmic rather than otherwise. Many, it is well known, in whom the migrainous tendency is not strongly marked remain tolerably free from attacks so long as their general health is good, but suffer frequently from them whenever their system becomes weakened and depressed.

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[1] Read before the Middlesex East District Medical Society.

[2] Practitioner, November, 1872, p. 273.

[3] Practitioner, November, 1872, p. 276.

The immediate occasion of an attack may be anything which tends to exhaust the system, especially overwork, which wearies the body while it taxes and worries the mind, and loss of sleep. Any slight deviation from one's usual routine, like a shopping excursion, or late hours, loss of a meal, or eating at an unusual hour, will induce an attack in some persons. Gastric derangements, like any other, will occasion them, but the notion that so-called "biliousness" is the great cause of sick headache is a mistaken one. The trouble commences at the other end of the line, and the nausea and vomiting are secondary. This does not lessen the importance of keeping the digestive system in good order. But in typical migraine I think exhaustion or loss of sleep is the occasion of ten attacks to one where indigestion is the cause. Undigested food is, I think, not usually seen in the vomit of migraine.

In treatment we aim, first, to avert an impending attack; second, to put the system into such a condition as to render it less liable to one.

First, to avert an impending attack, the most efficient remedies are guarana and caffeine. Thirty grains of the powder, or a teaspoonful of a good fluid extract of guarana, or three or four grains of caffeine, should be given every twenty minutes or half hour till three doses are taken, unless the symptoms sooner show signs of abating. This is a point I wish to emphasize strongly; it is the key to their successful use, namely, to give full doses, and to give them in the very first threatenings of an attack. Your patient will generally know when one is coming. Usually it is useless to give them after the storm is in full blast, though sometimes I have thought its duration was thus somewhat lessened.

Attention to some minor points may aid in averting an attack. When the patient has undergone any unusual fatigue or loss of sleep, anything which his own experience leads him to suspect will be followed by sick headache, I think, I feel quite sure, that a full dose of bromide of potassium, thirty to sixty grains at bed-time, will lessen his liability to it. This drug is useless, it seems to me, after the attack has begun. Under the same circumstances, if the patient is at all constipated, an aloetic laxative, like the old-fashioned *pil Rufi* (one at bed-time), is serviceable. If this has been neglected, a dose of citrate of magnesia may well be taken in the morning with the caffeine. This can usually be tolerated by the stomach. So trifling a matter as slight constipation appears at times to turn the scale under these circumstances.

These are the measures which have usually afforded more or less relief in my own attacks, and in a majority of my patients who have tried them. Many attacks may be wholly averted, in others a dull headache remains as a substitute for an outrageous one. I am bound to admit that in many cases also they fail, but in which ones I cannot tell except by trial. Treatment is most likely to fail in those whose hereditary neurotic tendency is strongly marked, and in those whose circumstances necessitate at times unusual strain and draft on the system. The subject of migraine is like a man whose balance at the bank is always small and soon overdrawn, his other assets are not immediately available; though not bankrupt he is often distressingly hard up. Perhaps this provision of nature is, after all, conservative and salutary, in that it teaches its subject by sharp suffering the limits beyond which he must not pass. And this suggests the question, are the subjects of this disorder, as a class, short lived? My impression is that they are not.

Of more importance than to repel a single assault is it to so fortify the system that none will be made. How to do it must be left to the judgment of the physician in view of the needs of each individual case. Every drain and tax and irregularity that the patient has learned by experience invites an attack must be looked after and stopped. Loss of sleep and irregular hours must be prevented. Over-lactation may be the trouble with one, excess of venery with another, abuse of tea or coffee or tobacco with others, over-feeding with some, under-feeding with many more; this latter is not infrequent, from a notion that in the stomach or liver lies the root of the difficulty. In general build up the patient's health and strength by whatever means seem most indicated. If anæmic, of course give iron. Generally, I think tonic doses of quinine, or of some one of the preparations from Peruvian bark, are of as much service as any one drug. Arsenic is highly commended by some. One of my medical friends who has had considerable personal and other experience with this disorder is certain that one fiftieth grain doses of the iodide of arsenic three times a day, continued for a considerable period, diminishes the frequency and severity of these attacks. If there is the slightest constipation use laxatives, preferably, I think, the aloetic, but avoid purging. A full diet is generally indicated. The physician or nurse when doing night work should not fail to take food in the night. Fasting then makes one doubly liable to an attack the next or second day. The use of fat food, cream, and cod-liver oil is strongly recommended by Austie in this as well as neuralgias generally. A careful and persevering use of such means will, I am satisfied, in a great majority of cases diminish very much the frequency and severity of these attacks.

I wish to add a few words about the use of cannabis indica. In this drug I believe we have a remedy of great value in migraine. My attention was particularly called to it by an article in the *New York Medical Record* of December 8, 1877, by Dr. Seguin, who says that in doses of one third to one half grain of good extract, thrice daily, continued for months, not less than three, it diminishes in a marked degree one's liability to these attacks. My experience of course has been quite limited, but I have had a few patients whose improvement from its use, after the failure of tonic treatment alone, has been very marked. One case, a lady of thirty-three, — whose mother suffered all her life from migraine, and father from migraine and asthma, — who had been having attacks increasing in severity and frequency for months, till she was having one nearly every week, each attack lasting two or three days, experienced immediate relief, and while she had threatenings did not have a decided attack for six months. This was three years ago; her improvement, though not immunity, has continued.

Though some begin to feel relief at once, the drug should not be considered to have had a fair trial till after months of continuous use. I have seen patients relieved after persevering four or five months who saw little or no benefit in three. The notorious uncertainty of the quality of this drug is a decided drawback to a satisfactory trial of it. What proportion of cases will be benefited by it, and how permanent will be the relief, I am not prepared to say.

A GAS FURNACE FOR FIRING DENTAL ENAMELS AND PORCELAINS. CAUSES OF "GASING" IN FIRING TEETH.[1]

BY WILLIAM HERBERT ROLLINS.

The two subjects are combined because by means of the former I have been able to discover the latter. The furnace shown in Figures 1 and 2 will give a heat from a dull red to a light so bright that an object in the muffle is invisible. Looking at the figures will enable any dentist, by means of the following brief description, to make a similar one: The furnace consists of a cylinder of sheet iron ten inches in diameter and eleven inches high. It has a handle and an iron door. The cover is a similar cylinder two inches deep. Both are lined with porous fire clay two inches thick. The furnace walls have four holes in them. Three of these holes give passage to three tuyeres, the fourth is for a No. 3 muffle, the mouth of which is closed by an iron door lined with asbestos. The door is perforated by a platinum tube, through which passes the platinum trial rod with a small spoon end for the test piece. This rod can be withdrawn from time to time to look at the test piece. At the front of the furnace are two iron tubes, one for gas, the other for air. These pass under the fire-clay arch, where they are brought to a yellow heat by the waste gases as they escape through the slit in the top of the furnace. See Figure 2. Each of these tubes divides into three branches at the back of the furnace where the gas tubes enter the air tubes. In this way three double tuyeres are made, their mouths corresponding with the holes in the furnace. This arrangement is necessary, for if the heated air and gas are allowed to mix before reaching the mouths of the tuyeres these would be destroyed by the intense heat. Figure 2 is a perpendicular section of the furnace. The course of the heated gases is indicated by the arrows. A similar furnace for dental metallurgy will be described in another paper.

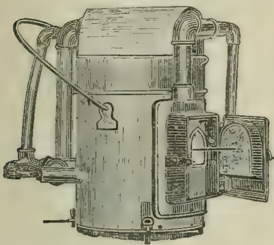

Fig. 1.

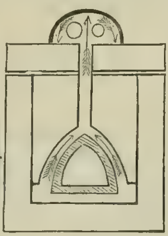

Fig. 2.

Any one familiar with the metallurgy of iron will see that the principles which have been used were discovered long ago. The hot blast was invented by Neilson in 1830. Siemens used gas as a fuel, and heated both this and the air. Using the waste gases to heat the blast is not new. Naphtha has been used to increase the illuminating power of gas, and knowing this, its value for increasing the heating power would occur to any one. Porous fire clay was known in Strabo's time, though T. Fletcher, with his usual capacity for adopting other men's ideas and giving them no credit, has recently reinvented it.

Though the principles were discovered long ago they had never been used together, and by this new combination I have been able to do what has never been done before in a gas furnace, produce heat enough to bake teeth, and this, too, in so short a time as forty minutes from the time the gas is lighted.

CAUSES OF GASING IN FIRING MINERAL TEETH.

In my first experiments for making enamels for filling conspicuous cavities in teeth difficulty was sometimes found in making the enamel base of a pure translucent white. As the result of somewhat elaborate tests it was found that the gray or green tint was due to the reduction of some of the lead oxide. A similar difficulty was encountered when the enamel base was fritted with the metallic oxides necessary to give it the shade of the teeth. Here the oxides themselves were reduced.

It therefore seemed probable that the so-called gasing in mineral teeth came from a similar cause.

Many experiments and analyses were made to test the matter, and though it is not worth while to give these in detail, one experiment, which is easily tried, will be mentioned: After having made a furnace like the one described, light the gas and open the air valve. When the heat is high enough put an unbaked tooth into the muffle. When taken out the color will be pure. Now diminish the oxygen by partly closing the air valve. Put in another unbaked tooth. When this is removed it will be found gased. The same result will follow with the air valve in the same position as in the first experiment if the supply of gas is increased. In experiments with dental enamels and porcelains it is advisable to have a slight excess of air in the furnace. Where the color used, as, for example, platinum, yields the proper tint in the metallic state this precaution is unnecessary, as in these cases the color has no oxygen to give up.

Reports of Societies.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. M. GREEN, M. D., SECRETARY.

June 14, 1884. The President, Dr. C. Ellery Stedman, in the chair.

EXTIRPATION OF A RETRO-RENAL SARCOMA BY ABDOMINAL SECTION.

Dr. J. R. Chadwick read the paper.[2]

Dr. C. E. Stedman said he had first seen the patient two or three years ago, when he was called to draw her urine. He had seen her again about a month before the operation: she was then rapidly emaciating and growing weak: she complained only of pain in the back, the pain and weakness being her only symptoms. He had found a tumor in the region of the left kidney.

Dr. Blake asked if the tumor had interfered with the functions of the kidney.

Dr. Chadwick said that from his examination of the urine Dr. Wood was led to think that there was some lesion of the pelvis of the kidney.

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[1] Abstract of a paper read before the Society for the Advancement of Oral Science, June 21, 1880.

[2] See page 388 of this number of the Journal.

Dr. Blake inquired if the kidney showed any effects of pressure.

Dr. Stedman thought the kidney was a little redder than usual.

Dr. Blake thought it was best to avoid transverse incisions of the abdomen, as there was liability to herniæ.

Dr. Chadwick said the transverse incision was an apparent necessity in this case, as he believed at the time it would be necessary to tie the renal vessels. He used silk ligatures and sutures. In reply to a question by Dr. Blake, Dr. Chadwick said that no glandular infiltration was observed.

Dr. Blake said that run-down patients recover better after operations than those in the full flush of health.

Dr. Davenport observed that Keith had found in seventy cases that recovery was slowest in tapped and run-down patients. He thought few cases died of peritonitis; that few, in fact, have it, except a slight local peritonitis. He had noticed after operations a diminished amount of urine, and thought the diminution might be due to the ether. He asked the reader if he thought the scanty secretion of urine was due to the operation.

Dr. Chadwick did not know what effect on the kidney was caused by abdominal operations, but thought that in some cases of nephrectomy the small amount of urine had been assigned as the cause of death. He thought the diminution might be attributable in part to the diminished amount of ingesta and to the use of opiates.

OBSTINATE VOMITING OF PREGNANCY: INDUCED ABORTION: RECOVERY.

Dr. Fifield reported the case, which he had seen in consultation. The patient was about three months pregnant, and for two weeks her attending physician had tried unsuccessfully to relieve the obstinate vomiting which was rapidly exhausting her strength. Oxalate of cerium, morphia, and other remedies were employed, also applications of iodine and nitrate of silver to the cervix, but all without effect. Rectal enemata were not well borne. It was decided to induce abortion, as the patient was sinking rapidly: Dr. Fifield therefore introduced a bougie within the uterus and waited twenty-four hours; but no result followed. A second bougie was then introduced to the depth of several inches, also without effect. Dr. Fifield then passed a sound into the uterus and moved it freely about: no pain was caused thereby and no blood followed the withdrawal of the sound; but the next day the fœtus was discharged with unbroken membranes. The change was marvelous: food was retained the same day, the color came back, the bowels, which had been obstinately constipated, resumed their function, and the patient was up and dressed at the end of a week. In passing the sound Dr. Fifield observed that the uterus was much anteverted, and he alluded to the fact that in fœtuses and young infants the uterus is anteflexed and bent to the left.

Dr. Blake regretted that one need ever to resort to the induction of premature labor for the relief of vomiting: he had always found that some other treatment sufficed: he thought counter-irritation was often efficient, with regulation of diet or rectal alimentation. If patients with gastric ulcer or intestinal obstruction. can be tided-over with rectal alimentation, why not pregnant women?

Dr. Chadwick had not always seen blood follow the introduction of a sound, even when passed for inducing labor.

Dr. Richardson had seen a woman three months pregnant and near death from vomiting, into whose cervix he inserted two laminaria tents and dilated the os. Abortion did not occur; but immediate improvement followed, and the patient was able to take egg nogg.

PLACENTA SUCCENTURIATA.

Dr. W. L. Richardson reported the following case: —

P. T., primipara, twenty-two years of age, entered the Boston Lying-In Hospital May 31st with this history: She was about nine months pregnant and expected to be confined at any moment. May 27th she had some flowing, without any assignable cause, lasting two days. She appeared on entrance very feeble and pale. She was put to bed and nourishing diet ordered. June 1st. Some flowing, which continued slight until the 4th, when flow increased. An examination showed the external os admitting the finger; on the side of the internal os placental tissue was felt: a diagnosis of low attachment of the placenta was made.

June 5th. She was delivered of a boy weighing six and three quarters pounds. The placenta was expressed with some difficulty, and was of normal size. Connected with it was a placenta succenturiata (three by four inches), oval in shape, and attached along the side of the internal os.

June 21st. Mother and child discharged well.

NATIONAL CONFERENCE OF STATE BOARDS OF HEALTH, ST. LOUIS, OCTOBER 13, 14, 15.

First Day's Proceedings.

The National Conference of State Boards of Health assembled for its annual meeting at Liederkranz Hall, St. Louis, Monday, October 13th, **Hon. Erastus Brooks**, of New York, occupying the chair. The meeting was an especially important one, as it was understood the questions concerning a possible invasion of cholera would be discussed. The following representatives of State Boards of Health were present: —

Arkansas, Dr. J. A. Debrell, Jr.; Connecticut, Dr. C. A. Lindsley; Illinois, Dr. J. H. Rauch; Kentucky, Drs. J. O. McReynolds, J. N. McCormack; Louisiana, Drs. L. F. Salomon, S. S. Herrick; Massachusetts, Dr. H. P. Walcott; Michigan, Dr. Henry B. Baker; Minnesota, Drs. D. W. Hand, W. H. Leonard, C. N. Hewitt; Missouri, Dr. J. C. Hearne; New Hampshire, Drs. I. A. Watson, G. P. Conn; New Jersey, Dr. E. M. Hunt; New York, Erastus Brooks; Rhode Island, Dr. C. H. Fisher; South Carolina, Dr. T. G. Simons; Tennessee, Drs. J. B. Lindsley, G. B. Thornton; Texas, Drs. R. M. Swearingen, J. L. Carter; West Virginia, Dr. J. E. Reeves; Wisconsin, Drs. J. T. Reeve, S. C. Johnson; Ontario, Dr. P. H. Bryce; Canada, Dr. C. W. Covernton.

In calling the meeting to order the **Chairman** said it would be useless to repeat what had been so often urged in the past in regard to the great importance of

State Boards of Health. He was glad to think that so many States of the Union already possessed these organizations, and felt sure that those which were still without them would soon recognize their utility. In his own State he was happy to say that local organizations have been completed in 900 towns, in nearly every one of the 240 villages, and in twenty-four of its cities. And this had been accomplished rather by persuasion than by force, although the State gave them unlimited power to establish organizations in the various towns and villages.

The minutes of the last meeting, held at Washington, May 7, 1884, were read by the secretary, **DR. J. N. McCORMACK**, and accepted.

PLAN OF ORGANIZATION.

DR. HEWITT, in behalf of the State of Minnesota, presented a plan of organization, the main points of which were as follows: The establishment of a body to be known as the Council of State Boards of Health of the United States; the officers to consist of a chairman, corresponding secretary, recording secretary, a treasurer, and an executive committee, the latter to consist of one member from each State Board. The objects of th eorganization were to cultivate a closer acquaintance between officers and members, to facilitate discussion of sanitary work, and to give better opportunities for comparing and discussing methods.

DR. RAUCH moved that the plan be referred to a committee of five, of which the chair and secretary be ex-officio members.

DR. BAKER offered an amendment that the report of the committee be received at the next annual meeting. The motion as amended was then carried, and the Chair appointed as the remaining members of such committee Drs. Rauch, Hunt, and Hewitt.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

An invitation from the American Public Health Association to the members of the Conference of State Boards, asking them to contribute papers and be present at a special session on Wednesday, was accepted with thanks.

The question whether papers prepared for the Conference should be reserved for the American Public Health Association aroused a warm discussion. **DR. RAUCH** said he proposed to deal with men who would give orders when the cholera came, and not with men who would hold sanitary prayer meetings. He had prepared a paper to be used as a nucleus for discussion at the Conference of State Boards of Health, and not at the American Public Health Association.

DR. SALOMON indorsed these views, and thought the two bodies were entirely distinct organizations and had different spheres.

Several other speakers expressed similar sentiments, Dr. **DEBRELL** stating that the principal thing that brought the Conference together was to devise means to keep cholera out of the United States. He valued the American Public Health Association, which has members all over the country, but he thought in moments of emergency it did not have the same power that State Boards of Health had.

The **CHAIRMAN** thought that the two associations ought to act in harmony, and that there was no necessity for any rivalry or recrimination.

PAPER BY DR. RAUCH — EFFICACY OF QUARANTINE AND THE RIGHTS OF STATES.

DR. J. H. RAUCH, of Illinois, then by general request read the paper which he had prepared for the meeting. It was virtually a presentation of the efficacy of quarantine and of the rights of individual States to keep their own borders free from contagion. He stated that Illinois, the largest internal tax-paying State in the Union, was vitally interested in the manner in which quarantine was enforced in New York and Eastern ports. He asserted that his wide range of experience in all cholera epidemics has convinced him that cholera is conveyed only by means of infected persons, and hence there was no necessity for guarding against merchandise, rags, etc. The Illinois State Board of Health would have the right to close up the Illinois end of the St. Louis bridge if the great city became plague-stricken. The State would also have the right to stop the Great Canada Southern Railroad from entering the State territory if the authorities thought Canada was afflicted with cholera. The same could be done on all lines, and all States had the same power, and it was only a mere question of assertion. For a period of six years sanitary officers and sanitary authorities have had no great demand made upon them. During these six years the interest in sanitary matters raised by the epidemic of 1878 — the yellow fever epidemic — has gradually diminished. When an epidemic actually exists and industry and commerce are paralyzed there is then no question in the public mind as to the desirability of sanitation, no hesitancy in making appropriations. But Rabelais told us nearly four hundred years ago what the devil did when he got well. The Forty-eighth Congress adjourned in spite of the fact that an epidemic was staring us in the face, after rendering inoperative all previous legislation on sanitary matters. It is now our imperative duty as sanitary officers to awaken public interest and to prevent the introduction of the epidemic of Asia to our shores. Much has already been done by the action of national and State authorities, and since the 2d of July last, over sixteen States have issued circulars of admonition.

In conclusion Dr. Rauch said: —

Congress should be urged to reorganize and rehabilitate the National Board of Health, or to provide an efficient substitute, one clothed with increased power and supplied with ample funds to maintain an effective system of modern sanitary quarantine for the exterior; to maintain an interior sanitary inspection service for the great highways of travel by rail and river; and to give judicious coöperation and substantial assistance to States and municipalities in preventing the introduction of epidemic diseases into one State from another, and their spread within the States themselves. Congress should give the President the power to issue a proclamation upon the recommendation of the national health authority forbidding immigration into the United States from infected districts; and it should provide some method of international sanitary coöperation between this country and the Dominion of Canada, whose interests are substantially the same as ours in these matters, and whose contiguity makes coöperation of vital importance. In States which now have no boards of health, or whose boards are not vested with the necessary authority or provided with adequate resources, the people should be awakened to the necessities of the situation. Legislators should be thoroughly informed as to the facts, and urged to provide suitable legislation. Information on sanitary matters should be widely diffused to this end, and also to the end that, if an epidemic should come, we may not have to encounter the obstacles which ignorance is always ready to put in the way of what it does not understand. Happily, in this country, we are not likely to meet with the treatment that the superstitious peasantry of France and the lazzaroni of Italy have accorded their physicians and health officers. But sanitary education and knowledge cannot be too wide-spread. These are matters which may profitably occupy much of our time and attention for the next two months; and I would suggest that when this meeting of the Conference adjourn it be to meet again in Washington in December for the purpose of conferring with the President, the cabinet officers, and the committees of the Senate and House as to the legislation which should be asked for at the next session of Congress. To this meeting I think not only should representatives of State Boards of Health be invited, but also all quarantine officers and health authorities of all the large cities, as well as those of the Dominion of Canada. I would also suggest that quarantine officers should be requested to come prepared to give all necessary information concerning the quarantine affairs of their respective ports.

THE VIEWS OF THE NATIONAL BOARD.

DR. CHARLES SMART, surgeon of the United States army and member of the National Board of Health, upon special invitation, read a paper outlining the methods of disinfection and quarantine used by the National Board. The Board based its rules and regulations for preventing the introduction of cholera into the United States, and its spread from one State to another upon certain incontrovertible facts demonstrated by science and experience, among which were the following: —

That cholera is caused by a specific germ, and that this germ may be destroyed with no other interruption to travel and traffic than is needful to discover its presence and so apply the necessary means for disinfection. In order to secure international coöperation a conference was held at Washington in 1881, and, of twenty-seven nationalities represented, the larger number were prepared to enter into a joint treaty that would secure harmony of action. The first step taken by the National Board was to frame rules and regulations to be enforced at foreign ports to secure the best sanitary condition of vessels about to leave for a port of the United States. Ships are the great carriers and propagators of diseases of foreign origin, and the modern emigrant ship is a vast field for the cultivation of pestilence. Sanitary service at sea, for securing at the foreign port a clean vessel and uninfected freight, also commanded the attention of the Board. On the arrival of vessels at any port of the United States proper steps were laid down by the Board for the prevention of the entry of any infected boat. Every vessel was visited by the quarantine officers and all needful precautions taken in case of suspicion of pestilence; clothing, baggage, and cargo were carefully disinfected. If, in spite of all these precautions, the disease effected an entrance into any port, measures were taken to prevent its spreading from that port to other ports on the coast, or to interior points. Sea-coast, river, and rail road travel, and transportation were conducted under sanitary supervision. In the case of coast or river steamboats or vessels sailing from the infected port, measures of inspection and disinfection were enforced similar to those practiced at foreign infected ports. In addition to this, inspection stations were established at certain points on the Mississippi River, the medical officers of which acted as quarantine officers for the States threatened with invasion.

In conclusion the reader made some additional recommendations for the establishment of a more rigid local quarantine.

DISCUSSION.

DR. BAKER moved that all papers read be referred to a special committee of five for consideration. The motion was carried, and the Chair appointed as such committee Drs. Baker, Rauch, Walcott, Bryce, and Herrick.

The chairman, MR. BROOKS, opened discussion on the papers by a warm defense of the sanitary officers of New York. He said that so far as was morally and physically possible everything had been done to prevent the introduction of cholera into New York, and what had been done had been well done. The arrangements were so complete that, under the guidance of God, it was impossible for cholera to be introduced into that city. He made that explanation because New York had, unintentionally, perhaps, been unjustly censured in one of the papers.

DR. J. B. LINDSLEY, of Tennessee, said: "I am personally familiar with every cholera epidemic that has visited the United States, going back fifty years and standing by the graves of persons taken off by cholera in 1833. Never has cholera come to Europe without coming to America; never has it come to America without coming to Tennessee and sweeping the State from one end to the other. But never were the people of my State as frightened as are the people of France and Italy to-day. The people of Tennessee have given the State Board of Health of Tennessee the power, if one case of cholera appears in Chicago, of stopping the Illinois Central Railway. If one case of cholera occurs in New Orleans the State Board will stop the same vehicle from the South. If one occurs in New York the same thing will happen, and six great lines of transportation from north to south and at least a billion of dollars will be stopped in less than twenty-four hours."

DR. C. W. COVERNTON said he remembered everything connected with cholera since 1830. Filth is the gunpowder and the germ is the disease. If we keep away filth we are all right.

DR. CONN moved that, inasmuch as the Conference had no funds for the printing of Proceedings, the conclusions of the committee to whom the papers had been given should be referred to the American Public Health Association. This was agreed to, and after refusing by a vote of eleven States to five to reconsider the vote by which the committee having charge of the scheme of permanent organization were instructed to report at the next annual meeting the Conference adjourned until Tuesday.

SECOND DAY'S PROCEEDINGS.

The Session of the second day, Tuesday, October 14th, was a prolonged one; a paper by Dr. C. W. Chancellor, of Maryland, on the Non-Contagiousness of Cholera and the Inadequacy of Quarantine, and the report of the Committee to which Dr. Rauch's paper of the previous day had been referred, giving rise to an active discussion, in the course of which, as was to be expected, a good deal of difference of opinion was manifested on the two principal points at issue, the contagiousness of the disease and the value of quarantine.

DR. CHANCELLOR'S PAPER. — THE NON-CONTAGIOUSNESS OF CHOLERA AND INADEQUACY OF QUARANTINE.

Dr. Chancellor, in his paper, took the ground that cholera was not contagious, and said there was hardly an instance of more stupendous folly than the attempt to prevent the spread of cholera by a system of sanitary cordons. Quarantine was not only useless, but it was a positive injury, because it prompted a false feeling of security and the neglect of other precautions. The history of cholera since 1817, when it first became known as such, having its origin in India, established, first, that sanitary cordons were unavailing, and secondly, that persons were afflicted with the disease who had not come in contact with the sick. If cholera was in the air it broke out in communities where there had been no ascertained introduction of the disease, but it was noticed that it gained its first hold and raged with greatest virulence where non-sanitary conditions prevailed. Dr. Chancellor cited a great array of instances in support of this view. Measures of isolation and of non-communication were futile, he declared. But though quarantine cannot be depended upon, the powers of government, national, State, and municipal, must be exerted to disarm the disease when it does come. The only practical work was to remedy the conditions favorable to the disease and let the germs take care of themselves. The best plan, he thought, was to establish without delay intelligent forces of sanitary inspectors. Ventilation and drainage must receive careful attention from all classes. Temperance and abstinence from unhealthy food and from intoxicating liquors must be urged upon the people. Warning should be given against exposure to excessive fatigue, and finally it should be the policy of the State Boards to tranquillize communities and inspire confidence.

Some approbation was manifested upon the termination of Dr. Chancellor's paper, but it was evident that the majority of those present were still disposed to rely upon quarantine in some form or other as a protection against invasion.

Dr. Holt, of the Louisiana Board, urged a quarantine, not of the old shotgun style, but intelligent provision for the detention of ships and the thorough cleansing of the hulks and the disinfecting of the contents before they were allowed to come into port.

Dr. Reeves, of the West Virginia Board, deplored the views of Dr. Chancellor, if that meant no quarantine at Baltimore. Of what use would be any precautions adopted by West Virginia.

Dr. Stewart, of Baltimore, assured Dr. Reeves that there wasn't the slightest danger of his port being thrown open.

REPORT OF COMMITTEE ON PRACTICAL WORK REQUIRED FOR THE PREVENTION OF CHOLERA IN THIS COUNTRY.

The committee, consisting of Drs. Baker, Walcott, Herrick, Rauch, and Bryce, to which Dr. Rauch's suggestions as to the "Practical Work required for the Prevention of Cholera in this Country" had been referred, having drafted its recommendations, reported as follows: —

Origin and Dissemination of Cholera.

There are three essential factors to the prevalence of cholera in this country as an epidemic: (1) The importation of the disease by means of ships more or less directly from its only place of origin in India; (2) local unsanitary conditions favorable to the reception and development of the disease; (3) persons sick with the disease in some of its stages, or things infected by such sick persons, to carry it from place to place. These three factors naturally suggest the methods of combating the disease, for which there is needed practical work, international, national and inter-State, State and local. So far as relates to State and local boards of health, their organization and activities are greater than ever before; but it must be admitted that after cholera has been introduced into a country inland quarantines are not easily and successfully maintained, although efforts in this direction are then advisable. In view of the threatened introduction of cholera into this country during the coming year, and the consequent immense waste of life and property values through derangements of commerce, trade, and productive industries, it is the sense of this Conference that the general government should maintain such a national health service as shall, by rigid inspection at the port of embarkation, question the freedom from disease and infection of all persons and things from infected districts; and shall secure the surveillance of such persons and things while on shipboard, and, when necessary, detention at quarantine stations on this side for treatment and disinfection.

Official Inspection.

In view of the present threatening aspect of Asiatic cholera, and the constant danger from other communicable diseases occurring at foreign ports having commercial relations with the United States, we urge upon Congress to provide for the appointment and maintenance at all such foreign ports where cholera, yellow fever, plague, small-pox, or scarlet fever exist, or are liable to exist, of medical officers of health, the same being either accredited consuls or attached to the consulates. The duties of these officers shall be: To give notice, by telegraph when practicable, of the existence or appearance of any of the above-named diseases to some constituted authority in this country; to give notice of the departure of any vessel known or suspected to be infected for any port in the United States; and, whenever requested by the master of any vessel about to load or leave for this country, to inspect thoroughly such vessel in all her parts, and also her cargo, her crew and passengers; to use such cleansing and disinfection as he may deem necessary, and to satisfy himself that all persons about to sail are free from dangerous communicable diseases, are not recently from infected places, and are properly protected from small-pox, giving to her commander a certificate of the inspection and of all precautionary measures taken. And it shall be the duty of the central authority in this country to transmit promptly intelligence of the existence of the above-mentioned diseases at foreign ports and places, and of the departure of dangerous vessels for the United States and Canada, to all State and local health authorities in the country which may be interested in the same.

We further recommend, in case of those foreign ports which have no consular agents in this country, or no telegraphic communication with this country, and which are liable to transmit pestilence through commercial intercourse, that one or more medical officers be chosen to visit such ports as often as may be deemed necessary by the central health authority in this country, so as to give trustworthy information of the health and sanitary condition of those places.

Canadian Health Alliance.

Inasmuch as the Dominion of Canada is equally interested with the United States in protecting itself and the United States from the importation of dangerous diseases we suggest that Congress take such measures as will bring about concerted action with the Dominion and the British government by which the consuls of this country or of England at foreign ports shall examine and take such action as they may deem effective, and notify the authorities of such government as has authority over any port to which any ship may sail in the United States or Canada, in order that such government may be in a position to take effective measures against the importation of these diseases. We are gratified that the authorities of the Dominion of Canada and of the Province of Ontario have taken active steps toward protecting the people of Canada and, indirectly, those of the United States, by the adoption of extensive quarantine regulations. We feel, however, that with respect to those regulations regarding the landing of passengers from the mail steamers along the St. Lawrence, etc., further special regulations for the thorough disinfection of the baggage and effects of all passengers, cabin or steerage, who come from infected ports and places, should be carried out in a manner similar to that recommended by the National Board of Health. Believing that the importation of cholera into this country has usually attended the presence of immigrants from infected countries we therefore recommend that all such immigrants be prevented from landing at our ports until such time as the danger of the introduction of cholera by them shall have passed.

The Inspection and Quarantine Service inaugurated by the National Board of Health, and set forth in the paper by Dr. Smart before this Conference, but which system is now inoperative for want of an appropriation by Congress, meets with our cordial approval. To enable these protective measures to be carried out we recommend that Congress be urged in the strongest terms to legislate on this subject at an early date in its coming session, and to appropriate such funds as may be needful. The expenses incident to the work which has to be performed at foreign ports, and the establishment of refuge stations at points on our coast for the detention and treatment of infected vessels arriving from foreign ports, should undoubtedly be borne by the national government, and not by individual States or municipalities, for the benefits accruing therefrom are general and not restricted to localities, although some ports and cities on the coast may have a more immediate interest in the matter than others in the interior. It is probable, however, that this national protective work may not be sufficient.

Local Safeguards.

It will undoubtedly delay and lessen the chances of invasion, but it may not prevent invasion; the poison of the disease is subtle, and may effect an entrance into the country at some unguarded point. The funds necessary to the stamping out of the disease in a particular locality, and to the prevention of its spread to other localities, might in some instances be borne by the municipality or State affected; but should the disease occur in a locality which has failed or is unable to make provision for the occurrence, its spread to other cities and States would be imminent. The want of means at the infected point would be disastrous to many others. Congress has recognized the necessity for aid to State and local boards of health under similar conditions in the case of yellow fever. In 1879 the sum of $500,000 was appropriated and placed at the disposal of the National Board of Health; and the records show that of this sum $160,000 was employed in combating the epidemic of that year. We therefore recommend that the influence of this Conference be used with the view of having apropriated by the National Legislature the sum of $500,000, to be used, or as much thereof as may be needful, in case of a cholera invasion, in stamping out the disease from the infected localities, and in preventing its spread from State to State.

The removal of local unsanitary conditions favorable to the development of cholera is the especial work of State and local boards of health. Much has been done already in some States, but much remains which should receive immediate attention. Where it can be done, State sanitary inspectors should be appointed to visit all towns and cities specially liable to the disease, to counsel with the local authorities as to the best methods of prevention. This work should be vigorously prosecuted before the disease reaches our shores.

Health officers and inspectors appointed by State or provincial boards of health should, in addition to other sanitary work, see that the localities have set apart, erected or planned to be set apart or erected, structures which shall possess the sanitary requirements of an isolation hospital. But as regards all necessary work by local boards of health, most State and provincial boards of health have printed and issued documents which give ample instructions.

Advice to Citizens.

The cause of cholera is contained in the discharges from persons affected by the disease, or in things infected by such discharges. Should the disease reach our shores, the first case, and after this the first case which reaches any given community, should be strictly isolated; all infective material from these and from any subsequent cases should be destroyed in such manner as to stamp out the disease.

Your committee recommend that when this Conference adjourns it be to meet in Washington, D. C., the second Tuesday in December next, and that the secretary of this Conference be directed to invite the attendance at that time of the quarantine officers and the health officers of the principal cities in the United States and Canada, and that all delegates to that meeting be prepared to report the sanitary status of their State or locality, and what steps have been taken to improve the same and to prevent the introduction of disease.

The reading of these recommendations gave rise to some discussion, in the course of which Dr. Chancellor said had he known what the committee was going to recommend he might have kept his paper in his pocket. He believed in the majority ruling, and if it should appear that most of the States endorsed the recommendations he would vote for them too.

On the ballot all the States voted in support of the report save Minnesota, and the point made by the Board of that State was that the recommendations were so important that more time should be taken for their consideration.

The Conference then adjourned until the following afternoon.

WEDNESDAY, OCTOBER 15.

THE RECOMMENDATIONS FOR PRACTICAL WORK INDORSED BY THE AMERICAN PUBLIC HEALTH ASSOCIATION.

The draft of recommendations for practical work to be done to prevent the entrance and spread of cholera in the United States was presented to the American Public Health Association by Dr. J. N. McCormack, secretary of the Conference of State Boards of Health.

Drs. Hunt, of New Jersey, and Devron, of Louisiana, favored the adoption and publication of the recommendations by the Association.

Dr. Pinckney Thompson, of Kentucky, considered internal quarantine or sanitary cordons of very little use in stamping out cholera which had once effected an entrance into the country.

Hon. Erastus Brooks, of New York, moved that the communication be indorsed by the Association, printed, and copies be forwarded to the President of the United States and his Cabinet, and to each of the Senators and Representatives of the National Congress.

Dr. Watson moved an amendment that a sufficient number of copies of this report be sent to the health offices of the different boards of health and the officers of the Dominion of Canada boards.

The motion, as amended, was adopted.

NEW YORK ACADEMY OF MEDICINE.

At a stated meeting held Thursday evening, October 16th, Dr. H. M. Sims presented to the Academy a beautiful bronze bust of his father, the late Dr. J. Marion Sims, which he had had executed in Paris during the past summer. It was received in a brief address by the President, Dr. Barker, on behalf of the Fellows of the Academy; and Dr. Wm. H. Draper then read a

MEMOIR OF THE LATE WILLARD PARKER, M. D., LL. D.;

after which Dr. A. L. Ranney read a paper on

THE THERAPEUTICAL EFFECTS OF THE INTERNAL ADMINISTRATION OF HOT WATER IN THE TREATMENT OF NERVOUS DISEASES.

The tendency of the age, particularly in neurology, he thought, seemed to be to manifest itself in endeavors to discover new medicinal agents, often to the neglect of simple remedies whose influence upon the system had not yet been thoroughly tested. Among the latter, to his mind, hot water stood preëminently at the head. There was little or nothing in medical literature in regard to the physiological and therapeutical effects of this agent when administered internally; and whatever of originality there was due in regard to the subject belonged to Dr. J. H. Salisbury, who called attention to it as early as 1858.

Having spoken of the different effects of different degrees of heat, in general, when applied to living tissues, Dr. Ranney said that he believed that the benefits that resulted from the internal use of hot water were due, in part at least, if not wholly, to heat. He then gave the following rules for its administration.

I. The water may be taken in doses of from one goblet to one and a half. The dose must be modified in accordance with its effects.

II. It must be taken hot and not warm (from 110° F. 150° F.), and, if necessary, fifteen minutes or more may be consumed in sipping a gobletful. Wooden cups prevent the water from cooling quickly. If there is obstinate constipation, Carlsbad salts, or other laxative, may be added to the morning dose. No flavoring is as a rule required.

III. The dose must be taken one hour and a half before each meal, with absolute punctuality, and again at bed-time.

IV. The temperature of the water should be increased as fast as it can be borne.

V. The hot water must be kept up with great regularity for at least six months in order to get its full effects.

VI. The dose should be determined largely by the specific gravity and general character of the urine. The object of the treatment should be to bring the specific gravity to the standard of health (1.010 to 1.022), and to keep it there.

VII. The use of cold fluids, in the form of beverages, must be absolutely prohibited.

VIII. A restricted diet is often necessary to the full effects of the treatment in some forms of nervous derangements. The condition of the subject in respect to flesh is to be the guide, as a rule, to the character of the diet prescribed, provided that marked disturbances to digestion or diabetic symptoms are not to be combated. In some instances Dr. Ranney said he employed a meat diet exclusively.

He spoke next of the physiological effects of the internal use of hot water on the stomach, skin, kidneys, intestines, liver, and pancreas, and then related some of the cases in which he had employed it successfully. Among these were instances of neuralgia, insomnia, gastralgia and neurasthenia, and two cases each of locomotor ataxia and diabetes. Both of the latter he thought were of neurotic origin. The theory of its action he believed to be that of reflex irritation from the effect of heat upon the nerves of the stomach and the solar plexus. Having answered several objections which might perhaps be raised against the use of hot water, in conclusion he advised its thorough trial on the following grounds: —

I. It was harmless, if it did not benefit.

II. Its effects were comparatively uniform if its administration were kept up for a sufficient time.

III. It seemed to have the effect of arresting degenerative processes in certain cases of organic nervous disease.

IV. Its effects were apparently permanent.

V. It could be employed as an adjuvant to other treatment.

VI. It had a marked effect in relieving hyperæmia and anæmia of the nervous centres, and was useful in the treatment of headache, vertigo, and neuralgia.

VII. It was of great service in the treatment of diabetes and some kidney affections. It ordinarily had the effect of raising the quantity of urinary salts.

VIII. The functions of the accessory organs of digestion, the liver and pancreas, were stimulated by it.

IX. It stimulated the action of the skin, and rendered the cutaneous circulation uniform.

X. It was useful in the prevention of sea-sickness. When given for this purpose it should be prescribed for from four to six weeks before the commencement of an ocean voyage.

The paper was discussed by Drs. Seguin, Amidon, Birdsall, Putzel, Dana, and Corning.

Dr. Seguin thought that the temperature of the water must necessarily be greatly reduced by the time it reached the stomach, and that it was probably merely as a diluent that the agent acted, since he had obtained equally good results from the use of cold water, which he usually directed to be taken with the meals. The most of the cases to which Dr. Ranney had referred were probably such as were usually associated with malassimilation or lithæmia, and the fact that he had enjoined a restricted diet, in addition to the use of hot water, seemed to indicate that it was the digestive function that was primarily at fault; in further corroboration of which was the fact that he took the condition of the urine for his guide in regulating the amount of water to be used. As to the benefit to be derived from water, whether cold or hot, it had been pointed out several years ago by Dr. McElroy, of Zanesville, Ohio, that in cases of neurasthenia in females a lack of thirst was often a characteristic symptom; an observation which was afterwards fully corroborated by Dr. Webber, of Boston. Personally he could see no objection to the use of ice water, as he believed that the temperature of the fluid became considerably elevated by the time that it reached the stomach. He had had no experience whatever in the treatment of organic disease of the nervous system with hot water

Dr. Amidon thought that the fact which Dr. Ranney had stated, that the agent acted gradually, so that six months were often required for the substantial relief of the patient, went far to show that its modus operandi could not be that of a counter-irritant or derivative. This slow action seemed to indicate very strongly, he thought, that the benefit which was produced by it was due merely to its diluent qualities, as Dr. Seguin had suggested.

Dr. Putzel could not understand how an agent which was supposed to be useful in cerebral hyperæmia could also be of service in cerebral anæmia, and also agreed with Drs. Seguin and Amidon that the hot water could not act by exciting reflex irritation. An irritant, he said, after a time ceased to be such, and if the hot water acted in this way the best results from its use could be seen at first. He did not see how this agent could have any effect in organic nervous disease, and believed that the recovery from diplopia under its use in the case of locomotor ataxia to which Dr. Ranney had referred was merely a coincidence.

Dr. Birdsall wished that the paper had given more clear statistics. As it was the cases were of little value since other methods of treatment were always used in addition to the hot water. Thus in his cases of locomotor ataxia Dr. Ranney employed nitrate of silver, a remedy which was acknowledged to be of considerable value in this affection.

Dr. Scott, of San Francisco, who was a guest of the Academy, referred to the great value of hot water in checking emesis, especially after the inhalation of ether.

Dr. Ranney, in closing the discussion, contended that the effect of hot water was very different from that of cold, and said that four goblets of the former taken during the day had a much more powerful diuretic effect than a gallon or more of cold water. As to his cases being rendered unsatisfactory by the fact that he had employed a special diet and other remedies in addition to the hot water, he would only say that notwithstanding the diet and the other remedies the patients did not improve until after the hot-water treatment had been commenced. It was a mistake to suppose, as many of the gentlemen who had spoken seemed to do, that this agent acted *only* in a very gradual manner. It was true that it sometimes took six months to secure the full effect of the remedy, as seen in the marked and permanent improvement in the nervous symptoms present, but in reality it had a very rapid action, the effect on the circulation of the skin and the kidneys being immediate. In regard to its action on the cerebral circulation, whether hyperæmia or anæmia were present, its tendency certainly was to restore it to its normal condition. Such was the fact, however the *modus operandi* might be explained. Dr. Ranney replied in the negative to a question as to whether he had ever noticed (1) a marked loss of the power of absorption and assimilation with rapid inanition, and (2) a tendency to internal hæmorrhage in those long accustomed to the internal use of hot water. These conditions he had himself seen more than once in patients at Saratoga, where he practiced during the summer, and the late Dr. F. D. Lente had observed the same thing.

Before the Academy adjourned **Dr. C. R. Agnew** called attention to

A NEW LOCAL ANÆSTHETIC,

the hydrochlorate of cocaine, to which reference had been made in a recent letter written from Germany to the *Medical Record* by Dr. H. D. Noyes, and which he had used with complete success in fifteen or sixteen operations upon the eyes during the past week. The form in which the drug was used was a two per cent. watery solution, which was dropped in the eye.

Recent Literature.

The Medical Graduate and His Needs. By George C. Wellner, M. D. Detroit: George S. Davis. 1884.

This little book of primer proportions is designed by its author chiefly for students and young practitioners, but, he suggests, may be read with profit by "children of a larger growth." There is, undoubtedly, much that is wise and much that is true to be found in these pages, but less novelty of language, greater simplicity of style, a more careful revision of proofs, would make it more useful to readers for whom it is designed.

On page 24 we find "calamatous;" page 26, "to act the medical histrion," "derisive dread;" page 28, "nothing is so well calculated to do this than the statement," etc., "the subject of misdiagnosis," "to misdiagnosticate a disease," "preadmonished;" page 30, "exertive efforts," "macaronic compounds," "medical abecedarian;" page 32, "the young physician should accustom himself to the use of the stethoscope, as there remains no longer an excuse for burrowing the side of one's face in the chest of the patient and thus, auscultation, circumscribe it;" page 66, "let him ween himself fortunate if the halcyon days of his sinecurism," etc., etc.

Medical and Surgical Journal.

THURSDAY, OCTOBER 16, 1884.

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INTERNATIONAL COLLECTIVE INVESTIGATION OF DISEASE.

In a disjointed and unmethodical manner a quasi collective investigation of disease is always being carried on by hospital reports, by the published transactions of medical organizations, and by the meetings of societies and associations, but it has long been felt that more than this was not only desirable but possible.

Several earnest enthusiasts in England, among whom Professor Humphrey, of Cambridge, and Drs. Ransome and Mahomed deserve prominent mention, after agitating the subject in addresses and articles on various occasions, determined to attempt an organization for the prosecution of collective investigation on a large scale. The British Medical Association was appealed to at its meeting in Cambridge in 1880, the suggestion was favorably entertained, and a committee appointed to report a plan for carrying out such a work with the support of the Association's funds and *Journal.* In consequence a committee of seven, known as the Combined Observation Committee, with a secretary, has been annually appointed, and a thorough organization of branches ramifying through the Association been effected. The first issue of the *Collective Investigation Record* was published in July, 1883, and a second number this summer. Many of the best men in London and elsewhere have thrown themselves into the movement with a zeal and earnestness deserving of the highest praise, whatever the results accomplished.

We believe this Journal was the first in this country to direct attention to the efforts being made by our British brethren, and we have watched with pleasure the growth and development of the movement. The subject was brought before the American Medical Association by Dr. J. S. Billings at its annual meeting in 1883, and referred to a committee, of which Dr. N. S. Davis, of Chicago, was appointed chairman. It was also brought last year before the Berlin Medical Society, referred to a committee upon which were Professor Frerichs, Drs. Fränzel, Ewald, Leyden, Löwenstein, and Börner, and an organization effected which is already at work. In other European countries attention has been attracted to what has been done in England and Germany, and the advisability of imitating their example has been under consideration.

To take advantage of and to encourage this growing interest in the subject of collective investigation for a unification and consolidation of aims and methods, the general meeting of the International Medical Congress, held at Copenhagen on August 14, 1884, upon propositions made by Sir James Paget, Professor Ewald, of Berlin, Professor Bouchard, of Paris, and Dr. Billings, of Washington, passed the following resolutions: —

(1.) That an International Committee be formed for the Collective Investigation of Disease in connection with the work of the International Medical Congress.

(2.) That the following gentlemen do represent their respective countries thereon: As representatives of Denmark, Professor Trier, of Copenhagen, Prof. C. Lange, of Copenhagen; Scandinavia, Dr. E. Bull, of Christiania; Russia, Dr. Rauchfuss, of St. Petersburg; Germany, Professor Ewald, of Berlin, Professor Bernhardt, of Berlin; Austria-Hungary, Professor Schnitzler, of Vienna, Professor Pribram, of Prague, Professor Korányi, of Buda-Pest; Switzerland, Professor D'Espine, of Geneva; France, Professor Bouchard, of Paris, Dr. Lépine, of Lyon; Great Britain and Ireland, Sir William W. Gull, Bart., Professor Humphrey, of Cambridge, Dr. Mahomed, of London; British India, Sir Joseph Fayrer, K. C. S. I.; United States, Professor Jacobi, of New York, Prof. N. S. Davis, of Chicago; South America, Dr. Gutiérrez-Ponce, of Paris. As Secretary-General, Dr. Isambard Owen, of London.

At the same time the Secretary was instructed to prepare a statement as to the objects of the committee for translation and publication in the medical journals of the various countries represented. A copy of this statement will be found in full on another page of this issue of the Journal.

Having always warmly approved of the project for collective investigation of disease since its first inception in England, we gladly give publicity to this attempt at an international extension of the same, commending it to the thoughtful attention of our readers.

We cannot sympathize with those who sneer at or discourage any earnest disinterested efforts to promote coöperation in the advancement of medical knowledge and the promotion of our art to the dignity of a science, however great the task, however inadequate the means, however certain the failures and disappointments. But the present movement, both abroad and at home, starts out under no mean auspices, and if supported elsewhere with the same energy as has been manifested by its early promoters cannot fail of greatly advancing medicine and the medical profession.

Mistakes will undoubtedly be made, and much chaff will doubtless be gathered along with the grain; but the mistakes may themselves be fruitful for instruction, and the separation of the chaff from the wheat be turned to profit. The work of medical men, as a rule, is necessarily too isolated and solitary, and the majority of men in active practice have neither the opportunity nor the stimulus for comparison and collaboration of methods and results before any other tribunal than that least qualified of all, — the general public. Men who now think they have no time to record their cases may be quickened; those who do not know how may be assisted by forms and taught by the merits and defects of others. To some it occurs to observe things not presented to others, or to see what others overlook. Different interpretations may be put upon the same fact by different observers. The same diseases in different countries present themselves under different guises, as modified by climate, by race, by customs. A simplification and unification of nomenclature of disease, as of weights and measures, would be a not impossible outcome of a vigorous and successful prosecution of the present movement.

We are by no means blind to the difficulties or sources of failure involved in a national or international collective investigation of disease; but no faint heart ever yet won a fair lady, nor have the so-called impregnable positions been carried by folding the hands and reciting a list of the obstacles and previous failures.

“PRACTICAL RECOMMENDATIONS FOR THE EXCLUSION AND PREVENTION OF CHOLERA.”

Among our Society reports this week is to be found quite a full account of the Conference of State Boards of Health held at St. Louis last week, simultaneously with the meeting of the American Public Health Association. This is the second annual conference of our State Boards of Health, and it was understood that the special subject of the occasion would be the drafting of recommendations for practical steps to be taken by national and local authorities to prevent the introduction and dissemination of cholera in this country in view of its prevalence in Europe.

The question is such a vital one, and the part to be acted by these State Boards, should the country be brought to face it in earnest, is so important, that we have not grudged the space which the report occupies, and have given the recommendations and suggestions finally adopted by the Conference and accepted by the Public Health Association, without abbreviation.

The representatives of interior States and of those on the seaboard necessarily take somewhat different views of the value of quarantine and of the relative reliance to be placed upon external and internal quarantine. There appears in the recommendations adopted a desire to harmonize conflicting views, and to secure the cooperation of all concerned.

There will always be the inclination to place the responsibility for the introduction of a disastrous epidemic at some remote point, and upon some one else's shortcomings. States situated in the Mississippi Valley feel that New Orleans should protect them from and not furnish them with yellow fever. Illinois is, naturally, aggrieved if New York and Boston send unvaccinated immigrants, with small-pox contagion among them, by through trains to her borders. In some degree in these matters there is cause for complaint, in some degree fear and feeling and an unwillingness to put things to rights at home have at times usurped the place of reason and judgment.

If external quarantine could exclude cholera from a country it would offer a comparatively simple solution of a great difficulty; but it never has and never will do so. Much may be done by inspection and disinfection of passengers, of their effects, which, notwithstanding Dr. Rauch's individual experience, are dangerous, of their transports (not of cargoes); but even in this, more reliance must be placed upon the intelligent judgment and good sense of trained inspectors than upon any rigid regulations. A cut-and-dried external quarantine, whether long or short, is and has been over and over again proved to be worse than useless. It is always sieve-like and is repulsive to the intimate and intricate commercial relations of the present day. Italy and Spain have just furnished fresh illustrations — if such were needed — of its worthlessness. Moreover, reliance is placed upon quarantine just in so far as communities are conscious of their own sanitary deficiencies; and conversely just in so far as reliance is placed on quarantine are communities negligent about local sanitation.

When it comes to internal quarantine and *cordons sanitaires* no language is too strong to describe their folly, and we heartily sympathize with the position taken at the Conference by Drs. Chancellor and Holt upon this point, though we protest against the statements of the former as to the diffusion of the cholera poison through the atmosphere.

A good water supply, good drainage, wholesome living, a tranquil spirit, these are the true safeguards against cholera preëminently, as against sundry other epidemic disorders in a lesser degree. These are the agents dreaded by microbes with pathological tendencies, whether presenting themselves in the bacillar or the spirillar forms, or as hybrids with comma-like extremities.

THE TICHBORNE CASE AND MEDICAL EVIDENCE.

The release of the Tichborne claimant from prison after the expiration of ten of the fourteen years of his penal sentence marks the conclusion of another stage of this *cause célèbre* which has lessons of importance regarding the value of evidence in medico-legal questions.

The main features in this case are doubtless familiar to our readers. Roger Tichborne, an eccentric and not over intelligent young man of twenty-six years, left England in April, 1854, for a foreign tour. The vessel on which he sailed was said to be lost with all on board. Lady Tichborne, the mother, refused to believe that her son was dead, and after twelve years of advertising for information of Roger a claimant of the name appeared in England with his wife and child, was seen and recognized by numerous attachés of the Tichborne estate as the missing man, and went to Paris, where he was unhesitatingly recognized by the old lady as her missing son, and so announced at the British embassy. The claimant was given a liberal allowance by his supposed mother, who continued to live with him with great comfort to herself till the day of her death, which happened in March, 1867. Other members of the family, however, considered him an impostor. He laid claim in 1871 to the estates, valued at £25,000 a year. This caused the first of the two memorable suits. In this action dozens of persons swore definitely to his identity with Roger Tichborne, and as many testified with equal positiveness to his not being that individual, some of them saying, moreover, that he was one Arthur Orton, a butcher of Wapping, who had been an associate of the lost Roger, and had gone, at about the same time with the latter, to Australia. After a trial lasting over a hundred days the plaintiff was nonsuited, and was then at once arrested for perjury and forgery. His friends and supporters, who were many, and who had contributed liberally towards the expenses of the suit, now furnished bail, and the trial came on in 1872 before Lord Chief Justice Cockburn and two other justices. This trial lasted 190 days, and is said to have cost the government no less than £300,000.

The theory of the prosecution was that the claimant was not Sir Roger but Arthur Orton. For the defense 132 persons made oath distinctly that the claimant was Tichborne. Of these 110 swore that Tichborne as they knew him before 1854 had dark-brown hair; thirty-seven swore that he had small hands; thirty-five that he had small feet; seventy-nine that he had an "in-turned knee"; eighty that he had a twitching of the eyebrows, and thirty-four that he had no marks of small-pox. The claimant had dark hair, small hands and feet, an "in-turned knee," twitching eyebrows, and no pock-marks. Seventy-five witnesses were then called who had known Arthur Orton, who all testified that he had light hair (in which they were supported by eleven government witnesses); sixty swore that he had large hands; fifty-two that he had large feet; fifty-one that he had high cheek bones; seven that he had light blue eyes; and twenty-eight that he had marks of small-pox. There was, however, enough opposing evidence to convince the jury that the claimant was no other than Arthur Orton; and he was found guilty, as charged, of perjury and forgery, and was sentenced seven years for each offense. The term was shortened a quarter for good behavior as is customary, and he has served ten years.

Meantime the friends of the claimant set to work to prove that he was not Arthur Orton, and they claim to have now established these facts: That Arthur Orton lived in Australia under an assumed name by which he was traced with difficulty; that under the name Cresswell he married a widow, whom he told the day after his marriage that his real name was Arthur Orton, of Wapping; that Orton drank to excess and became insane; and that he is now in a lunatic asylum under the name of Cresswell; that two brothers of Arthur Orton who went to Australia for the purpose of seeing this individual unqualifiedly pronounced him to be their brother; that he in turn recognized them and called them by name in the presence of the asylum officials; that eighteen independent witnesses have testified to his identity with Arthur Orton; and finally, that the story told by this lunatic of the Tichborne claimant confirms the testimony of the latter regarding the true Orton.

The fact that the case has already been before the highest court in England may make a reopening of it impossible, even supposing this new evidence to be confirmed. But the fact which at present alone concerns us is that so very many witnesses in this case, from first to last, have sworn, and, presumably, with honesty, directly against each other. If the claimant is a fraud there is no ground for supposing that any considerable number of his witnesses are willful perjurers. Though, perhaps, a majority of the public acquiesced in the justice of the decision in these trials, yet a great number of individuals are still convinced that the claimant was wronged. The unreliability of much of the testimony to identity in the courts generally has been abundantly illustrated. Particularly in the case of dead bodies mistakes are constantly made, so that the possession of some visible deformity or other marked peculiarity is almost necessary to gain credence for necroptic identification. Every wholesale drowning or burning accident gives fresh proof of this. Points turning upon the mistaken identity of the living are frequent enough in every court record. But it is not often one sees such wholesale error as must have been made by one party or the other in the Tichborne case. It is a wise parent that knows her own child, yet in face of the testimony of the brothers and sisters and against the verdict we have the affidavit of the dowager Lady Tichborne (who was only prevented by death from giving her evidence in court), "I am as certain as I am of my own existence, and distinctly and positively swear that the plaintiff is my first-born son, the issue of my marriage with Sir James Francis Doughty Tichborne."

Finally, reproach is brought, and with some reason, against the widely variant testimony of different medical experts in any given case. Yet their disputes have often regard to matters of opinion, or if to facts, yet to facts requiring the most skilled and careful scrutiny for their proper observation. But in this great case hundreds of witnesses testified diversely as to the most obvious facts, such as the color of the hair, the presence of pock-marks. A few years' and even a few months' lapse plays great havoc with men's memories. The discrepancies in expert testimony are not to be too hastily ascribed to the bias of lucre. Imperfectness of observation accompanied by dogmatism of assertion is proved by such cases as the Tichborne trial to be but too common in every class, and though scientific training tends to free a man from both these faults, yet there is enough of them left in average human nature to cause mischief in the investigation of difficult questions of fact or abstruse ones of opinion.

MEDICAL NOTES.

— Dr. Schweninger, of somewhat questionable repute, the medical attendant of Prince Bismarck, has been by distinguished influence foisted into the Berlin Medical Faculty. This body has had the spirit to make a protest against the appointment as unfit, but with what result remains to be seen. The premier's favorite was also made a member of the German Sanitary Board without any qualification for the post whatever, and against the protest of the director, Dr. Struck (also formerly a medical attendant on Prince Bismarck), who, in consequence, resigned his post. Dr. Koch has also, on account of some unpleasant circumstances connected with the affair, given up his seat on the Board, after having declined to be nominated as Struck's successor. It is to be feared that a conflict of this sort will be a terribly one-sided affair, but no other course seems compatible with the self-respect of the profession.

— Dr. Richardson has been making some successful experiments for the painless extinction of animal life. The electric shock did not prove sufficiently safe, says *Science*, so Dr. Richardson sought for an anæsthetic agent which would make death rapid as well as painless. He successively experimented with nitrous and carbonic oxides, ether, chloroform, coal-gas combined with chloroform, all of which more or less fulfilled their end. The results have been very satisfactory as carried out at the London home for lost dogs, where a chamber was charged with carbonic oxide, the gas having been previously passed over a porous surface, from which it took up vapor containing chloroform. Into this chamber was introduced a cage containing the dogs, which in a very short time passed from life to death in a profound sleep, without evincing the slightest pain or consciousness. Dr. Richardson has also administered the same narcotizing agent to sheep, so as to allow of their being killed in a perfectly painless manner; and he hopes that before long there will not be an abattoir in England without facilities for employing the system.

NEW YORK.

— The first annual meeting of the New York State Medical Association will be held at the new Murray Hill Hotel, on Park Avenue, on the 18th, 19th, and 20th of November. The annual address will be delivered by the president, Dr. Henry D. Didama, of Syracuse, the address on Surgery by Dr. E. M. Moore, of Rochester, the address on Obstetrics and Gynæcology by Dr. T. Gaillard Thomas, and the address on Medicinal and Non-Medicinal Therapeutics by Dr. Austin Flint, Sr. Among the papers to be read are the following: A New Procedure in Paracentesis Thoracis, by Dr. Thomas F. Rochester, of Erie County; A Case of Tubal Pregnancy, by Dr. Nathan Bozeman, of New York; Insanity: Preventive Measures, by Dr. John P. Gray, Superintendent of the State Lunatic Asylum at Utica; Excision of the Knee in Preference to Amputation in certain Deformities of the Leg, by Dr. Stephen Smith, of New York; Some Points in the Management of Breech Cases, by Dr. William T. Lusk, of New York; Abscess of the Liver, by Dr. E. G. Janeway, of New York; Diphtheritic Croup, by Dr. J. Lewis Smith, of New York; Typical Cases of Diabetes Mellitus not before reported, by Dr. A. Flint, Jr., of New York; and Report of a Case of Ligature of the Primitive Iliac Artery for Diffuse Aneurism of the External Iliac Artery, by Dr. J. W. S. Gouley, of New York. On the evening of November 20th the Fellows residing in New York County will entertain the Association at a banquet in the south grand hall of the Murray Hill Hotel, and on the morning of the 21st there will be surgical operations in the amphitheatre of Bellevue Hospital, followed by a demonstration of the application of the plaster-of-Paris jacket in the treatment of spondylitis and lateral curvature of the spine, by Dr. Lewis A. Sayre, after which an excursion will be made to the hospitals and other institutions on Blackwell's, Ward's and Randall's Islands under the charge of the Commissioners of Charities and Correction.

— On the 4th of September a boy ten years of age, who had been bitten by a Spitz dog in July, died of hydrophobia under the care of Dr. J. R. Cypert.

— Mr. Henry Lamb, of Rochester, has given $2000 to be distributed in prizes for essays on sanitary topics, and at the Public Health Convention in St. Louis last week the committee having the matter in charge reported that $500 would be awarded for the best paper on each of the following subjects: Healthy Houses and Food for the Working Classes; The Sanitary Condition and Necessities of School-Houses and School-Life; Disinfectants, and an Individual Prophylactic Agent for Infectious Diseases; and Appliances and Means for Saving Life and for Protection against the Injurious Influences of Certain Work and Occupations on Health. All competing essays must be sent in by April 1, 1885. At this meeting Dr. A. N. Bell, of Brooklyn, read the report of the Committee on Epidemics, in which it was claimed that in New York and other large cities epidemics had repeatedly been satisfactorily controlled by the observance of strict sanitary precautions.

On the 22d of October an open competitive examination, under the New York State Civil Service rules, was held at the New York Academy of Medicine to fill vacancies in the regular medical staff of the Hudson River State Hospital for the Insane at Poughkeepsie, for the positions of first assistant physician at an annual salary of $3000 and board, and third assistant physician at an annual salary of $1000 and board. The subjects on which the examination was made were of two classes, general and medical, and those comprised in the latter were the following: *Obligatory.* Theory and practice of medicine, therapeutics, clinical medicine, anatomy, physiology, and pathology of the brain, and psychological medicine. *Optional.* Use of the microscope and instruments of precision, medical chemistry, sanitary science, special branches of medicine, experience in the care and treatment of the insane, and experience in the management of institutions for the insane.

— At a meeting of the trustees of the College of Physicians and Surgeons, held on Saturday evening, October 18, it was officially announced that Mr. Wm. H. Vanderbilt had given to that institution, as a building fund, the sum of $500,000, which is probably the most munificent donation ever made to a medical school. It is stated that a site, including twenty-nine city lots, on Tenth Avenue, between Sixty-eighth and Sixty-ninth Streets, has already been secured, and that building operations will soon be commenced. This location is in the vicinity of the Roosevelt Hospital, but is remote from the large public hospitals, Bellevue and Charity.

Correspondence.

"DIPHTHERIA SPREAD BY ADULTS."

Plattsburg, N. Y., *October* 13, 1884.

Mr. Editor, — The article in your issue of the 9th inst. entitled, "Diphtheria Spread by Adults," ought not to pass by without a protest or at least some form of a denial. Dr. A. Jacobi's views on diphtheria, according to that article, are full of vagaries and contrary to clinical facts. The chief harm that can come from them is that some people *may* believe them. If this, his "cannon ball," be accurately aimed, there would be nothing left for the "pistol bullet" to destroy. In the first place there is no reasonable doubt that diphtheria is contagious. That it is invariably so has not yet been proved, and probably never will be. The isolated, solitary cases often appearing in the country, in which no possible source of contagion can be traced after careful investigation, are pretty good evidence that diphtheria may, in some instances, have a spontaneous origin.

In the second place, "what has been called follicular tonsillitis is" *not* "mostly diphtheria." There are cases of sore throat so mild and so peculiar that it is difficult to decide positively what their true character is. But these cases are so few that they do not constitute even a *respectable* minority.

In the third place it is very far from the truth that "There is as much diphtheria out of bed as in bed; nearly as much out of doors as in doors." Of course it is probable that some of Dr. Jacobi's "mild cases of diphtheria" which "have continued six or even nine months" may be out of doors before complete recovery. No one denies that all reasonable precautions should be taken to prevent the spreading of this terrible disease. The "nares and throats of all attendants and help" should be examined. So also "the sick nurses, the cooks, teachers, hair-dressers, and barbers, shopkeepers and restaurant keepers" should be looked after. But why stop here? Why not station special examiners on all street corners, in all railroad stations, at all country cross roads, and in numerous other places, so that those "who are in constant contact with all classes and ages," and especially those "who are out of bed and out of doors" may be kept from a possibility of spreading any possibly contagious disease? Perhaps some labor-saving machine could be invented and used that would facilitate these examinations.

Yours truly, D. S. Kellogg, M. D.

Miscellany.

THE FOLLIES OF QUARANTINE.

The *British Medical Journal* (October 4th) discourses forcibly, and in the same vein as our own editorial of September 25th, on the uselessness of the cordons by land and sea which have been substituted by the cholera-threatened cities of Southern Europe for the cleansing and disinfection of their own filthiness, which alone can check the epidemic. It says that the medical profession in France and Italy, as a body, has disapproved of these measures, following the opinion of German sanitarians, as expressed by Virchow, that the experiences of 1830 exploded all confidence in such cordons.

"In the *Annales d'Hygiène Publique*," continues the *Journal*, "that able French sanitarian Dr. Du Claux has recently lodged a complaint against the violent and vexatious measures of quarantine leveled by Italy and Spain against France. Not content, he says, with imposing ten days' quarantine at all their ports, they have established a useless land quarantine on the frontier; every pass in the Alps and Pyrenees is guarded with patrols, and travelers are crowded into filthy lazarets for seven days. Quoting from the *Temps*, he shows that prohibitive measures in Italy were from the first day pushed to absurd extremes. The papal Nuncio remains at Paris unable to pass the frontier. The French Ambassador is there too, for to reach the Quirinal he must pass eight days in the barracks of Bardonnechia, and risk being shot at by peasants and sentinels if he dares even to look over the walls. The lazarets of Italy have been crowded with 7000 miserable inhabitants; none of them, strangely enough, have been seized with cholera; yet, with all these vain, obstructive, and vexatious precautions, cholera has broken out more severely in Naples than elsewhere. In Spain the lazarets are filled to overflowing; it is not merely a question of spending seven days in them, the traveler has to wait a week for the chance of it.

"But Dr. Du Claux does not only inveigh against the follies of Italy and Spain. He strongly condemns as impracticable the attempt to put a *cordon* about Toulon. 'My humble opinion,' he adds, 'is that if the gates of Toulon had been shut the inhabitants would have passed under its walls.' It would, indeed, be difficult for any sanitarian to justify the acts of folly that have been committed through panic in France. Though it was well known that within ten days from the first outbreak two thirds of the inhabitants of Toulon and Marseilles had fled from their cities, many of them to Paris, which has remained singularly free from the epidemic, yet, at Lyons, every passenger from the south continues to undergo a mysterious rite. For a quarter of an hour a spray of carbolate of soda is played upon him, and then he is allowed to go free. In other towns the hapless visitor is shut in a room with sulphur heaped on live coals. Those of us who have seen cholera, and those who heard Dr. Norman Chevers tell us at the recent Social Science meeting at Birmingham that, during thirty years' experience in

India, he had never seen a single case of contagion, may smile at these simple attempts to destroy bacilli which, if anywhere, are deep in the intestinal canal, but those who have experienced these fumigations cannot smile. English invalids have received a scare that will be difficult to overcome. They might take their chance of cholera, but the lazarets and fumigations are intolerable. In truth each nation appears to distrust the other. Reprisal quarantine has reached its climax, commerce is deplorably disorganized, and the absurdity of the triangular duel between France, Italy, and Spain is admitted almost as openly by the sanitarians of these nations as by the English and Germans.

"Meanwhile, in England, there has been neither cholera nor panic of cholera, and there has been no disturbance of commerce. When one cholera ship from Marseilles arrived at Cardiff, and another at Liverpool, the measures taken by the Local Government Board were amply sufficient to prevent any outbreak. With us, quarantine, whether by land or sea, is wholly discredited. Any vessel may discharge its cargo at any port. Of course if there be cholera on board, there is a medical supervision of the sick man; but the destruction of cargoes and detention in lazarets, which is universal in the Mediterranean ports, is here unknown. Of land quarantine, English sanitarians have really no personal experience. It is known to have failed in India, and it has been rejected as useless in Germany. But no nation has so much evidence of the inutility of port quarantine; and whenever an international conference may be called we shall be ready with proof that cholera is but rarely carried in ships; that, as Von Pettenkofer insists, it dies away after a fortnight's voyage; and that medical supervision of the sick, together with adequate sanitation, are the best methods for preventing an epidemic. M. Clemenceau says it would be more easy to revise the Constitution than to cleanse Toulon; yet it is a task to which the inhabitants must ultimately devote themselves if they would keep out cholera."

STATEMENT RELATING TO THE INTERNATIONAL COLLECTIVE INVESTIGATION OF DISEASE, PROPOSED AT THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

The main objects which the Committee seeks to attain through the Collective Investigation of Disease are to widen the basis of medical science, to gather and store the mass of information that at present goes to waste, to verify or correct existing opinions, to discover laws where now only irregularity is perceived, to amplify our knowledge of rare affections, and to ascertain such points as the geographical distribution of diseases and their modifications in different districts. It will be its endeavor to place clearly before the whole profession the limits and defects of existing knowledge, as well as to stimulate observation, and to give it a definite direction. It will be a not unimportant incidental result of its work should it tend, as is hoped, to the better training of the members of the profession in habits of scientific and practical observation, and in systematic methods of recording the facts which they observe.

The age in which we live has seen enormous advances in the sciences on which the fabric of medicine rests, such as Chemistry and other branches of Physics, Physiology, and Pathology. Each of these has taken giant strides. It must be admitted, however, that purely medical knowledge has scarcely made proportionate progress. It cannot be expected that it should do so, as it deals with the aberrations of the most complex of organisms, is of all sciences the most difficult, and demands the greatest patience and the largest accumulation of data.

Hitherto the advancement of medical science has been brought about mainly by individual effort. The value of such work in the past we in no way underrate, nor do we desire to lessen the amount of it in the future; but in medical science there is much that defies interpretation from individual experience, and many problems so far-reaching in an ever-widening field, with elements so manifold, that no single man, however gifted and long-lived, can hope to bring the whole within his range. The need, therefore, in medicine, of that combination and concentration of individual work which is adopted in many other branches of science and in commerce, and to which increasing facilities of intercommunication have given so much impulse and so much strength, cannot be questioned. Indeed, it may be said that, resting on individual research alone, medical knowledge can be advanced but slowly and with difficulty. Future progress to any great extent must be the work, not of units acting disconnectedly, but of the collected force of many acting as one. For many to act as one, organization is needed; that organization it is the purpose of our Committee to supply.

Disease is many-sided, and we wish to include in our organization those who see it from every side. All, therefore, whether hospital physicians, family and school attendants, specialists, medical officers of the army and navy, and of workhouses and asylums, will be asked to contribute their quota of observation to the common fund.

In England and in Germany organizations for this purpose already exist, through which good work has been accomplished, and a volume entitled the Collective Investigation Record, containing tabulated returns, with reports upon them and other matter, is published annually by the British Medical Association. France and Austria are alive to the importance of the new method. In Scandinavia and in the United States the foundations of associations have been laid. Denmark, Russia, and Switzerland are setting their hands to the task. To unite these several associations by an international organization for the study of various problems, and to induce the formation of similar combinations elsewhere is felt to be a work peculiarly befitting an international congress. Our Committee is enjoined by the Congress at Copenhagen to endeavor to carry out this work, and in compliance with that injunction it invites the coöperation of all who have at heart the promotion of medical science and practice.

The following is the proposed method: A subject having been selected, a person or persons of acknowledged authority will be asked to write a memorandum, in the form of a short essay, upon it. The memorandum will succinctly give the present state of our knowledge. It will also point out the directions in which further research may best be made, and with this view will suggest a few simple and definite questions upon the subject selected. The questions will relate to matters of fact, to be elicited by observation of cases, rather than to matters of opinion.

The contemplated organization will, it is hoped, in time enable the committee to ask and collect answers to these questions from the profession at large wherever scientific medicine is studied or practiced. It will be a further duty to examine, arrange, tabulate, and deduce results from the mass of observations thus collected, due credit being given to each contributor for the information he has furnished, and reports on the results of the several investigations will be laid before the International Congress at its next meeting at Washington.

ISAMBARD OWEN, *Secretary-General.*

5 HERTFORD STREET, MAYFAIR, LONDON.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 11, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	621	287	28.16	17.60	15.84	2.46	5.63
Philadelphia	927,995	328	118	30.80	19.80	4.84	4.84	15.28
Brooklyn	644,526	—	—	—	—	—	—	—
Chicago	632,100	200	104	32.50	7.00	13.30	4.50	10.00
Boston	423,800	206	87	27.89	14.07	14.55	3.39	5.33
Baltimore	408,520	164	67	24.40	16.47	7.32	4.27	8.54
St. Louis	400,000	152	54	34.17	5.91	10.20	5.91	12.48
Cincinnati	272,400	89	28	23.52	13.44	6.72	2.24	2.24
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	81	31	25.83	14.76	7.38	8.61	—
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	50	26	30.00	10.00	16.00	4.00	4.00
Providence	119,405	33	13	33.33	6.06	21.21	9.09	—
New Haven	62,882	25	10	20.00	24.00	8.00	4.00	4.00
Nashville	54,400	31	9	35.44	19.33	12.88	16.11	—
Charleston	52,286	34	6	32.34	8.82	8.82	—	2.94
Lowell	71,447	20	7	25.00	15.00	15.00	—	5.00
Worcester	69,442	22	8	27.24	9.08	9.08	4.54	—
Fall River	62,674	27	11	37.03	14.00	22.20	11.10	—
Cambridge	60,995	19	6	15.78	31.56	10.52	5.26	—
Lawrence	45,516	11	6	27.27	36.36	9.09	—	9.09
Lynn	44,895	15	5	6.66	—	—	6.66	—
Springfield	38,090	7	5	28.56	28.56	14.28	—	14.28
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	14	7	28.56	7.14	14.28	—	14.28
New Bedford	30,144	9	1	22.22	33.33	11.11	11.11	—
Salem	29,503	14	8	28.56	—	28.56	—	—
Chelsea	24,347	13	5	46.14	15.38	23.07	7.69	7.69
Taunton	22,693	—	—	—	—	—	—	—
Gloucester	21,400	5	2	—	—	—	—	—
Haverhill	20,905	3	1	—	—	—	—	—
Newton	19,421	6	2	16.66	16.66	—	—	—
Brockton	18,323	6	2	33.53	16.66	16.66	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	3	1	33.33	33.33	33.33	—	—
Fitchburg	13,433	4	0	—	—	—	—	—
Eighty-seven Massachusetts towns	333,907	71	10	16.92	23.97	8.46	7.05	—

Deaths reported 2283 (no reports from Brooklyn, New Orleans, and Buffalo): under five years of age, 927; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 613, consumption 313, diarrhœal diseases 254, lung diseases 176, diphtheria and croup 149, typhoid fever 86, malarial fevers 53, whooping-cough 24, cerebro-spinal meningitis 12, scarlet fever 24, measles seven, puerperal fever two. From *malarial fevers*, New York 16, St. Louis eight, District of Columbia and Charleston seven each, Baltimore five, Philadelphia and Chicago four each, Nashville two. From *whooping-cough*, New York 10, Boston four, Chicago and Baltimore two each, St. Louis, Cincinnati, Providence, New Haven, Worcester, and Lawrence one each. From *scarlet fever*, New York and Philadelphia five each, Boston and Baltimore four each, St. Louis, District of Columbia, Milwaukee, Worcester, Chelsea, and Merrimac one each. From *cerebro-spinal meningitis*, New York three, Philadelphia two, Boston, Milwaukee, Lowell, Worcester, Fall River, Newton, and Brockton one each. From *measles*, New York six, Cincinnati one. From *puerperal fever*, Boston and Milwaukee one each.

Cases reported in Boston: typhoid fever 69, scarlatina 63, diphtheria 30, and measles two.

In 104 cities and towns of Massachusetts, with an estimated population of 1,326,946 (estimated population of the State 1,955,104), the total death-rate for the week was 17.84 against 18.58 and 23.01 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending September 27th, the death-rate was 19.1. Deaths reported 3200: infants under one year of age 954; acute diseases of the respiratory organs (London) 162, diarrhœal diseases 354, scarlet fever 67, fever 63, measles 48, whooping-cough 42, diphtheria 24, small-pox (London 10, Liverpool, Sheffield, and Sunderland one each) 13. The death-rates ranged from 14.4 in Norwich to 28.8 in Preston; Birmingham 18.2; Blackburn 26.9; Bradford 22.7; Leeds 24.2; Leicester 21.6; Liverpool 25.1; London 16.1; Manchester 25.1; Nottingham 18.3; Sheffield 21.9. In Edinburgh 19.5; Glasgow 24.9; Dublin 30.2.

For the week ending September 20th, in the Swiss cities, there were 16 deaths from consumption; diarrhœal diseases 13, typhoid fever five, lung diseases four, measles, scarlet fever, and diphtheria each one. The death-rates were, at Geneva 6.1; Zurich 7.9; Basle 7.0; Berne 22.2.

The meteorological record for the week ending October 11th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Oct., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 5	29.927	60	72	55	68	61	78	69	NW	E	W	18	9	3	C	C	C	—	—
Mon., 6	29.851	56	65	46	85	78	91	85	W	W	NE	2	10	3	F	F	C	—	—
Tues., 7	29.851	58	67	48	66	52	71	63	NW	NW	NW	19	23	10	C	C	C	—	—
Wed., 8	29.794	59	68	46	82	53	90	75	W	SW	W	13	9	10	F	F	R	—	—
Thurs., 9	30.095	47	61	41	58	36	63	53	N	NW	NW	21	10	8	C	C	C	—	—
Fri., 10	30.241	50	61	36	60	40	62	54	W	SW	SW	10	8	9	C	C	C	—	—
Sat., 11	30.093	62	73	48	67	33	84	61	SW	SW	SW	8	19	16	C	F	C	—	—
Mean, the Week.	29.979	43.4	66.6	45.7				64.4										5.35	0.10

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY FROM OCTOBER 11, 1884, TO OCTOBER 17, 1884.

Norris, Basil, lieutenant-colonel and surgeon. Relieved from duty as attending surgeon, Washington, D. C., and ordered for duty as medical director, Division of the Pacific, and Department of California, relieving Surgeon E. I. Baily. Colonel Baily, on being relieved, will assume the duties of attending surgeon at San Francisco, Cal.

Spencer, Wm. C., major and surgeon. From Department of Dakota to Department of the East.

Goddard, Charles E., major and surgeon. To be relieved from duty at Jefferson Barracks, Mo., and to report for duty in Department of Dakota.

McClellan, Ely, major and surgeon. From Department of the East to duty at Cavalry Depot, Jefferson Barracks, Mo. S. O. 242, A. G. O., October 15, 1884.

McKee, Jas. C., major and surgeon. Granted leave of absence for one month, with permission to apply at Division headquarters for one month's extension. Paragraph 1, S. O. 149, Department of California, October 3, 1884.

Loring, Leonard Y., captain and assistant surgeon. From Department of the East to Department of California.

Harvey, Philip F., captain and assistant surgeon. From Department of Dakota to duty in attending surgeon's office, Washington, D. C., relieving

Shufeldt Robert W., captain and assistant surgeon, who, on being relieved, will report to commanding general, Department of Missouri, for duty. S. O. 237, A. G. O., October 9, 1884.

Porter, J. Y., captain and assistant surgeon. Granted leave of absence for one month on surgeon's certificate of disability, with permission to leave the limits of the Department. Paragraph 3, S. O. 138, headquarters Department of Texas, October 9, 1884. Confirms telegraphic order of same date.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S NAVY DURING THE WEEK ENDING OCTOBER 18, 1884.

Brush, Geo R, surgeon. To temporary duty at the Naval Laboratory. October 11, 1884.

Burbank, Charles H., medical inspector. Detached from the Brooklyn, and placed on waiting orders. October 15, 1884.

Clark, John H., surgeon. Detached from the Lackawanna and detailed as Fleet Surgeon of the Pacific Station. October 17, 1884.

Cooke, George L., surgeon. To the Lackawanna. October 17, 1884.

Edgar, John M., passed assistant surgeon. To the Receiving Ship Franklin. October —, 1884.

Hudson, A., medical inspector. Detached from the Lancaster and placed on waiting orders. October 14, 1884.

Hugo, Joseph, surgeon. Placed on waiting orders. October 13, 1884.

Lovering, P. A., passed assistant surgeon. Detached from the Lackawanna and placed on waiting orders. October 17, 1884.

Marsteller, E. H., passed assistant surgeon. Detached from the Monongahela and ordered to the Lackawanna. October 17, 1884.

Martin, William, assistant surgeon. Detached from the Passaic and placed on waiting orders. October 14, 1884.

Martin, H. M., passed assistant surgeon. Detached from the Brooklyn and placed on waiting orders.

American Academy of Medicine. — The ninth annual meeting of the American Academy of Medicine will be held in Hopkins Hall, Johns Hopkins University, Baltimore, Maryland, Tuesday and Wednesday, October 28 and 29, 1884. Papers will be read by Drs. Peter D. Keyser, of Philadelphia, Penn.; Edward Jackson, of Philadelphia; Henry O. Marcy, of Boston; Albert H. Gihon, United States Navy; A. D. Rockwell, of New York; Benjamin Lee, of Philadelphia, Penn., President; R. Stansbury Sutton, of Pittsburg, Penn.; Virgil P. Gibney, of New York, N. Y.; Charles C. Bombaugh, of Baltimore, Md.; T. M. Ludlow Chrystie, of New York, N. Y.; Nathan Allen, of Lowell, Mass.; Herman Knapp, of New York, N. Y.; L. Duncan Bulkley, of New York, N. Y.; Richard J. Dunglison, of Philadelphia, Penn., and H. O. Marcy, of Boston, Mass.

Books and Pamphlets Received. — A Contribution to the Study of Coryza Vasomotoria Periodica, or So Called Hay Fever. By John N. Mackenzie, M. D., Surgeon to the Baltimore Eye, Ear, and Throat Charity Hospital. (Reprint from New York Medical Record.)

Cases of Reflex Cough due to Nasal Polypi, with Remarks. By John N. Mackenzie, M. D. Baltimore. (Reprint from Transactions of the Medical and Chirurgical Faculty of Maryland.) 1884.

Transactions of the Medical Society of the State of West Virginia, Seventeenth Annual Session, May 21–22, 1884, Wheeling, W. Va. 1884.

Circulars of Information of the Bureau of Education. No. 5. 1884. Suggestions respecting the Educational Exhibit at the World's Industrial and Cotton Centennial Exhibition. Washington.

Proceedings of the Connecticut Medical Society, 1884. Ninety-third Annual Convention. Held at New Haven, May 28–29. New Series. Vol. III. No. 1. Published by the Society. S. B. St. John, M. D., Secretary. Hartford, Conn.

Fifth Annual Report of Sapporo Agricultural College, Japan. 1884.

International Medical Congress. Copenhagen. 1884. Prostatic Obstruction. By Reginald Harrison, F. R. C. S., etc.

Notes on the Surgical Treatment of Hematuria and Rupture of the Bladder. By Reginald Harrison, F. R. C. S. Edinburgh. 1884.

McGill University. Annual Calendar, Faculty of Medicine. Fifty-second Session, 1884–85. Montreal. 1884.

Handbook of the Diagnosis and Treatment of Skin Diseases. By Arthur Van Harlingen, M. D. With Two Colored Plates. Philadelphia. P. Blakiston, Son & Co. 1884.

Original Articles.

TUMORS OF THE MALE BLADDER, WITH REPORT OF A CASE.[1]

BY DR. WATSON.

DECEMBER 14th. The patient, aged sixty, has had a good family and personal history; has never had any illnesses of importance; has been free from any trouble of the genito-urinary tract until six years ago. At that time he passed by the urethra two small calculi without pain, and has passed none since. Shortly afterward began hæmaturia, slight in degree, the urine being more or less pink or red from the presence of blood uniformly diffused through it, and small blood clots being also occasionally present. This condition was constant, and has persisted ever since, varying, however, in intensity. The patient's health has not suffered until recently, nor has he had any other symptoms accompanying the condition until two months ago. Then began frequent and painful micturition, most marked at night. The frequency varied from three to six times during the night; in the day-time it was often normal. The pain was most noticeable before and during the act of micturition. The quantity of blood began to increase, and there were more clots. These symptoms were not augmented in severity by any kind of motion, being often worst at night when at rest.

The patient was a large, muscular man, and when first seen paleness, thinness, and a slightly yellow tinge of the skin were the only outward signs of disease.

A careful examination of the thoracic and abdominal organs gave negative results. Rectal examination showed that there was no prostatic enlargement. The bladder wall gave the impression of being slightly thickened and more resistant than normal. Nothing unusual could be detected by bimanual palpation of the bladder, and there were no enlarged glands to be felt in its neighborhood either while examining by rectum or otherwise. Palpation over the region of the kidneys, anteriorly and posteriorly, and along the course of the ureters showed nothing abnormal.

The pulse was fairly strong, the tongue clean. The patient had felt well enough to pursue his usual avocations until a day or two previous to my first visit, which was on December 14th.

From this time until the diagnosis was established the urine was frequently examined by me, and also by Dr. Gannett, and upon these examinations the diagnosis was made. Their results, though varying more or less, presented in the main the same important features, which may be embodied under one heading, as follows: —

Urine. Color, reddish-yellow, the degree and intensity of the red varying, but always present, and always arising from the admixture of fresh blood. Specific gravity 1013 to 1020. Reaction strongly acid. Odor normal. Urea, uric acid, chlorides, sulphates, earthy phosphates, alkaline phosphates generally normal. Albumen, about one eighth per cent., but varying with and corresponding to the quantity of blood present. Sediment large. On settling the supernatant fluid is still red. The sediment contained blood clots, whose shape, color, and consistency presented the characters of the clots of fresh hæmorrhage. The sediment also occasionally contained small bits of tissue having a fleshy appearance. Besides these constituents were found fresh red blood corpuscles, leucocytes, and polymorphous cells in the greatest variety, many of which had very large nuclei, physalids, bacteria, and granular matter.

During the act of micturition the blood though present in the first was most conspicuous in the last part of the stream, the few final drops being sometimes pure blood.

The treatment during the first days was chiefly expectant.

Ten days after first visiting the patient he had an attack of retention of urine, due to profuse hæmorrhage, clots plugging the orifice of the bladder so as to prevent the natural escape of urine. The bladder was distended, its fundus reaching half way to the umbilicus. The retention was complete for twenty-four hours, during which the pain and vesical tenesmus were treated, in my temporary absence, by subcutaneous injections of morphia. At the end of this time the urine began to flow occasionally in small quantities, and on my return I found the bladder, though still considerably distended, much diminished in size. At the end of the next twenty-four hours the flow of urine was fully reëstablished. Nausea and loss of appetite occurred with the attack of retention, and persisted for several days, during which time there was also polyuria, the largest quantity in twenty-four hours being 2900 cubic centimetres.

Coincident with this attack began pain in the sciatic region of the left side, which was severe, and which lasted more or less persistently for some weeks, confining the patient to bed.

A week later, with Dr. C. B. Porter in consultation, the patient was etherized, and the bladder sounded. Its antero-posterior diameter was four inches, and its capacity large. Five hundred cubic centimetres of *residual* urine were present. This quantity was thought to be due, probably, to the attack of retention and consequent over-distention of the bladder. No stone was detected. The extremity of the sound in sweeping the vesical cavity revealed to the touch nothing abnormal. Examination of the bladder wall (so far as it could be reached) between one finger in the rectum and the sound in the bladder gave only the impression of slight thickening. The sound was then withdrawn, and the bladder washed out through a soft catheter with water at the temperature of 114° F., and with Sir Henry Thompson's borax solution.

After recovering from the ether the frequency of the desire to micturate was less. A slight rise of temperature followed the examination, and lasted for three days. Hæmorrhage was not greater than hitherto.

On the following day the bladder was irrigated for half an hour with water at 115° F., and this treatment was followed for two weeks daily with great relief to the patient, sciatic and vesical pain and frequency of micturition disappearing under its use, and the quantity of residual urine gradually diminishing until at the end of the two weeks there were only two ounces. The amount of blood in the urine also became much less, the urine being occasionally almost clear. During this time the patient was given a nourishing diet and tonics, under which and with the diminution of the local symptoms his condition decidedly improved.

In the washing following the sounding bits which resembled detached portions of a new growth were found, and for certainty as to their character they were taken to Dr. Gannett for examination, and from him the following report was obtained: —

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[1] Read before the Surgical Section of the Suffolk District Medical Society, October 6, 1884.

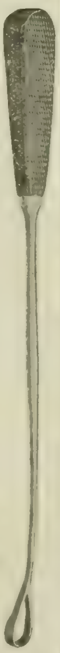
"The bits removed by washing out the bladder varied in size from a pin's head to a small pea, all presenting a gelatinous appearance. Microscopically they showed masses made up of finger-shaped projections with rounded, club-like extremities. After maceration in Ranvier's alcohol and staining with hæmatoxylon it was found that the centre or stem of each projection was a blood-vessel surrounded by several layers of cells having large, clear nuclei, and a comparatively small amount of protoplasm. In my opinion the masses described are portions of a new growth from the mucous membrane known as papilloma."

The diagnosis being thus far established, it was decided to perform the exploratory operation of the bladder, as recommended and practiced by Sir Henry Thompson, and to remove the new growth if possible.

The patient's condition at this time was fairly good; he was well enough to move about the house; had a fair appetite; all the organs except the bladder, so far as could be discovered, were functionating properly; the pulse was strong. There was *no evidence* of the disease being anything other than papilloma of the bladder.

On January 20th, five weeks after first seeing the patient, the operation was performed, Dr. Porter being in consultation; Drs. A. T. Cabot, J. W. Elliot, and Howard Lombard being also present, and kindly assisting.

I may, perhaps, be pardoned for entering somewhat into detail as to the steps of the operation, for the reason that although its procedures are simple, it has been as yet but little practiced in this country. A grooved staff, No. 24 (French), was passed into the bladder, and held in the median line. An incision was then made in the perinæum from one inch below the scrotum to within half an inch of the anus; further incisions in the same line exposed the urethra, which was opened at the bulbo-membranous junction, and divided backward to the prostatic urethra, which with the neck of the bladder were then gently dilated, by pushing first the little and then the forefinger through them. Strong downward pressure above the pubes now brought the whole interior of the bladder within reach of the finger, which revealed the fact that a very large portion of the inner lining was occupied by a sessile papillomatous growth, the surface of which was soft and friable enough to be broken down in places by the finger, and was very vascular, as shown by the hæmorrhage which followed this procedure. The condition was confirmed by examinations of the other gentlemen present. A dull plated copper curette of this shape was then passed in above the finger, and the removal of the growth was undertaken by this means, alternating with an instrument which I devised to act as a strong, long finger nail, a description of which will be given further on.



The growth was so extensive that, at the end of an hour, although much had been removed, there was also a good deal left. Hæmorrhage was free and constant during the operation. The bladder was three times thoroughly irrigated for a few moments with hot water at a temperature of 125° F., which answered the double purpose of stopping the hæmorrhage and of washing out detached fragments of the tumor and blood clots, which rendered the continued steps of the operation more precise.

At the end of the hour the patient was so weak from the loss of blood that it was thought unadvisable to proceed further with the operation, and he was put to bed. He made an excellent recovery from the shock of the operation.

The urine came away involuntarily during the first twenty-four hours through the wound. A drainage tube was then inserted into the bladder for thirty-six hours, but at the end of this time it caused pain and vesical tenesmus, which ceased upon its removal. Hæmorrhage sufficient to tinge the urine persisted for three days after the operation, after which it disappeared not to return until within three weeks of the patient's death.

Twenty-four hours after the removal of the drainage tube distinct acts of micturition were reëstablished; their frequency was only once in from four to six hours. At the end of a week the patient, so far as his bladder was concerned, was perfectly comfortable. Previous to this he had occasionally with micturition severe pain, referred to the end of the penis. The neuralgic pain in the left sciatic region had quite disappeared.

For nine days the bladder was washed out with a warm solution of corrosive sublimate one to 15,000. At this time there was again some bladder irritation, which ceased after changing the corrosive sublimate wash for a borax solution or hot water; these gave a sense of great comfort to the patient.

The urine for about a week after the operation smelt badly, contained a good deal of pus, and became neutral. Soon, however, the bad smell disappeared, the amount of pus diminished, and the urine became again acid.

During the first four or five days succeeding the operation several bits of growth were passed with the urine through the wound. On the thirteenth day the patient was out of bed, had a good appetite, and was apparently doing well in every way.

Three days later, owing to the outer part of the wound having been allowed to close too rapidly, a slight infiltration of urine about its edges and into the scrotal tissues occurred, which, however, subsided in a few days on reopening the wound superficially. Coincident with the infiltration of urine was a rise of temperature, reaching 105.5° F. on the evening of the second day, falling again to normal on the fifth day.

A marked diminution in the quantity of the urine *then* occurred, and hyaline and granular casts appeared for the first time. Under the use of diluents and diuretics the quantity became normal in a few days, and the casts slowly disappeared.

With the rise of temperature just spoken of occurred also a flatulent diarrhœa. The stools were nearly colorless, contained undigested food and some fat particles. This condition returned once or twice during the patient's illness.

Peat or fossil meal bags saturated with a solution of corrosive sublimate, 1 to 2000, were found a very useful dressing for the wound, catching and retaining the urine and obviating the annoying sense of wetness which would otherwise have taken place.

The rises of temperature were treated by aconite and morphia and quinine.

The diet was as strong and nutritious as possible for the patient to bear. The attacks of diarrhœa and flatulency were treated by a mercurial cathartic and subnitrate of bismuth, and tinct. cardamon comp., and changes of diet which seemed appropriate.

On the 23d of February, a little more than a month after the operation, I was obliged to leave the patient, and for the remaining notes of the case, as well as for his kindness in assuming the care of the patient, I am indebted to Dr. A. T. Cabot.

At this time the diarrhœa returned, but was soon relieved by gray powder and liquor pancreaticus. A week later a fluctuating swelling about the size of half a lemon appeared over the left posterior superior spine of the ilium; severe and constant pain in the same region accompanied this manifestation. Soon after the pain extended to both legs, being most marked in the right.

A digital exploration of the rectum at this time gave an increased sense of resistance to the finger on the right side of the pelvis, but no distinct tumor could be made out.

A little later the fluctuating swelling already referred to was aspirated and about two and a half ounces of dark bloody fluid were withdrawn; it refilled in two days. About the same period a distinct tumor was detected just above Poupart's ligament, on the right side, extending about one inch above it, and occupying about the middle two thirds of the space between the symphysis pubis and the anterior superior spine of the ilium. This steadily increased in size until the patient's death, when it reached half way to the umbilicus. Constant pain, delirium, rapid emaciation, and a steadily diminishing quantity of urine now became the prominent symptoms, and with them the patient quickly failed, and died on May 5th, about two months and a half after the operation.

In closing the report of the case I wish to lay especial stress upon the fact that the performance of the operation, even in this hopeless condition, almost relieved the two prominent and distressing symptoms, — hæmorrhage and vesical pain. As will be seen from the specimen which Dr. Gannett will show presently, the intrinsic nature of the case did not allow the hope that more could be accomplished.

There are about forty recorded cases of primary new growths of the male bladder in which operations with a view to their removal have been undertaken with varying success. Of this number eighteen have occurred in the practice of Sir Henry Thompson, four in that of Mr. Whitehead, of Manchester, while the rest of the series, beginning with the case of Corvillard in 1639, contains those of Crosse, Desault, Le Cat, Civiale, Gersuny, Liston, Billroth, Kocher, Volkman, G. M. Humphrey, Berkeley Hill, Marcacci, Davies Colley, Morgan, Ransohoff.

Beside these in the male subject are others in the female, numbering more than sixty.

Moreover, there are many more for which no operation was undertaken, but which, as pathological specimens, have afforded observers the opportunity for the study of their nature.

Sir Henry Thompson has been able to collect no less than fifty examples of primary growths of the bladder from the various museums of London, added to which number the twenty cases which have been in his own hands makes a total of seventy. It must, of course, be borne in mind that this observer has had more widely extended opportunities for making such a collection than any one else.

Within one year in this town six cases of this class of disease have come to my notice, two of which have been in my own care, and four in that of other surgeons. I have thought it worth while to cite these figures to accentuate the fact that primary new growths of the bladder are not of very great rarity, and this impression would be confirmed, I am sure, if we had more exact knowledge in regard to many cases which have died without autopsy, and with a diagnosis of hæmaturia simply, amongst which no doubt a certain proportion would be found in which the source of hæmorrhage was a new growth in the bladder.

In view of these facts, and of the decided impetus which the surgical treatment of tumors of the bladder has received in late years, and the much greater success which it has met with under improved methods and more accurate knowledge, it may be useful to try to briefly summarize what experience has already taught us in this direction, and the prospect for the relief of a very suffering class of cases which it offers.

The variety of tumors which have been found in the bladder are: (1) Papilloma, (2) fibroma, (3) epithelioma, (4) carcinoma, (5) sarcoma, (6) myxoma, (7) myoma, (8) enchondroma.

The last is quoted on the authority of a case published in the *Gazette Médicale de Paris* in 1836, but its nature is open to doubt.

About fifty per cent. of all tumors of the bladder are papillomas, which term is meant to express the benign growths, pedunculated or sessile, having branching papillæ of greater or less length, which consist of a capillary loop of blood-vessel covered with epithelial layers, which, being very tender, allow hæmorrhage to occur readily.

Almost any tumor of the bladder may have a papillated surface, with which the true papillomas should not be confused. Moreover, a papilloma may become with time a cancerous growth.

The other varieties of new growth occur in relative frequency in about the order named.

The most common seat of tumors of the bladder is about the trigonum, but they may occur in any portion of the bladder.

DIAGNOSIS AND SYMPTOMS.

The two most prominent symptoms of new growths in the bladder are hæmorrhage and vesical pain, though they may both be absent through the entire course of the disease.

Hæmaturia varies in respect to constancy, time of appearance, and quantity of blood lost, with the nature of the tumor. If the growth be a papilloma it is generally the first, the most pronounced, and most unfailing symptom. In malignant growths it is more likely to be preceded by pain and frequency of micturition.

Hæmaturia is sometimes the only symptom throughout the course of the disease. The quantity of blood in the urine varies from enough to slightly tinge it to severe hæmorrhage, blanching the patient and filling the bladder with clots. These generally have the appearance of being formed from fresh hæmorrhage. They lack any characteristic shape, and are not firm and decolorized, as those formed in the pelvis of the kidney or ureters sometimes are. If there be no urethral lesion, and blood appears at the end of the act of micturition, the inference that it is of bladder origin is justified.

The hæmaturia may be intermittent or constant, and its appearance in greater or less amount may be noticed in every urination for a period of years, as in the case of this evening. Exclusive of papillomas, the constancy depends probably upon the extent of superficial erosion present.

Microscopically blood corpuscles present the characters of fresh hæmorrhages, but it is an interesting fact that this is not invariable, as I have had occasion to observe in one case, in which the corpuscles showed in several examinations of the urine the features which belong to blood which has remained for a long time in the urinary tract, and this, too, in a case in which no condition obstructive to the outflow of urine from the bladder, such as stricture or hypertrophied prostate, was present.

There was also an entire absence of vesical symptoms, and these facts led to the inference that the hæmorrhage originated higher up in the urinary tract than the bladder. The autopsy, however, disclosed two tumors of the bladder, one near the orifice of each ureter, which were the source of the bleeding. The absence of blood, on the other hand, does not preclude the possibility of the presence of a new growth in the bladder, as is shown in several cases of Stein's, in which large tumors were present, and yet no hæmorrhages had occurred at any time during the malady.

Pain and vesical irritability are symptoms of the next importance to hæmaturia, which they may precede or follow, or be coexistent with. As already stated, pain may be absent. Its presence and severity are due in part to the situation of the growth (being most marked when it is in the vicinity of the vesical orifice), in part to the nature of the disease. It may be felt in the end of the penis, in the perinæum, at the vesical neck, at the sacro-iliac synchondrosis, or in the sciatic regions, and often occurs quite independent of any form of motion or exercise. It varies in intensity from a slight stinging along the course of the urethra to the severer forms accompanying vesical tenesmus. When in the sciatic region it is apt to be on the same side as the growth, but this is not invariable. It is generally most marked at the end of micturition, but this, too, is not always the case, as in the instance reported to-night, in which the pain was often most marked when the patient was at rest and independent of urination. In some of the cases reported actual pain has not been present, but difficulty of micturition has been mentioned, and described by the patient as straining.

Frequency of micturition is often increased, and attains its greatest height in those cases in which necrosis of the growth occurs, and is accompanied by a serious form of cystitis. It will be seen, therefore, that the two most important symptoms of these new growths, hæmorrhage and pain, may vary greatly in degree, from being, indeed, entirely absent during the course of the disease to occupying the most prominent place.

As a further aid to diagnosis, and this is of especial interest in the early history of such cases, the *urine* should be carefully examined. These examinations may give us only a suspicion or the most positive proof of the presence of a new growth that can be furnished. The normal characters of the urine in the early stages of the malady, and sometimes throughout its progress, may be unaffected, except that the color is altered by the presence of blood, and albumen appears in proportion to its quantity. Later the urine often becomes alkaline and fetid, contains large deposits of pus and triple phosphates, and finally may take on the characters of a fibrinuria, as described by Ultzmann.

The presence in the urine of large numbers of cells of varied shapes and having large nuclei has been noted by many observers in connection with new growths in the bladder. There is a general agreement that their existence has nothing necessarily characteristic in it, as the cells represent only such forms as are found in the mucous membrane of the bladder normally, and may be cast off and appear in the urine in conditions which favor maceration of its epithelial layers. Nevertheless, when present in the urine and coincident with hæmaturia, vesical pain, or difficulty of micturition, or when present without their appearance being explained by the existence of such a condition as just mentioned, they may be taken as strongly indicative of the existence of a new growth. On the other hand, their absence does not preclude the possibility of a bladder tumor.

The surest evidence which the urine can afford is the presence in it of bits of the growth. These vary from the smallest shreds of necrotic tissue to fleshy masses of considerable size and characteristic appearance. The smaller bits are difficult to detect in a urine which contains much blood, but the search is rendered easy by diluting the sediment largely with water, and pouring it out into several flat dishes.

Occasionally a bit of the surface of a papillomatous growth will be passed in the urine which is sufficiently characteristic in its tufted form to be recognized by the naked eye. More frequently, however, the detached portions come away in a necrotic condition so altered that they are difficult to recognize even under the microscope, but very small bits may show the elements of papillomatous growth. One should bear in mind, however, that the surface of the growths may be papillomatous while the base is cancerous, and that therefore microscopic examination alone is not conclusive evidence as to the nature of the tumor.

Leaving the urine and subjective symptoms of the patient, there are several aids which may be used to a furtherance of the diagnosis. These are capable of furnishing the most information if the patient be etherized.

Examination by rectum, with one or more fingers, will reveal the presence of a tumor which has to any great degree involved the bladder walls posteriorly, or has its seat in the prostate, by imparting to the finger a sense of increased resistance, weight, thickness, or induration, uniformly or unevenly distributed through the bladder wall. This search may be aided by bimanual palpation, the other hand exerting pressure above the pubes in a relaxed condition of the abdominal walls. A small, benign tumor, not involving the vesical walls, or a tumor situated on the anterior wall or fundus, even if of large size, in a fat patient, may quite escape detection by this means.

No better testimony could be brought forward to show that a tumor of the bladder may very readily fail to be noticed by an *exploration of the sound* or searcher than Sir Henry Thompson's assertion that such is frequently the case. In some instances, however, the diagnosis has been made by this means, and in the case of a hard, firm, circumscribed tumor it is quite conceivable that such should occur, but in most cases the use of the searcher is chiefly valuable as a means of eliminating stone. It should be mentioned in this connection that a tumor of the bladder whose surface had become coated with urinary salts has been mistaken for stone, and it is quite possible to regard, on the other hand, an encysted stone as a tumor of the bladder, as in Dr. Otis's case. Before removing the sound it is well to replace the finger in the rectum, and examine as much of the bladder wall between it and the sound as can be reached.

If a catheter or searcher be introduced their eyes and contents should be carefully examined on withdrawal to see if a bit of the growth has not been caught and detached in the movements of the instrument.

All instrumental manipulations should be undertaken with great gentleness, as several instances of serious and one or two of fatal hæmorrhage have arisen from a lack of caution in this respect.

Irrigation of the bladder, especially immediately after the use of instruments, may furnish valuable information by washing out any detached fragments of growth. Such irrigations, if made with hot water, 125° F., will also be of service in stopping any hæmorrhage which may have originated during an examination.

With the steps just recounted all the ordinary means of diagnosis have been put in requisition, and there remains only one other method to be employed, namely, the *digital exploration of the bladder* as advocated by Sir Henry Thompson, which is justified when such symptoms as have been described render the probability of the presence of a new growth a strong one, or when, even in their absence, vesical disease is suspected, in which the obscurity of the symptoms is such that they cannot be explained by the supposition of the presence of the more ordinary pathological conditions of the bladder. For example, if a patient presents himself suffering from painful or frequent micturition, hæmaturia, and we can eliminate the presence of stone, of hypertrophied prostate, of ordinary cystitis as a reasonable source of the trouble, and are decided that the hæmorrhage is vesical, there is no doubt that digital exploration of the bladder should be undertaken after a reasonable time has elapsed without the disappearance or amelioration of the symptoms under treatment. And bearing in mind the exceptional cases in which neither blood nor pain are present, and where obscure vesical symptoms persist, digital exploration may become justifiable in the absence of further positive evidence of the presence of a new growth. The operation is not in such cases in itself dangerous, and one will not have the unpleasant surprise, in case of the patient's death, of finding at the autopsy a tumor in the bladder, perhaps of such a nature that it could have been easily and safely removed. Moreover, in a number of cases in which the operation has been undertaken under the suspicion that a new growth existed, and no growth was found, the patient has been greatly benefited and sometimes cured of his trouble, although the surgeon has been left in the dark as to the condition which he has relieved. Bearing this fact in mind, and linking it with the two others, namely, the slight risk attaching to the operation, and in default of it the possibility of the patient's dying unnecessarily of a disease which might have been cured or ameliorated, one may prophesy that digital exploration will be undertaken more frequently than hitherto.

The method has already been described in the report of the case. It is undertaken as a means for diagnosis, and as the first step in the operation for the removal of the growth if it exists, to the consideration of which we now come.

There are a certain number of growths which, from their nature, it is impossible to remove, either because of their size or of the great extent to which they involve the bladder walls or neighboring organs. But even in these the operation for digital exploration will at any rate often afford relief by securing drainage for the bladder, or, perhaps, enabling the operator to put a stop to hæmorrhage, by removing the surface of the growth, and often to allay the pain. Such relief to pain and hæmorrhage will not, it is true, follow the operation in all cases, but surely it is better to undertake it even if it is afforded in only a few than to allow the patient to go on through the inevitable series of painful events which must follow if he be let alone.

There are three conditions mentioned by Messrs. Whitehead and Pollard, and experienced by other surgeons as well, which may render digital exploration of the bladder from the perinæum and operation for the removal of the growth impossible. These are (1) "stoutness of the patient; (2) enlargement of the prostate and consequent elongation of the prostatic urethra; (3) an unusually narrow pelvic outlet."

Three methods of operation for removal of new growths from the male bladder have been practiced: —

(1.) Lateral cystotomy, as in the cases of G. M. Humphrey and Berkeley Hill.

(2.) Epicystotomy, as in those of Billroth and Volkman.

(3.) Median perineal cystotomy or urethrotomy, as advocated by Sir Henry Thompson.

A few growths have been removed by the lithotrite, but are only interesting as surgical events.

The lateral operation has the advantages that it gives more room to work in, and that it secures better drainage from the bladder afterwards. On the other hand there can be urged against it the facts that in its performance the base of the growth may be divided, giving rise to hæmorrhage difficult to control; that it is not so short a road to the bladder; that it is in itself a more serious undertaking. It must also be shown by its advocates that growths can be removed by this means which could not have been done by the median operation. In those patients who have hypertrophied prostates it might become more desirable.

Combined epicystotomy and median perineal urethrotomy was performed successfully by Billroth in his celebrated case. Volkman afterward failed to save his patient's life by a similar proceeding in a similar condition. Marcacci's case of epicystotomy died from the effects of the operation.

It has been urged by several surgeons on the ground of the greater ease and accuracy which it offers to them for the removal of the growth after the bladder has been opened. This is of course true, but does not thus far offset the disadvantages of the operation.

That the bladder has been freely incised without harm in ovariotomy does not furnish an argument in favor of epicystotomy, for the bladders which have been so injured have usually been healthy ones.

The high operation for stone, even with the improved methods and greater relative success which it has attained of late years, is still so open to the dangers of urinary infiltration about the wound, peritonitis, and suprapubic urinary fistula, that it must be regarded as a much more serious undertaking than the urethral one, and the same holds true for new growths in the bladder.

There are, however, some growths which from their extent and size might be removable only from above the pubes, and in such cases if any operation is to be undertaken it should be epicystotomy. The additional step of combining an external urethrotomy with this operation to secure drainage and avert the danger of urinary infiltration is desirable.

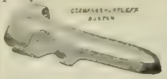
Professor Guyon and his school have lately attacked Sir Henry Thompson's operation with the statement that "the suprapubic operation should invariably be employed in these cases, and the perineal operation never." Sir Henry's answer, I think, fully meets this, and sets the relative advantages and disadvantages of the two operations in a perfectly clear light; it is as follows: —

"There can, I suppose, be no hesitation in any one's mind that the high operation is a much more formidable and hazardous proceeding than the boutonnière. Why, then, should the former be practiced in any case until absolute certainty is attained not only that the tumor is present, but also that it is removable by operation? Now, it is only in a moderate proportion of suspected cases, say, perhaps, in two thirds of them, that the presence of the tumor can be regarded as strongly probable. In very few indeed can it be stated with certainty until the finger has entered the bladder. In no single case can the surgeon ascertain whether or no the tumor is separable from the bladder until the cavity has been opened and the interior examined. . . . All the data necessary for determining the question of operation can be attained by a slight urethral incision which involves no risk. What imprudence, then, can be greater than that of performing the high operation with all its admitted risks, while the operator does not know for certain that a tumor is present, and while he knows that if he does find one, the numerical chances are that the tumor, although thus completely approached and laid bare, cannot be entirely removed without inflicting fatal injury to the patient, since one half the cases are not completely removable.

"Further I declare, that while the boutonnière enables the surgeon to ascertain all the facts which it is necessary to obtain before operating, it also enables him to remove the tumor when it is polypoid in form, and therefore capable of being removed with a fair amount of ease and safety. If, however, he believes, and he is then in a position to determine the question, that he can attain a better result in any particular case by the high operation, there is nothing whatever to prevent his performing it."

For the reasons stated, therefore, the median perineal operation, having digital exploration for its first step, is of all procedures thus far proposed to be preferred. The method of its performance has already been detailed in the report of the case, and it only remains to say a word as to the instruments to be employed, and their manipulation, the cautions to be observed in operating, and the subsequent treatment. The instruments best suited to the performance of the operation for the removal of the growths are curettes, écraseurs, or snares, forceps, and the finger nail, or something which will serve its purpose better.

A broad based sessile papilloma or growth with a soft papillomatous surface, can often be broken down and scraped away by the finger nail. Wishing to have something rather more efficient, however, for this purpose, I had the following instrument made, which answered very well. It is a skeleton finger cap, terminating in a moderately sharp-curved curette edge, which points downward. It is slipped over the index finger as far as the second joint, and held there by the spring action of its side arms, which embrace the finger in such a way as to allow, however, free movements to both the joints and consequently to the pulp of the finger, which can feel the surface of the bladder, localize the growth, recognize its extent, and as the operation proceeds how much has been taken away, and then employ the sharp edge of the instrument, so guided by the touch, for the removal of the growth. It has the advantage that the finger does not need to be withdrawn and reinserted in alternation with an instrument; the finger and instrument work as one in the bladder. A uterine curette working beside the index finger of the other hand is also a serviceable instrument.



Pedunculated growths may be snared, cut through with an écraseur, or they may be seized and bitten off with forceps, the best form of which has been devised by Sir Henry Thompson.

The following precautions should be observed in operating: —

The suprapubic pressure which is necessary to bring the interior of the bladder and the growth within reach of the finger should not be continued during the actual employment of the instruments, else it may easily happen that the bladder wall, being inverted by the pressure, may be caught between the blades of the forceps and nipped off, or perforation may be readily caused if a curette is being used. Again, one should be careful to avoid any attempt to bite, twist, or curette away the growth to the extent of making a flush and smooth surface. This is not necessary for the success of the operation, as the wound in cicatrizing will accomplish this for itself, and one incurs the danger of perforating the bladder.

If forceps be used, their movements should be twisting, chewing, crushing, and traction should be avoided.

Frequent digital examinations should be made to determine the progress of the work and recall the exact locality of the growth.

Decided assistance may be gained by washing out the bladder with hot water from time to time. Clots and fragments which obscure the work may thus be removed, and hæmorrhage decidedly checked.

Messrs. Whitehead and Pollard recommend the injection into the bladder of undiluted liquor ferri perchlor. to check hæmorrhage, if it is required in the course of the operation, and state that its use for this purpose is followed by no untoward result.

The treatment subsequent to the operation will of course vary with the circumstances of each case. A short, soft rubber drainage tube may be inserted into the bladder for from one to four days, taking care to change it each day to avoid clogging and uncleanliness. Through this the bladder may be washed out with any one of a number of antiseptic solutions, such as corrosive sublimate in the strength of one to 10,000 to one to 15,000, or stronger if the bladder will tolerate its presence, or permanganate of potash (potas. perm. .04 gramme, aquæ 200 grammes), saturated solution of boracic acid, or simply hot water at a temperature of 110° F. to 125° F. The washings should be repeated daily, and generally will be found to afford relief to the patient.

The drainage tube will not be well borne by some patients, and when this is shown it should be removed at once. The fossil meal or peat bags will be found to make a serviceable dressing for the outer wound.

The autopsy in the present case showed the presence in the bladder of a primary villous cancer occupying about two thirds of the inner surface of the organ, and extending deeply into the muscular coat. On the right side the growth had extended laterally, involving the bones of the right os innominatum, causing absorption and disappearance of the body and ramus of the pubes, ramus of the ischium, the whole of the acetabulum, with that portion of ilium forming and adjacent to the acetabulum, thus making an opening in the pelvis rather larger than the palm of the hand. Through this opening projected the femur, the head and most of the neck lying in the cavity of the pelvis. The bones forming the edges of the opening described were found, microscopically, to be the seat of a cancerous growth. The head of the femur at the point of attachment of the ligamentum teres was eroded, forming a cavity large enough to admit the tip of the little finger. On section of the bone and microscopic examination it was found that the head and neck were infiltrated with a cancerous growth like that already mentioned.

In addition to the direct extension of the new growth from the bladder to the bones of the pelvis and the femur there were also found cancerous nodules in the lungs, the size of walnuts, evidently resulting from embolism.

The tumor, from its seat in the bladder, had compressed somewhat the opening of the right ureter, leading to a moderate degree of dilatation of the right ureter and to a partial hydronephrosis.

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SUBCUTANEOUS INJECTIONS IN INTESTINAL PAIN; THEIR SAFETY AS COMPARED WITH OPIATES BY THE MOUTH.

BY E. M. BUCKINGHAM, M. D.

When called to a patient suffering pain, one of the obvious ways of giving relief is by the use of opium in one of its forms. If the pain has its seat in the intestines, other methods of treatment may be considered, as either an emetic or a cathartic to remove irritating ingesta, but there are cases even when irritating ingesta are known to be present in which a cathartic seems to act more surely and more pleasantly after the removal of spasmodic contractions accompanied by pain, and there are also cases in which humanity demands the relief of pain without waiting for the slow action of cathartics, and others again in which the diagnosis being a matter of doubt a cathartic may be dangerous, while the irritating ingesta, if present, have apparently passed the point when they can be reached by emetics. In such cases the use of opium is undoubtedly the practice of the profession. It may be given by the mouth or the anus, or by subcutaneous injections. It is well recognized that the subcutaneous injection is rapid in its effect, and this, of course, is an argument for its use, but it has occurred to me that there is another advantage as well, that of safety; and that this is the more worth dwelling on that there are practitioners who dread the subcutaneous syringe on the ground of danger. That it has its dangers is a well-recognized fact; that they may be avoided by care is commonly agreed upon; that there is ever any danger in giving opiates by the mouth that does not belong to the hypodermic injection, and that such cases may in a measure be recognized, is something that has not been dwelt upon, so far as I am aware.

It is, however, well established that in certain conditions the intestinal canal does not digest and absorb food, sometimes does not absorb because it does not digest, and it is equally well known that fatigue or mental excitement may be the cause of this non-absorption; that is, a cause which acts through the nervous system independently of the particular contents of the intestine. It seems, too, that this nervous cause does not always act merely by stopping digestion, but that it also prevents the absorption of materials that are in themselves ready to be absorbed. At least I can explain in no other way the cases occasionally reported on good authority in which enormous doses of laudanum have been taken either for suicide or by accident, and which have been retained long enough to be fatal, but have produced in some cases no symptoms, in others none of any severity. Such cases are to be found scattered through medical literature, and need not be repeated here.

If it be granted, as it must be, that fatigue, cold, or mental excitement are at times causes acting through the nerves and preventing absorption, or at least preventing digestion, it may be more readily accepted that pain may have a similar effect. Whether it actually does so or not is a matter to be decided by clinical experience, and probably in no other way. I think that I have seen some evidence that it does, but not enough to make the matter certain; and it is in hopes of comparing notes with others, or at least of drawing attention to the subject, that this paper is presented.

Case I. A gentleman has had several attacks of pain, which, as will be seen later, it is necessary for my purpose should be shown not to be due to calculi. This gentleman, who is of middle age, has for years managed a large business alone, getting little exercise, and keeping a luxurious table. He has a habitually coated tongue. There have been extra fatigue and anxiety, with lunch omitted and dinner postponed; or some recently eaten article of food has been tasted for hours before the onset of pain; or on one occasion the exciting cause seemed to be an indiscretion in diet while in bed with a carbuncle, followed by sleeping exposed to a strong current of air, by which his wife also took cold. One or the other of these supposed causes has preceded each attack. Furthermore there has never been pain referred to the penis, the thigh, or the testicle, which last has not been retracted. The liver has never been large nor tender, and with one slight exception there has been no jaundice. The pain has been general over the abdomen rather than local, and when once controlled by opium, at whatever stage of the attack, has not returned except once, when it ended with a diarrhœa.

This is not the history of calculus, and the sudden cessation of pain to be reported has evidently a different explanation.

The history of the particular attack to which I refer is as follows: He had headache for a few days, was very and anxiously busy, and was all day out of town in the cold, and with nothing to eat after breakfast until night. Pain began in the following afternoon, somewhat suddenly, and he was given a subcutaneous injection by a physician down town, the amount unknown. When I saw him at his house the abdomen was tympanitic, and he was regurgitating gas. Was still in great pain, though a little easier from the injection. Because of the partial relief, together with the unknown quantity of opium taken, he was given small, frequently repeated doses of morphia by the mouth. When I next saw him, four hours later, he had taken by the mouth five sixths of a grain, the pain was at least no easier, and the pupils were not contracted. Soon after I entered the room he vomited for the first time, bringing up green liquid very freely, but nothing else. After waiting a short time to see if vomiting would give relief, I did what I should have hardly dared had he not vomited, gave a sixth of a grain subcutaneously, and with the effect of giving complete ease, relief beginning in something less than a half hour. He then dozed off and on for three hours, and then slept for three, but there was no return of pain, and in the morning, some twelve hours after this last injection, neither the pupils nor the skin showed the effects of opium.

Now if it be assumed that his stomach was in ordinary working order it follows that of the five sixths of a grain given by the mouth the most must have been absorbed. In addition to this a sixth of a grain was given by me and something given down town. It will be safe to say that the man took over a grain of morphia during a few hours, and it must be assumed either that he deceived me by complaining after the pain was partly relieved by the absorption of this large dose, which supposition is contradicted both by the character of the man and the absence of any effect on the pupils, or that no effect was had from five sixths of a grain, while the addition of a single sixth gave complete relief, a result not in accordance with common experience, and in either case we are left to account for a grain of morphia being taken in a short time of the late afternoon and evening, and leaving no effects perceptible early on the following morning.

On the other hand, if the stomach was not absorbing a dangerously large dose was collected there, and remained inert until it was, fortunately, vomited, after which the pain was relieved by a comparatively small dose placed where it could be of service, and there were no manifestations of a large dose, because that had been rejected after lying useless for some time.

To assume certainly that the non-absorption was due to pain would be going too far, but it was not due to the presence of any large amount of mucus, so far as one can judge by the vomitus, while the next dejections contained nothing but some old fæces. That there was a connection between this non-absorption and the presence of intestinal pain seems probable, partly in the absence of any other explanation, partly in view of the fact that abdominal pain sometimes causes vomiting, as witness the vomiting that accompanies tenesmus in dysentery, even in cases where the stomach contains no food, and there is no vomiting, except at the times of dejections, and partly in view of the next case to be reported.

CASE II. A lady, ill with dysentery, was given morphia many times both by mouth, by rectum, and by the skin without showing any idiosyncrasy with regard to its use. For several days during a part of the illness nearly every dejection was accompanied by vomiting. On one day she was given a sixth of a grain of morphia for the relief of distressing and persistent tenesmus, and this was repeated twice in eighth grain doses, making nearly a half grain in all, but with no apparent effect. I saw her an hour and a half after the last dose, and, remembering the previous case, injected a twelfth grain subcutaneously. Very shortly the pain became easy, the pupils were much contracted, and she sunk into an unusually sound and prolonged sleep. The long and sound sleep might be accounted for by the relief of pain in a worn-out woman, but not the contracted pupil. She was certainly affected powerfully by the opiate, of which by far the greater part had been taken from an hour and a half to several hours before showing its effects. Furthermore, nearly a half grain had been taken without effect; a twelfth grain injected was followed at least by relief, and this relief was not merely caused by the repeated addition of dose after dose, as is seen from the long interval between the two last doses, and the overpowering effect when the drug did act. I can find no explanation of this case unless the large dose, made up of small ones, lay inert together until the pain became lessened, and then the whole morphia, that given by the skin and that by the mouth, entered the circulation together with effects to be expected from that dose.

That the partial relief to pain given by the small injection was the cause of the stomach beginning again to absorb is not certain, but the coincidence is at least suggestive.

Unquestionably the stomach will almost always absorb an opiate. It is probable there are times when it will not, and one indication of this condition may be intestinal pain. If, as these two cases suggest, though they do not prove, the presence of intestinal pain has sometimes an effect in preventing absorption, it follows that in such cases opium by the mouth is uncertain, and if pushed may become dangerous; if given at all may make the after use of the syringe dangerous.

My own practice has been for some time to inject morphia in these cases, and to stay with the patient until he becomes easier. Only when relief has begun, to leave an opiate to be used provisionally.

If discussion shall remove my fears in this matter, and lead me to a less cumbersome practice, the trouble of writing will be amply repaid.

A CASE OF CALCULUS IN THE FEMALE BLADDER. REMOVAL BY BIGELOW'S OPERATION.

BY J. G. PINKHAM, M. D.

THE patient was a small, feeble-looking woman, about thirty years of age. In February, 1881, six months after the birth of her first and only child, she began to experience a smarting sensation during and after micturition. Previous to this there had been no vesical disorder, and there was no history of renal colic. Not long after the smarting began she noticed a gritty substance in the urine. A good deal of this in the form of fine sand, with some larger pieces, escaped in the course of a few months, the symptoms meantime increasing in severity, and the urine becoming offensive, thick, and bloody. After a time, the exact length of which could not be stated, the gravel ceased to be passed. When the case came into my hands many of the symptoms of vesical calculus, such as frequent and painful micturition, sudden stoppage of the stream of water, a sense of weight in the bladder, pain from sudden motions of the body, etc., were present, and the patient's general health was much impaired. On passing a steel sound into the bladder the stone was at once discovered, and shown to be of considerable size.

The operation for its removal was performed at the patient's home on the 19th of December, 1883, Drs. Lovejoy, Colman, and Sheldon assisting. The instruments employed were a series of elastic bougies, a pair of long, slender forceps, a Thompson's lithotrite, a Davidson's syringe, and a piece of rubber tubing about two feet long, and one half inch in diameter.

The urethra was first dilated rapidly up to No. 30 of the French scale. It then easily admitted the lithotrite. There was little difficulty in getting hold of the stone, which, as grasped by the lithotrite, measured about four and a half centimetres in diameter. It was soft and readily crushed, but the instrument frequently became clogged, necessitating withdrawal for the purpose of clearing the jaws. Several pieces were removed by the forceps. The remainder was washed out by means of the rubber tubing and Davidson's syringe, the process being to pass in the tube, fill the bladder, and then, depressing the outer end of the tube as far as possible below the level of the table upon which the patient was lying, to allow the water to flow out. In this way it was found quite easy to remove the detritus from the bladder. The patient did not bear the anæsthetic well, and at one time, when we were fairly under way with the operation, she suddenly ceased to breathe, and turned livid. Active efforts were required for some minutes (as it seemed) to induce respiration, and when this did begin again it was attended with an abundant discharge of white froth from the mouth and nostrils. Again after this, an attempt being made to push the anæsthetic to the extent of relaxing the lower limbs, alarming symptoms, similar to those described, though less in degree, supervened. Hence it was found necessary to endure a certain amount of moving about on the part of the patient, and to work more slowly than we might have done had we been able safely to induce complete anæsthesia.

The time occupied in the operation was about two hours. Very little blood was lost, and little injury done to either bladder or urethra.

One hour and forty-five minutes after the operation the patient had a temperature of 99° F., and a pulse of 124 per minute. Her mind was clear, and she complained of pain in the bladder and head. She was given a rectal suppository containing one third grain each of morph. sulph. and ext. bell. Four hours later her temperature was 100.8° F., and pulse 124. She had passed water twice with some gravel. Was bright and cheerful, and had no pain.

December 20th, morning. Passed a comfortable night. Temperature 98.4° F. Pulse 108. Has had but little discomfort when passing water, and no incontinence. From this time on the patient's recovery was uninterrupted. In a week she was about the house. Six weeks later she was found to be free from vesical trouble, and to have gained much in flesh and strength.

The portion saved of the calculus weighed a little more than half an ounce. Its principal constituents were uric acid and the urates of the fixed alkalies.

The operation of litholapaxy, or lithotrity at one sitting, introduced by Dr. Bigelow, seems to be especially appropriate for the removal of calculi from the female bladder, inasmuch as the urethra is short and easily dilated, and no complicated and expensive evacuating apparatus is required, as shown in this case. Professor Heath used a vulcanite-urethral speculum and a Higginson's syringe to wash out the detritus.[1] He, however, had dilated the urethra to the extent of producing rupture, and had introduced his forefinger. With the method adopted in my case there is no need for any except a very moderate dilatation. Heath claims that no harm resulted from extreme dilatation in his cases. I have myself dilated the urethra so as to introduce the finger for the purpose of removing small calculi and calculous encrustations of the vesical mucosa. In these cases there was a moderate amount of rupture of the meatus superiorly, but the patients recovered promptly. Yet instances are not unknown in which this procedure has been followed by prolonged incontinence. Sometimes, indeed, the vesical sphincter never regains its control over the contents of the bladder. Such a result would be an evil second only to the retention of the calculus. Hence the inquiry is pertinent why the patient should ever be subjected to such a risk. The caustic application recommended by Mr. Heath can be applied through the urethral speculum without extreme dilatation.

Vaginal cystotomy will probably always have to be resorted to in certain cases, such as those of foreign bodies which cannot be removed *per urethram*, encysted calculi, etc., but for all ordinary cases of stone in the female bladder it is safe to say that litholapaxy will be the operation of the future.

Hospital Practice and Clinical Memoranda.

PREGNANCY AND OVARIAN CYST. OVARIAN TUMOR IN A WOMAN OF NINETY YEARS.

BY W. P. GIDDINGS, GARDINER, ME.

THE following cases I thought might be of sufficient interest to the readers of your valuable journal to warrant their being reported: —

I. Mrs. S., aged twenty-four, American, first noticed an enlargement of the abdomen in 1879. She consulted Dr. S. Whitmore, now deceased, who diagnosticated pregnancy complicated with an ovarian growth. A consultation was held with our veteran surgeon, Dr. H. H. Hill, of Augusta, who advised tapping of the cyst for temporary relief. At full term she was delivered of a strong, healthy boy, now living, three years of age. The mother made a good recovery from confinement, and the tumor refilled in some four months. Tapping was repeated at various intervals five times, the last two being done by the writer, removing respectively thirty-five and thirty-three pounds. On the 26th of June, 1882, I operated upon her, removing a multilocular ovarian tumor, weighing with its contents fifty pounds. Recovery perfect and uninterrupted, save a little cystitis lasting a few days. On June 16th of the present year I attended her at full term with a fine healthy boy weighing ten pounds; labor normal and easy. In quite an experience with ovarian disease this is the second I have seen in which pregnancy supervened. The first, in Boston, passed from under my observation, and its subsequent history I do not know.

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[1] See London Lancet of December 23, 1882.

II. Mrs. W., aged ninety years eight months, had been noticing an abdominal enlargement for nearly a year, which, increasing to an uncomfortable degree, she sought counsel of a physician, who diagnosticated ascites. I was called April 4th in consultation to tap if it was thought advisable.

The most distressing feature of the case was a profuse and constant salivation, precluding nourishment and sleep. A careful examination revealed an ovarian tumor, and tapping was advised, which I did on April 10th. The old lady, unusually bright and intelligent, related during the operation many interesting medical experiences in her life, and remarked upon the advancement in medical and surgical science since her early life. The fluid removed weighed sixteen pounds. On August 9th I tapped her the second time, removing fifteen pounds; and the day following, being her ninety-first anniversary, she received and entertained several callers. At this writing she is in excellent health, reads with as much interest the daily paper as any person in our city, and discusses the prospects of our presidential election with the interest of a politician.

This is the rarest case of an ovarian growth that has ever come to my knowledge, though I assisted my friend Dr. Crooke, of Augusta, Me., in removing one from a lady seventy-three years of age, which weighed fifty-five pounds, and her recovery was as rapid and uninterrupted as any I have ever seen.

Reports of Societies.

MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION, ST. LOUIS, OCTOBER 14, 15, 16, 17.

The American Public Health Association opened its twelfth annual meeting in St. Louis on Tuesday morning October 14th, and after the usual preliminary work proceeded to the discussion of the various topics which had been previously arranged.

A large number of papers were read, embracing the following subjects: The Hygiene of Occupations; The Hygiene of Habitations; The Hygiene of Schools and School-buildings; Heating and Ventilation; Food and its Adulterations; The Disposal of the Dead; Cattle Transportation and Diseases; Water Pollution, and Analysis; Sewerage and the Disposal of Sewage; The Germ Theory of Infectious Diseases; The Health of St. Louis.

In addition to these special meetings were held of the Conference of State Boards of Health, at which the subject of Cholera and the work of State Boards were the chief topics of discussion.

Of the sixty or more papers presented at the meetings of the Association, either in full or by title, a few only need to be mentioned as presenting points of marked professional interest.

On Thursday evening **Dr. George M. Sternberg**, U. S. A., delivered a popular lecture on

DISEASE GERMS,

illustrated by photo-micrographic views by means of a stereopticon. Dr. Sternberg presented the historical view of the subject, embracing the researches of Koch and other observers, and also detailed his own experience with reference to the search for yellow-fever germs at Havana. He had thus far been unsuccessful in finding anything characteristic, and also expressed his disbelief in the assertions of others who claimed to have found such germs, mentioning especially the bacillus of Dr. Domenigos Freire.

Views of the bacilli of tuberculosis, splenic fever, and other diseases were shown upon the screen.

His paper was followed by another by **Dr. L. Bremer**, of St. Louis, on the Bearing of the Discovery of the Bacillus Tuberculosis on Public Health, in which the author expressed very decidedly his belief in the infectious nature of the disease.

The paper by **Surgeon Charles Smart, U. S. A.**, on the

PRESENT AND FUTURE OF WATER ANALYSIS,

was one of the best of the session. He expressed very decidedly the impossibility of chemical analysis of itself alone, and without the knowledge of other associated facts or factors, to determine the question of purity or impurity of any given water with reference to its power of communicating infectious disease. Pollution and danger may be affirmed, but purity and freedom from danger cannot be affirmed. His statements were in harmony with the results of experiments recently made by Dr. R. Cory, for the Local Government Board of England, and confirmed by analysis made for him by Dr. Dupré.

Two papers on

THE HYGIENE OF OCCUPATIONS

deserve special notice. One by **Prof. Geo. H. Rohé**, of Baltimore, on the general subject, in which the Reports of the Massachusetts Bureau of Labor were largely employed for the purpose of illustration.

Another paper, presented by **Dr. Walter Wyman**, United States Marine Hospital Service, detailed with much minuteness the Hardships of the Chesapeake Oystermen. He showed that this class of men were subject to great suffering and danger in consequence of brutal treatment, exposure to the inclemency of the oystering season, and serious injuries received by the cranks of dredging-machines.

ADULTERATION OF FOOD AND DRUGS.

Several papers were presented on food adulteration, both general and special. One paper in particular showed a lamentable want of knowledge of actual facts as to existing conditions, and repeated some of the older traditions and long-exploded statements of earlier writers as though they were verities of the present day.

Dr. B. F. Davenport detailed his experience as Analyist of the Massachusetts Board in the examination of drugs, and also as Inspector of Milk for the City of Boston; and explained the operation of the laws of Massachusetts with reference to the subject of food and drug adulteration. He also advocated the organization of a society of public analysts on a plan similar to that adopted in England.

Dr. J. C. Morris, of Philadelphia, presented a paper on the Milk Supply of Large Cities, wherein he showed the immense importance of this article of food, and proposed its delivery to customers in glass jars as a practical solution of the adulteration question.

SCHOOL HYGIENE.

Of the papers on School Hygiene the following were notable for their able presentation of the subject: —

Dr. Felix Formento, of New Orleans, on the general subject.

Dr. E. S. Elder, of Indianapolis, on the Sanitary Survey of the School-houses of Indiana.

Dr. S. O. Richey, of Washington, D. C., on the Hygiene of the Eyesight of School Children.

Prof. E. M. Hartwell, of Johns Hopkins University, on Physical Training in American Colleges and Schools.

CREMATION

received its share of attention both as a mode of disposal of the dead, and for all refuse material, garbage, and solid material of sewage. Two papers were presented by ardent advocates of "Sanitation by Fire."

WATER POLLUTION.

In the matter of water pollution **Dr. H. B. Baker** the veteran secretary of the State Board of Michigan, presented the subject of the relation of the depth of water in wells to the prevalence of typhoid fever, illustrating his subject by diagrams showing the depth of water for several years, and the prevalence of typhoid fever during those years.

LOMB PRIZES FOR ESSAYS.

On the second day of the meeting it was announced that Mr. Lomb, of Rochester, N. Y., had offered to the Association the sum of $2000 to be distributed in the form of prizes for essays on the following subjects: Healthy Homes and Foods for the Working Classes; Sanitary Conditions and Necessities of School-houses and School Life; Disinfectants and Individual Prophylaxis against Infectious Diseases; Appliances and Means for Saving Life, and for Protection against Injurious Influences of Occupations on Health.

It is understood that these papers are to be submitted, before April 1, 1885, to a committee appointed for the purpose.

THE SANITARY CONDITION OF ST. LOUIS.

Several papers had been announced on topics relating to the sanitary condition of St. Louis, but, having been reserved for the last day's session, at which time the attendance was considerably diminished, a portion were omitted.

It is sufficient to say that the sanitary condition of the city has been decidedly improved since the great cholera epidemic of 1866, in which year there were 3527 deaths from cholera out of a population of 204,000. The death-rate for 1883 was 21.35 per 1000. Population 383,006.

Carefully prepared maps showing these facts, together with the portions of the city furnished with water-supply and sewerage, were distributed to the members of the Association.

INCIDENTAL MATTERS.

A prominent and new feature coincident with the meetings of the Association was the Conference of State Boards of Health, of which several sessions were held during the week, an organization having been effected for the purpose. The principal subject of discussion was the cholera, and the question of the efficiency of quarantine was the mooted point.

In comparing the meeting of the Association with those of previous years it may be said that the undue length of some of the papers presented upon general subjects prevented the discussion of papers of greater and special value.

The prevalence of unexceptionable weather through the entire session enabled the members of the Association to accept the cordial invitations of various organizations to visit the public institutions, parks, clubs, libraries, and other places of interest.

Public addresses of welcome were given by the Governor of Missouri, Mayor of St. Louis, President of the State Board of Health, and a brilliant illumination of all the public streets and buildings took place upon Wednesday evening.

ELECTION OF OFFICERS.

The officers chosen for the following year were as follows: —

President, Dr. James E. Reeves, of West Virginia.

First Vice-President, Hon. Erastus Brooks, of New York.

Second Vice-President, Dr. Henry B. Baker, of Michigan.

Treasurer, Dr. J. B. Lindsley, of Tennessee.

Secretary, Dr. Irving A. Watson, of New Hampshire.

Executive Committee, Dr. H. P. Walcott, of Massachusetts; Dr. Charles Smart, United States Army; Dr. George B. Thornton, of Tennessee; Dr. J. W. Hand, of Minnesota; Dr. Gustavus Devron, of Louisiana; Dr. H. B. Horlbeck, of South Carolina.

Among the names of new members elected were those of Dr. Charles Harrington, of Boston, and Mr. John Wells, of Winthrop, Mass.

It was decided to hold the next meeting at Washington, D. C., in December, 1885.

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SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

S. J. MIXTER, M. D., SECRETARY.

October 6, 1884. **Dr. F. S. Watson** read a paper on

TUMORS OF THE BLADDER IN THE MALE, ILLUSTRATED BY A CASE.[1]

Dr. Gannett, before giving the results of the autopsy, made some remarks in regard to tumors of the bladder, saying that they developed from the mucous membrane. Over a circumscribed area the mucous membrane might grow upwards, projecting into the cavity of the bladder, or downwards into the muscular coat. In the former case one had to do with a papilloma, in the latter with a cancer. Further, there might be a combination of both.

As regards the papilloma, the arborescent structure is its distinguishing feature, it presenting a villous appearance. Each villus is made up of a thin-walled, branching capillary, covered by a many-layered, flat epithelium similar to that lining the bladder. So delicate are these that a slight violence is sufficient to lacerate them, and so permit of a hæmorrhage.

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[1] See page 409 of this number of the Journal.

These growths may be either sessile or attached by a larger or smaller pedicle, the pedicle often being very small in proportion to the size of the tumor.

Alcoholic preparations illustrating these varieties were shown.

As regards diagnosis of new growths by examination of the urine, this often affords the only means of coming to a positive conclusion in cases where a suspicion of tumor has arisen, either from the existence of intermittent hæmaturia, or vesical tenesmus, or both.

In the urine from such cases are found red blood corpuscles, as a rule in a fresh condition, rarely degenerated; usually polymorphous epithelial cells, sometimes singly, sometimes in clumps. Such cells, when abundant, point very strongly to a new growth, though they are not absolutely conclusive. The diagnosis is rendered certain only by finding portions of the tumor which have become detached and passed with the urine. It is often difficult to find these, owing to the fact that so long as the villi remain undegenerated they are not separated from the wall by the contractions of the bladder; whereas if they become degenerated and cast off they are usually in the form of a granular mass, and nothing characteristic can be made out.

Since, however, the symptoms often lead to a suspicion of stone, sounding is frequently practiced. Bits may, in this way, be torn off and removed in the eye of the cathether. Such bits show a typical structure, and lead one to a positive diagnosis.

Where cystitis is associated with the tumor the villi often become incrusted with crystals of phosphate of lime and triple phosphates. Such masses may be broken off, and cause intense pain in their passage through the urethra with the urine.

It is a noticeable fact in connection with these tumors of the bladder that, whereas in other parts of the body papillomata are benignant and cancers malignant, here it makes, as a rule, very little difference to the individual, *unless he is operated on*, whether the tumor be a papilloma or a cancer, in that hæmorrhage is the important factor in either, and will eventually lead to a fatal termination.

Dr. C. B. Porter reported from memory a case in which he had performed the operation. The patient was a man past middle life. The prominent symptoms were vesical pain, requiring large doses of morphine for its relief, and hæmorrhage. The diagnosis of a papilloma was made chiefly from the microscopic examination of the urine, in which were found bits of necrosed arborescent shaped growth. These pieces were at times of sufficient size to completely block the urethra. This was the first operation of the kind done in this vicinity. It was made in the median line, and it was exceedingly difficult to reach the bladder on account of the great depth of the perinæum. It was considered at that time that the entire growth was not entirely removed. The relief, however, to pain and hæmorrhage was complete until the man left the hospital. The only subsequent history known was the newspaper announcement of his death three or four months afterwards.

He thought that the operation of cystotomy had a large future both for the removal of new growths and for relief in cystitis. Thompson's median operation is the best; that over the pubes should only be used in rare cases, and then always supplemented by opening through the perinæum to insure perfect drainage.

Dr. E. S. Wood said in relation to the microscopic examination that in his experience the finding of well-defined arborescent tufts was rare. The presence of large patches of polymorphous cells should always be looked upon as suspicious; as, although they may theoretically arise from desquamated bladder epithelium, this practically only occurs in urine that has been drawn after death, and which has had time to macerate the mucous membrane.

Dr. A. T. Cabot said that towards the end of the patient's life, in the case reported, hæmorrhage returned and was quite constant. As to the different operations, he thought that they must be still considered as *sub judice*, and that greater experience will enable more precise rules to be formulated. Guyon and his followers believe in the suprapubic operation, which is facilitated by the introduction of a rubber bag into the rectum, by filling which with water the bladder is forced up, and thus additional space is gained over the symphysis. Where the operation is for relief only he considers the perineal one preferable.

He recalled the case of a man sixty years old who had had symptoms of intermittent hæmaturia for a year and a half. No great pain, but great cacchexia. He was sounded to eliminate stone, and two fleshy looking masses came away upon washing, which were apparently blood clots coated with small cells. No operation was attempted.

Dr. Abner Post spoke of a case of malignant tumor of the bladder, seen by him during the past summer. He called attention to the value of negative evidence furnished by rectal examination. When the history of a case pointed to the presence of a tumor in the bladder, the absence of any thickening of the walls as felt by the finger in the rectum, would be strong presumptive evidence that the supposed tumor was a benign papilloma, and would aid in the elimination of malignant disease. He also suggested the use of Bigelow's evacuator as a help in diagnosis, as used by Sir Henry Thompson in his last few cases.

Dr. Watson said, in answer to an inquiry, that hot water injections for the relief of vesical tenesmus can be kept up from ten minutes to half an hour, commencing with warm water and gradually increasing the heat. He had employed water as hot as 125° F. with nothing but beneficial effect.

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NEW YORK COUNTY MEDICAL ASSOCIATION.

At a meeting of the Association, held October 20th, Dr. Austin Flint, Sr., read a paper on

THE PARASITIC DOCTRINE OF EPIDEMIC CHOLERA,

in which he took much the same favorable view of Koch's observations on cholera that he did of his investigations into the specific origin of tuberculosis in the paper which he read before the Association a few months ago. He said that in order to accept the fact that cholera was a parasitic disease it was not necessary to have personally verified by microscopic studies the existence and agency of its special micro-organism. If the claims of such an organism were substantiated by the confirmatory observations of a sufficient number of competent judges it was all that could be asked. Fortunately, there had been no opportunity for studying the cholera microbe in this country, but when he was in London during the past summer he had had an opportunity of seeing in the biological department of the Health Exhibition a specimen of the so-called comma bacillus which had been prepared by Koch himself.

At the present day it was regarded as logically certain that all of the infectious diseases were due to a distinct and specific causative agent of some kind, and that it was most probable that this causative agent was a living organism. A number of years ago the name of *zymotic* had been given to such diseases by Farr (the word zymosis signifying fermentation), because he believed that they were due to a morbific agent of the nature of a ferment. It had since been shown by Pasteur that this ferment was a micro-organism, and a strong confirmation of what had long been a favorite hypothesis was thus afforded. In this connection Dr. Flint alluded to the remarkable paper of the distinguished American physician, Dr. J. K. Mitchell, on the Cryptogamic Origin of Disease, which had appeared nearly fifty years ago. There was now no room for question that in several infectious diseases the existence of a special micro-organism had been established, and if this fact could be positively demonstrated in a single one of these it seemed fair to reason by analogy that all such diseases were due to similar specific agents.

In regard to epidemic cholera much had been added to our knowledge within the past few months. In 1883 Koch had been sent to Egypt by the German government to make a study of the disease. He had afterwards gone to Calcutta for the same purpose, and subsequently pursued his investigations at Toulon during the recent epidemic at that place. The results of his observations he had embodied in a series of reports to the German government, and at the Cholera Conference held in Berlin on the 26th of July last, at which Virchow presided, he had given a summary of them to the medical profession. Having given a brief account of the comma bacillus and its characteristics, as described by Koch, Dr. Flint went on to say that the latter had not hesitated to express his conviction of the potential agency of the organism in such words as these: "For my own part the matter is proved that the comma bacilli are the cause of cholera." That the comma bacillus was a suitable organism could not be doubted, since it had been successfully cultivated not only by Koch, but by a number of other investigators.

The grounds on which Koch based the hypothesis that this microbe was the causative agent of cholera were: —

First, because it was found to be present in all well-marked cases of the disease, and,

Second, because it was never present in the healthy body, or in cases of any other disease except cholera.

In the hundred cases of cholera in which he had looked for it he had not found it wanting in a single instance. The experience of the French government Commission, with Strauss at its head, which had also been sent out to Egypt in 1883, was somewhat different. In twenty-four cases examined by them the microbe was present in greater or less abundance in all except three. In these three it was present in such very small numbers that the Commission reported that they did not feel authorized in assigning this as the essential cause of cholera. Within a few days Dr. Flint said he had seen in the *Lancet* of September 20th an article by Mr. Timothy Lewis, assistant professor of pathology in the Army Medical School, in which he claimed to have discovered that comma-like bacilli identical in size, form, and in their reaction with aniline dyes, with those found in choleraic dejecta, were ordinarily present in the mouth and fauces of perfectly healthy persons. It did not appear that the culture-test had been applied in the case of those bacilli found in the saliva; and, at all events, the observations of Mr. Lewis would soon be confirmed or refuted by those of other investigators.

Granting, however, that Koch was correct in his two hypotheses, mentioned above, that the comma bacillus was always present in cholera, and that it was never found except in cases of this disease, it would be logically certain that there was an essential pathological connection between the disease and this micro-organism. Still it would not follow that the latter was the causative agent of cholera, since it might be a result, and not the cause, of the disease. The crucial test of its causative agency would be inoculation. If inoculation could be demonstrated the proof would be absolute; but Koch, as well as the members of the French Commission referred to, had failed in their efforts to secure this proof. In the same number of the *Lancet* in which Mr. Lewis's communication had appeared, however, there was published an account of the experiments made by two Swiss physicians, Rietsch and Nicati, in the laboratory of the Pharo Hospital at Marseilles, by instructions from the French government, in which it was stated that they had successfully inoculated a number of guinea-pigs, dogs, and rats with cholera. The guinea-pig was found much more susceptible to the disease than any other animal.

Having discussed still further the probable relations between the comma bacillus and cholera, Dr. Flint remarked that the disease, except in India, was an exotic one, and it was, therefore, much more probable that cholera was caused by the microbe than that the latter was simply a result of the disease. Koch had shown that the comma bacillus was short-lived, and it was well known that cholera was a very short disease. Moreover, the microbes were found most abundantly in the earlier stages of the disease, and rapidly diminished as time elapsed. Could the fact be shown that the comma bacillus gets into the system before the symptoms of cholera are developed the proof of its causative relation to the disease would be as clearly established as if the point of inoculation could be demonstrated, and Koch had found some evidence apparently to this effect when he was in India. During a local epidemic of cholera he found that the water in a tank used by the people for drinking and other purposes contained a large number of comma bacilli, and that the disappearance of these micro-organisms from the water coincided with the subsidence of the epidemic. Moreover, he could detect no comma bacilli in the water-supply of adjacent localities which were free from cholera at the time he visited them. The whole question of the parasitic origin of this disease, however, was still *sub judice*, and a proper sense of conservatism ought to lead us not to accept the investigations and conclusions of Koch until they had been confirmed by the researches of a sufficient number of expert observers. Still, in his own mind, Dr. Flint said he had little doubt that the truth of the doctrine would eventually be conclusively demonstrated. If this were the case it would only establish a hypothesis that had been for a considerable time anticipated in the medical world, and in this connection he quoted a passage on the relation of the germ theory to cholera in the fifth edition of his own work on the Practice of Medicine, published in 1880.

It was not to be denied, he continued, that there were considerable difficulties in reconciling Koch's views with certain facts in clinical experience, especially those relating to the diffusion and transmission of the *contagium vivum*. If the causative micro-organism was taken into the system in the ingesta it was difficult to explain the occurrence, almost simultaneously, of cases at a distance from each other, as well as the immunity of a large number of individuals exposed to the danger of infection, and the development of the disease in some whom we would naturally expect to escape. Much the same difficulties were met with in accepting the doctrine that tuberculosis was due to a specific microbe.

But, granting the truth of the parasitic origin of of cholera, what bearing would this have on treatment? This was certainly a question of great practical importance, since we were liable to have an outbreak of the disease in this country at any moment. So far as our present knowledge went there was no agent capable of destroying the parasite in the intestines without being toxical to the patient, though it was quite possible that such an agent might yet be discovered. Clinical experience had shown, however, that there was no disease which could be controlled with greater ease than cholera. The remedies *par excellence* for it were opium and complete rest, and if any case of it were taken in time the further development of the disease could be prevented with almost absolute certainty by these means. Dr. Flint said he could speak from personal knowledge on this point, as he had had a pretty large experience in several epidemics of cholera which had visited this country. Exactly what the modus operandi of the opium was in controlling this disease he was not prepared to state. He could only say that it was one of those instances, not very rare in practical medicine, of an important therapeutical truth which could not be satisfactorily explained in our present state of knowledge.

The next question to be considered was the bearing of this doctrine on the prevention of cholera, a point which was of even greater importance than the treatment. It was probable that the detection of the comma bacillus in the dejecta of patients before cholera had become epidemic would prove of great service in enabling us to check outbreaks of the disease at the very beginning, and would also furnish a means for making a differential diagnosis between cholera and cholerine, which was often a matter of very considerable difficulty. Wherever cholera appeared the complete destruction of the parasite directly it left the body could be secured, and by this means every case of the disease would be rendered sterile. Koch had proved that the cholera microbe was readily killed by drying, while cold somewhat diminished its activity, but did not destroy its vitality. The local conditions under which the parasite would thrive best outside the body were not definitely known, but there could be no doubt whatever that filth was very favorable to its development. Inside the body Koch had shown that the acidity of the gastric fluids was inimical to it. In order that an individual should contract cholera it was probable that there should be a predisposition or susceptibility to it, as was the case in tuberculosis, but, as in regard to that affection, our knowledge concerning the matter was as yet incomplete.

Dr. Flint then spoke of the very successful manner in which the epidemics of cholera in New York in the years 1866 and 1867 were stamped out by the energetic efforts of the Board of Health, and said that the efficiency of the measures adopted seemed to afford a certain amount of confirmation of the truth of the parasitic doctrine. These measures were carried out with admirable thoroughness by the late Dr. E. B. Dalton, a man of great promptness of action and executive ability, and under his direction there were a number of special sanitary inspectors, who visited every case the moment it was reported, and a large disinfecting corps, composed entirely of men who had lately served in the army during the war, who were kept in the state of readiness and discipline that the members of the fire department now are. The consequence was, that while there were 362 cases in the year 1866, in not a single instance did the disease spread proximately beyond the house where it was found. In 1867 there were a much smaller number of cases, and the disease was very readily controlled. Dr. Flint then said that it was his belief that never before or since in any country in the world had measures for the suppression of a dangerous epidemic been so successfully carried out. The history of the outbreak of cholera at that time showed that it was a disease which could certainly be stamped out, and he did not hesitate to say that if the same means had been adopted in the recent epidemics at Toulon, Marseilles, and Naples thousands of lives might have been saved. He also expressed the opinion that if the disease should again make its appearance here, it would rest entirely with the authorities whether it should become epidemic or not.

In conclusion he remarked that this was a most important era in medicine, since he believed that it would be to the present epoch that posterity would look back as the time when those signal discoveries were made which led to the final adoption of the parasitic theory of the origin of all infectious diseases. Was the medical profession in this country to have an active share in this great work of investigation and in these brilliant discoveries, or was it to be content to wait patiently until the announcements of the results of their labors were made by the scientific men of Europe? There was certainly no lack of ability on the part of American medical men, but it seemed to him that there was, at all events, a certain want of self-reliance and energy. At the same time it could not but be granted that there were difficulties met with here which did not exist in Europe, since the government did not afford any facilities or encouragement for investigation, as was the case there. In this country the profession would have to look to private liberality for its encouragement, and in this connection he alluded to the recent gift of $50,000 by Mr. Andrew Carnegie for the pathological laboratory at Bellevue, and of half a million by Mr. William H. Vanderbilt to the College of Physicians and Surgeons. One of the greatest benefits of such donations, he thought, was that it tended to give private beneficence a direction toward the advancement of medical knowledge and education.

A few remarks were then made by **Drs. E. G. Janeway** and **C. A. Leale**, and also by the President, **Dr. William Detmold**, who thought that as papers were to be presented on the same subject (by Drs. Janeway and Leale) at the next meeting of the Association, it would, perhaps, be better that further discussion of Dr. Flint's paper should be postponed until that occasion.

PHILADELPHIA CLINICAL SOCIETY.

G. BELTON MASSEY, M. D., REPORTING SECRETARY.

Stated meeting, held September 26, 1884.

Dr. Clara Marshall read a report of two cases of Imperforate Anus, with Recto-Vaginal Fistulæ, in the Adult. The paper was reserved for publication by the reader.

A case of

ATRESIÆ VAGINÆ WITH RETENTION OF MENSES

was reported by **Dr. E. E. Montgomery.** Miss F., aged forty-four, single, of healthy parentage, was brought to my office July 5, 1884, by Dr. Sibbald, of Wissahickon, with the following history: She commenced menstruating at sixteen, and continued without disturbance until her thirtieth year. Two years previously she had fallen upon a curbstone, receiving quite serious spinal injury, which lasted a year, when she fully recovered. The menstrual periods, which were always regular, lasting from three to four days, normal in quantity and color, at thirty became painful. Since then the pain has been constant, and increasing with each period. The discharge now lasts from seven to ten days, is of a dark bloody nature and offensive odor. During the menstrual intervals there is a continuous discharge of "corruption," as she calls it, necessitating the constant wearing of a napkin, and producing excoriation. All of these symptoms have been increasing during the past eight years, and she has been compelled to discontinue work a week or more at a time. She complains of a sensation of weight or pressure in the pelvis, attended with severe pain during defecation. There is no pain during micturition. Her nervous system has become much affected. Upon examination the vagina was found relaxed, and the external parts red and bathed with secretion. The vagina was about two inches long, ending above in a lateral cicatrix. No uterus could be felt. Upon withdrawal the finger was found bathed with a dark, thick, highly offensive discharge. The use of a Sims' speculum disclosed a cicatricial line running from side to side across the fundus of the sulcus, just posterior to which the membrane looked thinner. Slight pressure against this with a sound perforated it, and was followed by a profuse discharge of broken-down blood and pus. A pair of Ellinger's dilators was then introduced and spread to their full extent; over four ounces of the fluid flowed out. The cavity was then washed out with a carbolized solution. In this cavity above the cicatrix the uterus was found retroverted and firmly fixed, forming the roof. The cavity was dressed with carbolized glycerine on cotton. Subsequent treatment was conducted by Dr. Sibbald. He informs me that there has been no difficulty since, and that she now feels perfectly well.

Dr. W. H. Parish. That the treatment adopted in this case was proper the results showed, though it was not in accordance with the treatment directed by the text-books. We are there told to puncture the cavity with a trocar and draw off the confined liquid drop by drop. This is undoubtedly wrong, and its disadvantages have been demonstrated in my own practice. The crucial incision is undoubtedly best.

Dr. Collins related the details of a case treated in the manner of the text-books by exploratory needle, trocar, and drop-by-drop drainage. The cartilaginous membrane acting as septum was one and a half inches from the vulva, and probably congenital. A crucial incision was made after drainage, and the corners cut off, and no further trouble was experienced by the patient.

Dr. Montgomery, in closing the discussion said: As Dr. Parish has said, the free incision is best, though it was precipitated in the case related by an opening occurring during examination. The danger of septicæmia is certainly increased by a small opening. A particular point of interest in this case was the lateness in life and the time that elapsed between the injury and the retention.

Recent Literature.

Henke's Atlas of Surgical Anatomy. A Series of Plates illustrating the Application of Anatomy to Medicine and Surgery. Translated and edited by W. A. Rothacker, M. D., Pathologist to Cincinnati Hospital, etc. Cincinnati: A. E. Wilde & Co.

We are of the opinion that the translator has done a true service to the profession by the reproduction of this atlas. The original appeared some years ago, in advance of the text which was recently completed, and the reviewer well remembers recommending it to a medical friend in want of a good atlas for general use. The case of this gentleman was that of scores of professional men who want to see what structures are to be found in any particular region, and in what order they occur. They can refer to atlases of descriptive anatomy in which the various tissues are represented beautifully dissected, in which the ramifications of nerves or arteries can be followed, but only successively, which, in short, give no comprehensive view; or they may turn to frozen sections which, though true, give too limited views, and require too much study to be satisfactory. Between these extremes is the work before us, a happy combination of sections and dissections, showing many original and instructive views. The treatment is perhaps at times rather too diagrammatic. There would be considerable practical difficulty in cutting out of muscles the regularly shaped pieces with sharp edges, as appears to have been done, but the picture gains in vigor by this treatment, and the point is shown all the more emphatically. We particularly fancy some views of the abdomen in which certain parts of the intestinal canal have been removed so as to show the arrangement of the mesenteries and the position of deeper parts. Our most serious criticism of Henke's work is that he seems to have ignored the fasciæ almost entirely.

In the work before us the plates are of varying merit, some very good, others, we regret to say, of rather indifferent execution. The figures are not as large as in the original. The names of the parts are clearly printed around the figure, and there is little difficulty in identifying them. We regret that Dr. Rothacker should have thought it advisable to change the adjective in the title from *topographical* to *surgical*, for, to our mind, one of the chief merits of the work is that it demonstrates that there is much in topographical anatomy that is not surgical. We should not close without a word of commendation of the solid binding and the good paper. T. D.

The Physiological Factor in Diagnosis, a Work for Young Practitioners. By J. MILNER FOTHERGILL, M. D. New York: William Wood & Co. 1883.

This volume of 250 pages crown octavo, from the prolific and facile pen of Dr. J. Milner Fothergill, is scarcely more than an expansion of the two little numbers of the Student's Aid Series, published by G. P. Putnam, in 1881, on Diagnosis. Of those numbers the first part, on Semeiology, was by Dr. Fothergill, and the second part, on Physical Diagnosis, by Dr. Thorowgood.

Dr. Fothergill's style is agreeable. Many of the hints which he gives have an undoubted value for young practitioners, who will be apt to find their ignorance on such subjects in direct proportion to their previous assiduity in the laboratory and lecture room, and some will profit by such a book as the one before us who would be repulsed by "sterner stuff."

The Pedigree of Disease, being Six Lectures on Temperament, Idiosyncrasy, and Diathesis, delivered in the Theatre of the Royal College of Surgeons in the Session of 1881. By JONATHAN HUTCHINSON, F. R. S., etc., etc. London: J. & A. Churchill. 1884.

Mr. Hutchinson's name, like the stamp on a coin, is of itself a guarantee of value to that which appears under it. These lectures, now published in book form, making a thin octavo volume of 140 pages, with index, were, as the title informs us, originally delivered, three years ago, before the Royal College of Surgeons, and appeared at the time in the *London Lancet*. With a few emendations they are published as originally delivered.

The methods of Darwin, to whose memory Mr. Hutchinson inscribes these pages, are followed in dealing with some of the problems of disease, methods which Sir James Paget has recently shown the fruitful possibilities of in this same direction, and which Mr. Francis Galton has made so suggestive in his treatment of sociological and physiological problems. One can hardly read what the writer actually says without being incited to further reflection and investigation in the direction pointed out, which we regard as higher praise than to bestow the too common epithet of "exhaustive treatise," a phrase which should rather be rendered as "laborious compilation."

The lectures are six in number, and group themselves in general around "the study of those differences between man and man, of which, for the most part, physiology takes no cognizance, but which may yet prove of much importance in modifying the processes of disease." The subjects, in the order presented, are temperament, idiosyncrasy, diathesis.

The "young practitioner," if intelligent, may profit by these suggestive essays, and old ones, however experienced, will find mental food which they will relish.

A New Method of Recording the Motions of the Soft Palate. By HARRISON ALLEN, M. D., Professor of Physiology in the University of Pennsylvania. P. Blakiston, Son, & Co. 1884.

Dr. Allen's method consists of passing a straight rod through the nose from before backward until it impinges against the roof of the naso-pharynx. In this position, he says, the rod is not influenced by any motions of the soft palate; but if the end of the rod which remains without the nostril be raised so that the rod be brought in contact with the anterior border of the nostril, the pharyngeal end of the rod will lie in a position which will cause a decided motion to be transmitted to it when the soft palate is raised. The subject being seated before a kymographion, which had been previously prepared with smoked paper, it was ascertained that when the free end of the lever touched the cylinder, at a time when the latter was in motion and the soft palate was raised, that a distinct tracing appeared upon the cylinder, and that the differences between the long and short sounds of the vowels were found to correspond with the curves made by the rod upon the kymographion.

Dr. Allen calls his instrument the palate-myograph. Tracings are given of the movements of the palate as it is raised in the articulation of different sounds, and in the acts of swallowing, coughing, hawking, etc. The curves show considerable variation, and are not the same for the same sounds in all individuals. They show that the palate is raised once only for some words, twice for others, and three times for others. The author points out the sources of inconstancy of the curves, but they are not sufficient, it is thought, to invalidate the claim of accuracy for the method. It is hoped that the palate-myograph will prove of use in studying the mechanism of the soft palate in disease as well as in health, also in stammering, and in determining the degree of degeneration of the levator-palati muscles in progressive dry aural catarrh. It has even been suggested by competent critics that it may be made available for the comparative study of language, for the instruction of the deaf, and for the promotion of a system of logography or short-hand writing. We hope the palate-myograph will have this brilliant future, and prove useful in all these different channels. It is certainly an ingenious instrument of precision, and will be of some real practical value. F. H. H.

— A "mountain of alum" is said to have been discovered in New Mexico. It extends over a superficial area of more than a square mile, and rises in some places to an elevation of seven hundred feet above the bed of the river. Most of the alum appears to be in an impure state, tasting strongly of sulphuric acid, but, nevertheless, some of the cliffs are said to show immense quantities of alum in a marketable condition.

Medical and Surgical Journal.

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DILATATION OF THE STOMACH.

There is no organ in the body whose well being and efficiency are more important to the general economy than the stomach, and at the same time there is none which is more abused. There is no class of diseases more common in this country than the functional or true dyspepsias, and no class whose ætiology is more difficult to disentangle, whose treatment is more difficult to direct and control.

For a long time the term "dyspepsia," like the term "bilious," was a reproach to the knowledge of the doctor, and a refuge for the ignorance of the layman. The former is no longer contented with a diagnosis which achieves nothing more than the rendering of two English words into one Greek word, and the patient himself desires to know something of the cause as well as of the symptoms.

Antiseptic surgery has robbed the peritonæum of the respect in which it was formerly held, and the surgeon no longer hesitates to attack mechanical obstructions of the stomach or intestines through the abdominal walls. We are no longer dependent upon an almost unique accidental traumatism for studying the chemistry of the stomach. In addition to increased facilities for observation we have besides in the advances of physiological chemistry, in the more careful application of the microscope to tissue changes, in the bolder use of the stomach-sound and tube, in the application of auscultation and percussion, and in the more accurate knowledge of nerve changes, distribution and influences, a far more scientific key to the interpretation of our observations upon the gastric tissues and functions, and consequently of their derangements.

Dyspepsias are being classified not arbitrarily but according to structural and chemical changes, and the name itself is more properly limited to functional disorders, to chemical derangements of the gastro-intestinal tract; these are true "dyspepsias." Mechanical obstructions are responsible for many difficult digestions, but these should not be classed in the same category as the "true dyspepsias," and again these latter will certainly before long be still further subdivided. We stand as yet only on the threshold of such advances.

In his volume on Dyspepsies Gastro-Intestinales, Monsieur Germain Sée made an important contribution to the elucidation of these functional dyspepsias, and we find him again, in company with M. Mathieu as a collaborator, contributing an interesting study to the cause, diagnosis, and treatment of a very common but not sufficiently recognized or well understood gastric phenomenon — dilatation.[1]

Dilatation of the stomach is much more common than is generally supposed, and results from a variety of causes besides the strictly mechanical ones of obstruction and excessive ingestion of food or drink — polyphagia. MM. Sée and Mathieu recognize in a certain number of cases lesions appreciable to the microscope which afford a sufficient explanation of an exaggerated dilatation of the stomach, such as fatty degeneration or the interstitial cirrhosis of those addicted to alcohol. Dilatation may ensue in a passive manner in debilitated individuals, in those who are exhausted by a general cachexia, as a result of the debility, but particularly from loss of action on the part of the muscular walls of the abdomen. Occasionally paralysis of the stomach is the only assignable cause, possibly the result of epigastric or general traumatisms. Simple dilatation of the stomach occurs most frequently in persons who present a peculiar general neurosis. It occurs as a sequence to crises which seem to indicate the successive and alternate occurrence of a special state of spasm and atony of the gastro-intestinal motor system. These crises, which are frequently painful and sometimes accompanied by diarrhœa, are repeatedly produced by an occasional or general cause, such as depressing emotions, moral shocks, or by a local cause, as excess, insufficiency, or bad quality of the alimentation. Constipation and flatulence seem to play a considerable part in the mechanism of the development of these gastro-intestinal troubles in which gastric ectasis predominates. Dyspepsia, rarely preceding dilatation, follows it frequently, and then seems to be characterized by the presence in the urine of an unusual quantity of peptones. In any case a permanent dilatation is not reached until after prolonged alternations of spasms, giving rise to pain and diarrhœa, with atony, giving rise to distention. These pathogenetic considerations have a direct bearing upon the study of the symptomatology of simple gastric dilatation, upon its diagnosis, and upon the treatment of the complex train of symptoms accompanying it. In the pursuit of these we will follow MM. Sée and Mathieu in another number.

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MR. VANDERBILT'S GIFT TO THE COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK.

It is but a few weeks ago that we spoke of the reasons why medical men should remember the wants of their own profession, and said that medical schools in this country needed assistance because they were deprived of the government subsidies, which sustain similar institutions in certain other countries. We also tried to show that in no way could the whole community be more benefited than by fostering those things which tend to educate and elevate the medical profession. A new era has been inaugurated since we wrote those words. Not that medical schools as a body are less needy, but the immediate wants of one school have been provided for by the gift of half a million of dollars; which amount has been given by Mr. William H. Vanderbilt to the College of Physicians and Surgeons of New York. The importance of the gift is not confined to the college which is the recipient of Mr. Vanderbilt's munificence, but its good effect will be widely felt in drawing attention to the fact that medical colleges are proper objects of benevolence. It will have an influence in drawing towards them additional gifts from the charitable until private munificence shall leave no chance for us to speak with even a show of regret of the want of governmental aid. The modern good Samaritan will not be content to bind up the wounds of a single individual, but will bestow his collected oil and wine so that it may be used for the training of men whose daily duty it shall be to attend to the relief of many unfortunates. Even a single college well endowed, so that it need have no thought whatever of the amount of its tuition fees, so that its whole ambition will find scope in providing the best possible education, must have a beneficial effect upon the profession, not merely by the character of its graduates but by stimulating other and feebler institutions to better things.

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[1] Revue de Médicine, Nos. 5 and 9, 1884.

There is no immediate prospect that the laws of all the States will discriminate between physicians who have been fitted for their work and those who have not. To many men it seems of more importance that there should actually be a difference than that the distinction should be legally declared to exist. That the distinction is not always clearly marked is in great measure the fault of the medical schools which are too ready to receive as students men who are unfit to be so received and to graduate men who are unfit for graduation. Our medical schools have grown from small beginnings, and in few things is the youthfulness of our country more apparent than in the condition of these schools. The great bar to their improvement is their need of money. By the munificent gift of Mr. Vanderbilt the New York College of Physicians and Surgeons becomes, we believe, the best endowed institution now open to students. With our high ideal of the medical profession we doubt if the donor could have done a wiser act or one better calculated to benefit the community at large, and we trust it will be so wisely administered that the greatest good possible will be attained.

It is believed that a part of the donation will be used in the erection of a new building in the block between Fifty-ninth and Sixtieth Streets and Ninth and Tenth Avenues, in close proximity to Roosevelt Hospital, from which it will be separated only by Fifty-ninth Street, and within convenient access, by the elevated and surface railways, with the distant hospitals.

— The Syrian College, Beyroot, has tendered to Dr. W. P. Manton, of Detroit, the chair of Gynæcology and Obstetrics in the Medical Department of that college.

MEDICAL NOTES.

— An astonishing ruling has, according to the reports of the German medical journals, been recently made by the courts of that country on a point of alleged malpraxis. In April of the present year a serving man was wounded in the chest with a knife, and was treated by a practitioner without antiseptic precautions. The man died from septic poisoning, and the practitioner was arraigned on the charge of culpable homicide, which was upheld by the magisterial court on the ground that a medical man should be so far abreast with modern science as to avail himself of the recognized rules of treatment, and that in the case in question the practitioner should have been aware that the procedure adopted by him might lead to the death of his patient. The Reichsgericht, being appealed to, confirmed this decision. In view of the wide differences of opinion still obtaining among practitioners in England and America regarding so-called "Listerism," one cannot help thinking what havoc would be made with professional reputations and pockets were such a cause recognized in either of the latter countries as a fit ground for legal interference.

— However it may be regarding the fertility of the French people in their native land, the increase of the French population in Canada is most remarkable. A Montreal paper states that the French inhabitants of the Province of Quebec numbered 3000 in 1653. In 1763 they were 60,000. Since that date there has been no immigration from France, and many of the French have been tempted away to the States. Yet in spite of this fact the French population of the province of Quebec is now over a million. With their increase the English have diminished. The French in all the Canadian provinces number about 1,300,000.

— The Society of the Red Cross has instituted some experiments with the electric light as an aid in the search for wounded on the field. An exhibition of the experiment was made during the recent meeting of the Society at Geneva, but proved a disappointment to the spectators on account of the full moon which was shining at the time.

— An officer of the British army in India was recently, while staying at Kangra, bitten by a cobra in the hand. With great fortitude he seized his gun and blew off the finger that had been bitten. Nevertheless, when medical aid arrived he was almost insensible, and it was only by keeping him walking about all night and administering large doses of brandy and ammonia that he was pulled through. Recovery from a cobra-bite is very rare.

— The female medical students in Paris have organized a movement looking to their admission as internes in the Paris hospitals, or rather to being allowed to compete therefor. The appointment is for four years, and in the largest hospitals its responsibility and arduousness are such as to tax severely the powers of the male incumbents. But *place aux dames.*

— The *Medical and Surgical Reporter* says that during the cholera season of 1873 a French physician in Nashville declared that he never lost a cholera patient. Shortly afterward, having gained some notoriety by this assertion, he was summoned to attend a man named White. The neighbors were anxious to see the result of the Frenchman's treatment, and whenever the doctor was seen leaving White's house numerous inquiries were propounded. "How is your patient, doctor?" was asked one morning. "Ze man is dead." "What! thought you never lost a case of cholera?" "Zis was ze first case I had. You not expect a man to lose one case before he get him. I cure ze man of ze cholera, but he die of ze weakness."

— Dr. Thomas exhibited at the recent meeting of the American Gynecological Society a mediæval instrument for preventing coitus. The apparatus resembled the well-known ivory affair that was furtively exhibited to tourists at the Hôtel de Cluny. It consisted of a jointed iron belt, to encircle the hips, to which a rigid strip of iron was connected before and behind, somewhat after the manner of a T-bandage. This strip of iron was widened where it passed over the vulva, and at that place there was a slit-like fenestra with a serrated edge, the teeth being bent somewhat outward. At the situation of the anus there was another perforated expansion, circular in this instance, and that opening also was serrated. The whole was covered with ancient-looking velvet. The strip of iron which passed between the thighs was hinged to the pelvic girdle in front, but behind (perhaps to add to its discomfort) it was secured with a lock. The original lock was a remarkable antique, and bore the emblems of high nobility, — perhaps royalty. On that account his friend had desired to keep possession of it, and therefore he (Dr. Thomas) had replaced it with a small modern padlock.

— Some observations as to the relation between deaf-mutism and consanguineous marriages, especially those of first cousins, were made last year by Dr. C. A. Cameron, President of the Subsection of State Medicine of the Academy of Medicine in Ireland. On the whole, the evidence seemed to show that the effects were somewhat injurious. The statistics in reference to mutes published in the *Irish Census Reports* for 1881, and the previous decennial reports, were closely examined by the author. It appears that in Ireland, in 1881, there were 5136 mutes, of whom 135 were the children of first cousins. The author endeavored to ascertain the proportion of the population who were children of first cousins. He ascertained that amongst nearly 8000 persons the proportion was only 0.57 per cent., or less than one fourth of the rate amongst deaf-mutes. As the statistics were in great part collected amongst Protestants, the author believed that there was not in all Ireland one person in two hundred the offspring of first cousins, as marriage between such persons was very rare amongst Catholics, who formed three fourths of the population of Ireland. The general conclusion arrived at was that consanguineous marriages were a cause of deaf-mutism.

— The *Lancet* remarks that Signor Silvio Plevani, Director of the Hospital Frate Bene Fratelli, has published (May 28th) in the *Gazzetta degli Ospitali*, a paper on The Economical Preparation of Some Antiseptic Dressings. He states that tow, which is a very cheap, residual material, can be used for all surgical purposes instead of absorbent cotton, when prepared according to the following directions: Boil the tow for some time in lye made with wood ashes, or with a ten per cent. solution of carbonate of sodium; then wash it repeatedly in water. The tow thus deprived of grease is immersed in a ten per cent. solution of chloride of lime, and kept in it some hours, with occasional stirring, until it has become perfectly white. It is then washed thoroughly in pure water until the liquid squeezed from it is perfectly limpid. Drying and carding complete the process.

— At the Congress of the Sanitary Institute of Great Britain, recently held in Dublin, a Mr. Maguire read a paper in which he introduced a valuable sanitary maxim, which, however, being couched in the language of the country, took the following peculiar turn: "The best way to prevent what is past is to put a stop to it before it happens."

— "Eph, wha's de reason you doan' want Mass' Blaine 'lected?"

"'Cause he ain' no hones' man."

"Did n't he 'splain dem Mulligum lettahs?"

"Yaas."

"An' did n' he say he war marrud twy'st?"

"Yaas."

"An' doan't he swar he neber owned no lan' in Ohio?"

"Yaas, but he ain' no hones' man."

"Wha 's de reason?"

"Ain' 'e got Bright's disease?"

"S'pose 'e hes?"

"Waal, w'y doan' 'e gib it back to Bright, den?"

Correspondence.

A CORRECTION.

Mr. Editor, — In the *Boston Medical and Surgical Journal* for October 9th, on page 347, I find the following paragraph: —

"Dr. Van de Warker had seen, in consultation, a case which had been thirty hours in labor, in which the pelvis was filled with a fibroid of the posterior cervical wall. He advised enucleation, but was overruled. Cæsarean section was performed and the mother died of shock. The autopsy showed that enucleation could have been easily performed. In this case the child was saved."

The facts of the above case are these: I was notified on the evening of the 16th of June, 1881, that the patient was beginning to have labor pains. I called about ten A. M., but found her so comfortable I thought that labor had not yet commenced. About two P. M. of the 17th the husband came for me. On arriving at the house I was informed that "the waters had broken." I made an examination, and found what I thought to be the head well down in the middle straits, but could not detect the os. In a little time I made a second examination, and after giving a few whiffs of chloroform introduced my hand well up anteriorly, when I was able to feel the os not much dilated. The pains not being very strong I did not examine again for some time. At the third examination, using both hands, I found a tumor above the pubes, and through the os detected the fontanelle; then I knew I had a more formidable case to deal with. Dr. Mercer was sent for, and under chloroform he examined the patient. I had previously tried to force up the tumor, thinking that by dislodging it I might turn should the head not engage. I now applied the forceps, and together we endeavored by various means to push up the tumor into the abdominal cavity and bring down the head. After successive efforts and failures we asked for another physician. Dr. Van de Warker was sent for, and arrived before nine A. M., seven hours after my night visit when labor had only fairly set in.

Recounting our experience to him, he said, Why not aspirate? We tried, but did not get a drop of fluid. Then one of us proposed Cæsarean section; it was conceded by the others to be the only resource left. The family were informed, and a ready consent given. Leaving Drs. Mercer and Van de Warker with the patient I started out to get the instruments required and invite a few medical friends to assist.

About noon, the patient being anæsthetized, and the table ready, Drs. Pease, Van Duyn, A. C. Mercer, Cook, Slocum, and Stevenson were admitted to the room. Dr. Pease examined the patient for the other physicians, and all deciding the Cæsarean section to be the only feasible procedure, I performed the operation. It was asked, before the abdominal wound was closed, whether it were best to remove the tumor. On examination several thought the pedicle too short and thick, and wishing to give the patient every chance it was left *in situ*. She rallied nicely from the chloroform, and I stayed with her for the succeeding eighteen hours, during part of which time she caressed her baby, complained very little of pain, took what was given her, and rested under an anodyne. She was not aware of the operation she had undergone, as I did not wish to alarm her. Some time after I had left the house some injudicious friend was allowed into the room who described to her (no doubt very graphically) the terrible ordeal she had passed through; she fainted, rallied a little, but the shock was too great, and twenty-five hours after the operation she quietly passed away.

At the autopsy, performed twenty-four hours after death by Drs. Jacobson and Elsares, Drs. Mercer, Van de Warker, Pease, and myself being present, the tumor was found to be egg-shaped, attached by a round pedicle three quarters of an inch long, one inch in diameter, to the posterior wall of the uterus, five (5) inches from os, the entire length of womb being nine (9) inches. The natural position of the tumor had been transverse, but its attachment having been a little nearer the smaller end had allowed the heavier extremity to dip down into Douglas' cul de sac. The dimensions of the tumor were, long circumference fourteen (14) inches, long diameter six (6) inches, circumference of large extremity twelve (12) inches, diameter four (4) inches. On a section being made into it the walls were found to be over one inch in thickness, hard, and unyielding; the interior resembled that of a kidney.

The capsule and tissue of the tumor were so intimately blended together that enucleation could not have been performed. From its size and consistence it would have been impracticable to have attempted ablation per vaginam. The only way to have gotten at it would have been through the abdominal walls.

In closing I would state that the specimen is now in the Histological Museum of Syracuse University.

ROBERT ABERDEIN.

SYRACUSE, *October* 20, 1884.

Miscellany.

A FRACTURE OF SKULL OF MEDICO-LEGAL INTEREST.

IN the *Edinburgh Medical Journal* (October) Mr. Nasmyth gives an account of a case having somewhat remarkable clinical symptoms, and containing important suggestions from a medico-legal point of view: —

A man was found lying dead at the side of a disused toll-house near to an inn. He was cold and stiff, his clothes soiled, and saturated with water. The night was a terribly stormy one, and during that night a great many deaths from exposure occurred, as was learned from the newspapers. The expressed belief of those who found it was that death was due to exposure. It was casually learned, however, that on the previous night a man had fallen down-stairs in the inn near to where this man was found; that he was insensible for a time, and blood came from his nose and ears or ear; inquiry showed that this person was identical with the dead man. The body was found to have clotted blood in the left ear, marks on the face, and the pupils of both eyes were widely dilated. An examination was ordered with the following result: —

Body said to be of a miner, aged about forty; height five feet ten inches; body cold; rigor mortis marked; face scratched over left cheek bone; blood in left ear; pupils widely dilated. On dissecting back the scalp, extensive effused blood found over left parietal and temporal bones. Knife grated against the skull, and on investigating a fracture of skull was found. On removing skull-cap an extensive effusion of blood was found corresponding to situation of left parietal and temporal bones, and reaching up to longitudinal suture of skull. On removing brain effused blood found at base, reaching forward to anterior lobes, posteriorly to medulla, and between the cerebrum and cerebellum. The fracture could now be seen distinctly, and was quite open at one place, allowing a scalpel to be inserted into the opening, and to pass into auditory meatus. The course of the fracture was this: Beginning in the petrous portion of the left temporal bone, near to the articulation with the sphenoid, passed into the auditory meatus, right across the squamous portion of temporal bone, up through the left parietal, and backwards in an irregular curved course. The total length, as nearly as could be measured, was about eight inches.

The following evidence as to the case was then obtained. The dead man had fallen from a height of about six feet, on the Saturday night, in the inn; he fell face forward, and his face or head alighted on the hard stone floor. He lay insensible for some minutes, but regained consciousness so far and was able to walk with assistance to one of the rooms in the inn, where cold water cloths were applied to his head and in a short time he was able to converse and smoke a pipe. He remained in this condition for at least an hour and a half, and at the closing hour he left with others who were in the house. It was noticed that he stumbled and fell, but was able to get to his feet again. No subsequent history could be obtained, and the finding of his dead body is the next point in the evidence.

The points of importance in the case are: (1.) The length of time the man lived after receiving his extensive and deadly injuries, taking for granted that the fall down-stairs was the cause; (2.) The stage of unconsciousness after the fall, the regained consciousness, again passing into the insensibility which preceded death, evidenced by stumbling and falling as he left the inn.

The writer's explanation of the above points is as follows: —

"The severe fall caused, in the first place, concussion of the brain, as well as fracture of the skull. This concussion explained the first unconsciousness, and as it passed away he returned to his senses, and then the effects of the fracture began, namely, hæmorrhage, which from the free openings of the fracture into the ear, and under the scalp textures, could escape externally, so that at first the brain was not pressed on; as the blood accumulated under the scalp it gradually offered resistance to the external hæmorrhage, and clotting occurring in the auditory meatus stopped this outlet, so that the full effects of the pressure would now be exerted on the brain, and the stumbling and fall at the inn door were the first symptoms of this; then the gradual increase of blood, at last reaching the medulla, as the clots there showed, put an end to existence."

CROSSING THE LEGS, AND THE MODE OF SITTING.

M. DELAUNAY, of Paris, has made an extended and careful investigation, an account of which is given in the *British Medical Journal*, May 10, 1884, to ascertain if, in the majority of cases, the right upper and lower extremity be crossed over the left, or the left over the right, and which side most persons incline to when in the sitting posture. According to M. Delaunay, certain breeds of dogs, such as terriers, Newfoundlands, and poodles, cross the right paw over the left. The Chinese and Japanese cross the left arm over the right. Europeans cross the right over the left. M. Delaunay observed, in the *crèches* and *salles d'asiles*, that infants under three years of age cross the left arm over the right, older children crossing the right over the left, sixty per cent. doing so at six years of age. Robust children cross the right arm over the left; the idiotic and weak, including those who are incapable of working, cross the left over the right. The Calmucks and Arabs cross the right over the left like the Europeans. A great many women cross the left leg over the right. Among the opera dancers some always cross the right leg over the left, but not one the left over the right habitually; the majority cross the left over the right or the right over the left indifferently. Robust children cross the right leg over the left earlier than their weaker playmates. Persons who cross the right leg over the left lean towards the left when sitting; those who place the left uppermost lean to the right. Hence, consistently with what might have been expected from what is observed in children with regard to crossing legs, until six years of age children lean towards the right, and afterwards towards the left. French schoolmasters, it would appear, try to prevent their pupils from assuming this position, believing that scoliosis results; hence they encourage or enforce the use of elbow-rests (*accoudoirs*), which oblige the children to sit straight, — a useless measure, according to M. Delaunay, as the position they choose is in conformity with the process of evolution. Tailors affirm that the back of a pair of trousers is always more worn on the left side than on the right. Left-handed people always sit towards the right. M. Delaunay concludes from these observations that the left brain develops previously to the right, and finally the right predominates.

PROFESSOR OSLER.

IT has been for some time known that Prof. William Osler, of McGill University, has been a candidate for the Professorship of Clinical Medicine in the University of Pennsylvania at Philadelphia. On the 7th inst. a meeting of the Board of Trustees of this Institution was held, and it was immediately afterwards announced to Dr. Osler that he had been unanimously elected. We congratulate most heartily our *confrère* and hitherto colleague upon this mark of the high esteem in which his professional abilities are held by the teaching men of the United States. The position he now holds he never sought. It was, in fact, offered to him without any solicitation on his part. The selection, in our opinion, does his University infinite credit, as showing that they are willing to go even beyond the boundaries of their own country to find the best man to fill such important vacancies.

The profession of this city and of this country feel that they are sustaining a great loss in thus parting with one of their ablest, most zealous, and energetic members. McGill University feels keenly the removal of one of its best teachers, and the General Hospital one of the most active members of its staff.

We feel certain that Dr. Osler will be often heard of in his new and wider field of labor, where we wish him all the success and prosperity his undoubted merits deserve. — *Canada Medical and Surgical Journal.*

THE OIL-SPOT.

ABOUT ten miles to the south of the Sabine River, which forms the boundary between Texas and Louisiana, and about a mile from the shore, there exists a natural phenomenon known to sailors as "The Oil-Spot." In fine weather there is nothing remarkable to attract the attention of a stranger; but when an angry gale from the north-east sweeps the ocean, and great crested waves rise in battle array, this charmed natural harbor reveals itself. No visible boundary divides it from the tempestuous ocean around; but within a space two miles in length *the waters remain perfectly calm*, their only change being that they become turbid and red, as though the oil-bearing mud were stirred up from below. A broad belt of white foam and towering breakers marks where the mighty waves, with all the force gathered in an unbroken sweep of seven hundred miles across the Gulf, are suddenly arrested, and sink down, conquered and powerless, so soon as they come within the mysterious influence of this gentlest of rulers.

Unfortunately, this peaceful haven is very shallow; its depth is variously stated at twelve and eighteen feet, so that only vessels of light burden can here take shelter. But to these, blessed, indeed, is the change of passing suddenly from the wild tossing of the outer ocean to the wonderful calm of this strange harbor, where the weary crew may rest as securely as though within an encompassing coral reef. Indeed, the stranger approaching this wall of breakers would naturally assume it to be caused by a dangerous reef, and would, as a matter of course, seek safety by steering away from it.

We believe that no scientific examination of this so-called Oil-Spot has yet been made. Sailors who have here found refuge state that the bottom is of a soft, soapy mud, into which they can easily push a pole to a considerable depth — a mud which, when applied to deck-scrubbing, is found to be exceedingly cleansing. — *From "The Oil Supply of the World," in Popular Science Monthly for November.*

BLUE EYES GOING OUT.

As the outcome of sexual selection, says *Science*, blue eyes are to disappear, at least from Europe. So predicts Mr. Alphonse de Candolle, in his paper on Heredity in the Color of the Dyes in the Human Species, recently published in the *Archives des Sciences.* In investigating the subject of heredity, it occurred to De Candolle that the color of the iris offered the best outward and visible sign. It is conspicuous; it cannot be masked by artifice; after early childhood it does not vary with age, as does the color of the hair; and the character is, on the whole, distinct. For, according to him, there are only two sorts, — black, or rather brown eyes, and blue; gray eyes being reckoned as mere varieties of the blue. From the working-up of the statistics, in part from series of observations made for the purpose, it appears, that, when both parents have eyes of the same color, 88.4 per cent of the children follow their parents in this feature; and of the 11.6 per cent. of children born with eyes of other than the parental color a part must be attributed to atavism, that is, to intermittent heredity. But the curious fact comes out, that more females than males have black or brown eyes, in the proportion, say, of 49 to 45 or of 41 to 39. Next it appears that with different-colored eyes in the two parents 53.9 per cent. of the progeny followed the fathers in being dark-eyed, and 55.9 per cent. followed their mothers in being dark-eyed. An increase of five per cent. of dark-eyed in each generation of discolorous unions must tell heavily in the course of time. It would seem, that, unless specially bred by concolorous marriages, blue-eyed belles will be scarce in the millennium.

THE INJECTION OF A SOLUTION OF SALT IN ACUTE ANÆMIA.

A contribution to the study of saline injections, intra-venous and arterial, in acute anæmia is made by Dr. Thon, who has collected reports of thirteen cases, and published them in the *Australian Medical Gazette.* In six of these cases the cause of the acute anæmia was post-partum hæmorrhage. Five out of the six patients recovered completely, and the sixth improved temporarily, but died three weeks after the operation from perforative peritonitis. The remaining cases which called for injection were as follows: One of collapse, following partial extirpation of an ovarian carcinoma; one of collapse, after poisoning by iodoform; one of collapse through loss of blood during nephrotomy; one of anæmia from secondary hæmorrhage after resection of the knee-joint; one of hæmorrhage from carcinoma of the cervix uteri; one of collapse from severe compound comminuted fracture; and one from complete collapse and anæmia during abundant hæmorrhage from an ulcer of the stomach. Three of these seven cases, from various causes, were saved by the infusion of sodium chloride, and although the rest died, there was in every case material improvement, lasting for hours and days. The strength of the solution is recommended to be six parts of pure chloride of sodium to a thousand parts of distilled water neutralized by two drops of the solution of soda. A convenient method of administering it is to place it, after being warmed to 39° C. (102.2° F.) in a cylindrical glass jar. To the base of this jar a tube 80 c. m. (twenty-six inches) long is attached, ending in a transfusion canula, which is to be inserted into the vein. The fluid makes its way very readily into the latter. From a thousand to fifteen hundred centigrammes of the solution may be employed, although in some instances not more than five hundred were found to be necessary. The injection may be made into either the basilic vein or radial artery.

SUDDEN DEATH IN CHILDBIRTH.

Dr. William T. Lusk read before the Practitioners' Society of New York, at its meeting June 6th, a case of sudden death, which the reader believed to be due to surgical shock, and remarked that text-books on obstetrics assumed that it was not possible for a woman to die of shock in parturition, but from what he had observed he was inclined to believe that death in lying-in women was not infrequently produced by that cause.

The case was as follows: —

The patient was a primipara, healthy, and twenty-three years of age. Seen first January 1st of present year at seven A. M. Patient said pains had begun on previous afternoon, and she had paced the floor all night. She said that when in motion she found it easier to bear her pains. Examination: Extreme tenderness of vagina and cervix; cervical canal dilated by head; os extended, size of half dollar; head covered tightly by membranes; no pouch. At eleven o'clock little progress. Gave chloroform, and pushed up head so as to allow bag of waters to form. This manœuvre was followed by rapid dilatation. Head in twenty minutes on perineal floor. Forceps then urged. Patient wished "glory of having her baby herself." Waited at her instance until between one and two o'clock. Patient suddenly lost color, and seemed dazed when spoken to. Applied forceps to head at vulva. Easy extraction followed by some hæmorrhage, but the latter was quickly controlled. Patient's face showed signs of complete collapse. Stimulants, warm hypodermics of brandy, and hot tea were given at short intervals. Apparent rally. At seven P. M. went to dinner, thinking period of safety reached. Patient suddenly turned in bed, and pulse became very feeble.

There was a slight rally, and then came death. Absence of respiratory troubles excluded pulmonary embolism either from venous thrombi or from air. The associated symptoms were those of surgical shock, to which the patient was, probably, predisposed by the ante-partum exhaustion. The writer argued against the rejection of surgical shock among the causes of sudden death in childbed, holding that the entry of air into veins, embolism, and pulmonary thrombosis are insufficient to account for all cases.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 18, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	648	293	25.05	16.20	10.80	1.65	6.90
Philadelphia	927,995	363	136	19.87	17.11	3.31	3.59	10.76
Brooklyn	644,526	273	130	24.09	10.59	10.59	7.30	5.84
Chicago	632,100	190	98	32.09	4.75	8.03	4.38	7.66
Boston	423,800	166	46	22.27	16.85	4.21	6.02	8.43
Baltimore	408,520	144	53	30.36	17.20	6.21	3.45	14.49
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	102	28	26.46	12.74	11.76	—	2.94
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	70	19	21.45	12·87	4.29	5.72	4.29
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	51	25	33.32	5.88	21.56	1.96	5.88
Providence	119,405	51	23	35 28	5.88	7.84	—	9.80
New Haven	62,882	26	6	23.10	11.55	3.85	7.70	11.55
Nashville	54,400	15	6	40.00	—	6.66	6.66	6.66
Charleston	52,286	39	13	17.92	2.56	5.12	2.56	5.12
Lowell	71,447	24	9	20.80	16.64	12.48	8.32	—
Worcester	69,442	25	12	28.00	8.00	12.00	—	16.00
Fall River	62,674	32	16	40.69	15.65	18.78	9.39	3 13
Cambridge	60,995	28	6	10.71	17.85	3.57	3.57	—
Lawrence	45,516	13	8	23 07	15.38	15.38	—	7.69
Lynn	44,895	20	6	30.00	30.00	5.00	10.00	5.00
Springfield	38,090	7	3	57.12	14.28	—	—	57.12
Somerville	31,350	5	1	20.00	—	—	20.00	—
Holyoke	30,515	16	10	18.75	6.25	6.25	6.25	—
New Bedford	30,144	16	7	37.50	6.25	25.00	—	12.50
Salem	29,503	7	2	14.28	28.56	14.28	—	—
Chelsea	24,347	9	3	33.33	11.11	—	11.11	22.22
Taunton	22,693	4	1	25.00	—	—	—	25.00
Gloucester	21,400	6	2	50.00	—	16.66	—	33.33
Haverhill	20,905	4	2	25.00	—	—	—	25.00
Newton	19,421	6	1	16.66	16.66	—	16.66	—
Brockton	18,323	5	1	—	10.00	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	2	25.00	—	—	—	—
Fitchburg	13,433	2	0	50.00	—	—	50.00	—
Eighty-six Massachusetts towns	428,279	70	20	24.30	17.16	7.15	11.44	5.72

Deaths reported 2441 (no reports from St. Louis, Cincinanti, and Pittsburg): under five years of age, 988; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 627, consumption 352, diarrhœal diseases 213, diphtheria and croup 201, lung diseases 177, typhoid fever 84, whooping-cough 41, malarial fevers 46, scarlet fever 20, measles 10, erysipelas two, puerperal fever one. From *malarial fevers*, Brooklyn 13, New Orleans 11, New York 10, Providence four, Philadelphia, Baltimore, and Charleston two each, Chicago and Nashville one each. From *whooping-cough*, New York 14, Baltimore six, District of Columbia five, Chicago and Boston four each, Brooklyn three, Nashville two, Philadelphia, New Orleans, and Lynn one each. From *scarlet fever*, New York six, Providence five, Brooklyn and Boston two each, Philadelphia, Chicago, Cambridge, Holyoke, and Newburyport one each. From *measles*, New York five, Philadelphia two, Brooklyn, District of Columbia, and Fall River one each. From *cerebro-spinal meningitis*, New York three, Philadelphia and Fall River two each, Milwaukee one. From *erysipelas*, Baltimore and Lynn one each. From *puerperal fever*, Milwaukee one.

Cases reported in Boston: typhoid fever 59, scarlatina 58, diphtheria 33, and measles six.

In 104 cities and towns of Massachusetts, with an estimated population of 1,366,324 (estimated population of the State 1,955,104), the total death-rate for the week was 17.62 against 17.84 and 18.58 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending October 4th, the death-rate was 20.1. Deaths reported 3379: infants under one year of age 1057; acute diseases of the respiratory organs (London) 184, diarrhœal diseases 281, fever 68, scarlet fever 59, whooping-cough 54, measles 37, diphtheria 37, small-pox (London 10, Birkenhead and Sunderland one each) 12. The death-rates ranged from 14.1 in Portsmouth to 31.4 in Halifax; Birkenhead 21.8; Birmingham 22.2; Bradford 20.4; Leeds 22.8; Leicester 24.4; Liverpool 22.1; London 17.2; Manchester 25.1; Nottingham 20.8; Sheffield 23.8. In Edinburgh 16.1; Glasgow 23.1; Dublin 26.3.

For the week ending October 4th, in the Swiss cities, there were 33 deaths from consumption; diarrhœal diseases 20, lung diseases seven, typhoid fever four, small-pox three, puerperal fever two, whooping-cough one. The death-rates were, at Geneva 12.2; Zurich 19.9; Basle 19.5; Berne 22.2.

The meteorological record for the week ending October 18th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Oct., 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 12	29.980	66	75	62	78	91	92	87	SW	SW	SW	19	12	11	F	R	C	—	—
Mon., 13	29.940	60	75	49	90	51	72	71	SW	NW	NW	8	22	22	C	C	C	—	—
Tues., 14	30.233	42	50	39	68	39	48	52	NW	NW	NW	14	24	15	C	O	F	—	—
Wed., 15	30.286	40	48	33	55	33	60	49	NW	NW	W	15	15	8	C	C	C	—	—
Thurs., 16	30.009	48	54	33	59	58	53	57	W	SW	SW	2	5	14	O	O	O	—	—
Fri., 17	29.708	54	64	48	86	47	65	66	SW	W	NW	12	15	8	F	O	O	—	—
Sat., 18	29.878	44	51	38	60	58	83	67	W	E	NW	2	5	14	F	O	C	—	—
Mean, the Week.	30.005	50.4	60.3	43.2				64.1										4.45	0.23

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY FROM OCTOBER 18, 1884, TO OCTOBER 24, 1884.

Wolverton, W. D., major and surgeon. Granted one month's leave of absence, to take effect when his services can be spared by his post commander. Paragraph 4, S. O. 211, Department of the East, October 16, 1884.

Vickery, R. S., major and surgeon. During temporary absence of Major J. C. McKee, Surgeon U. S. A., Medical Director of the Department, in addition to his other duties, will assume charge of the office of the medical director. G. O. 34, headquarters Department of California, October 8, 1884.

Winne, C. K., captain and assistant surgeon. In addition to his duties as post surgeon at Benicia Barracks, will also attend the sick at Benicia Arsenal, Cal. S. O. 122, headquarters Department of California, October 13, 1884.

Havard, Valery, captain and assistant surgeon. Assigned to temporary duty at Fort Schuyler, New York Harbor, N. Y. Paragraph 2, S. O. 211, Department of the East, October 16, 1884.

Strong, Norton, first lieutenant and assistant surgeon. Assigned to duty at Fort Union, N. M. S. O. 198, Department of the Missouri, October 4, 1884.

Phillips, Jno. L., first lieutenant and assistant surgeon. Transferred from Department of the East to Department of Dakota. S. O. 245, A. G. O., October 18, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY DURING THE WEEK ENDING OCTOBER 25, 1884.

Bloodgood, Delavan. Promoted to the grade of medical director. August 22, 1884.

Oberly, Aaron S. Promoted to the grade of medical inspector. March 28, 1884.

Wells, Henry M. Promoted to the grade of medical inspector. August 22, 1884.

OBITUARY. DR HERMAN VON ZEISSL.

This famous teacher, a contemporary and fellow-worker with Skoda, Rokitansky, and Hebra, died in Vienna on September 23d. His reputation as a syphilographer attracted vast numbers of students of all nations to the great hospital in Vienna, and his text book on the subject enjoyed an exceptionally large circulation. He was born in Moravia in 1817, and studied medicine at Vienna, where he was subsequently offered by Hebra a ward for special investigations of syphilis. In 1850 he was appointed "Privat Docent," his inaugural address being entitled A Compendium of the Pathology and Therapeutics of Syphilis and Venereal Diseases. This passed through two editions in the course of six weeks. In 1860 he received the Extraordinary Professorship, and in 1864 he published his chief work, A Manual of Constitutional Syphilis, which brought him considerable scientific reputation as the founder of the German dualistic school. In 1869 he was named director of the second ward for syphilis which had then recently been formed in the General Hospital. He filled this office up to a year ago, when he resigned it on account of bad health.

Suffolk District Medical Society. *Surgical Section.* — There will be a meeting of the Section at 19 Boylston Place on Wednesday evening, November 5th, at 7.45 o'clock. Communication: Dr. E. H. Bradford, A Case of Subtrochanteric Osteotomy.

S. J. Mixter, *Secretary.*

Books and Pamphlets Received. — Contributions to the Anatomy and Pathology of the Nervous System. Based on Researches conducted in the Private Laboratory of E. C. Spitzka, M. D. Series III. No. 3. Singular Case of Vertebral Disease associated with a Tumor in the Abdominal Cavity, etc. By Richard Mollenhauer, M. D.

Kentucky School of Medicine. Twenty-ninth Annual Announcement. Session of 1885. Louisville, Kentucky. 1884.

Hyperæsthesia. A Paper read before the Medical Association of the State of Alabama. By James T. Searcy, M. D., of Tuskaloosa. (Reprint.) Montgomery, Ala. 1884.

Transactions of the Medical Society of the State of California during the years 1883 and 1884. Sacramento.

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Original Articles.

CASES OF ARSENICAL DERMATITIS.[1]

BY JAMES C. WHITE, M. D.,
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Concerning the possible effects of arsenic upon the skin we have a great number of recorded observations, from which it appears that nearly every form of eruption which it is capable of exhibiting in its most varied forms of disease has occurred after the administration of arsenic, and has been attributed to it: macular and erythematous efflorescences, papules, vesicles, and pustules, wheals, furuncles, and ulcers, scales, petechiæ, and pigment deposits. These have presented themselves as local manifestations of cutaneous disturbance, or universally distributed, or have simulated in their arrangement and course distinct forms of dermatoses, as the exanthemata, erythema, erysipelas, herpes, zoster, eczema, pityriasis, psoriasis, etc. Such are the phenomena which, it is claimed, have followed the internal administration of arsenic. Its action upon the cutaneous tissues may, however, be regarded as possibly always a purely local one, inasmuch as it is excreted in part by the glandular structures of the integument.

As to the effects produced by it when brought in contact with the skin in any form from without we have less positive information. Applied purposely as a caustic we know that it causes, in combination with other substances, a rapid destruction of the cutaneous tissues, or that, on the other hand, its action by dilution may be limited to that of a simple depilatory. As employed by workmen in the numerous arts in which it is used, its effects upon the skin are of all degrees of intensity from a fugitive erythema to deep-seated gangrene, and varying in extent of distribution from the limited ulceration about the nails of the taxidermist to widespread forms of dermatitis of all grades. It is my purpose in this paper to present brief notes of three cases of dermatitis, the first two of which were undoubtedly the result of direct contact with green arsenical paper, while in the third case the ætiology is so much a matter of doubt that it furnishes the reason for offering this communication to your criticism.

Case I. A few years ago a medical student consulted me about his hands. The palmar surfaces were universally occupied by vesicles buried deeply beneath the thick horny layer, as closely approximated as possible without becoming confluent, and varying in size from a large pin's head to a medium-sized pea. They presented with their semi-translucent coverings that peculiar boiled-sago-like appearance considered to be characteristic of the so-called dysidrosis, of which pseudo-dermatosis it might have been taken as a good example. The pressure of the imprisoned fluid produced but a slight bulging of the cuticle overlying the individual efflorescences, but towards the lateral surfaces of the fingers the lesions became more prominent, and in the more yielding epidermis between them well-developed, elevated vesicles. There was considerable general thickening of the integument with much burning and itching. All these manifestations of an acute dermatitis reached their height of development in three or four days, and subsided in the course of the following week, leaving a somewhat prolonged desquamation of the palms, corresponding to the depressed roofs of the vesicles in their stage of involution, none of which were able to discharge their fluid contents. An investigation of the possible exciting causes of the trouble showed that the patient had been using, a few evenings before the onset of the inflammation, a pack of playing cards, the backs of which were covered with a large amount of arsenical green, and I had no doubt that the dermatitis was the result of such contact.

Case II. On the 19th of March, this year, my opinion was asked with regard to a patient applying for admission to the Massachusetts General Hospital, from which he had been discharged "well" twelve days previously, after five weeks' residence on account of "anæmia and general debility." He had been at work for a week, but for two days his mouth had felt sore, and he had noticed red spots upon his hands and fore-arms. When I saw him these parts were swollen, and presented numerous erythematous patches, which in some parts had already passed into papular forms of inflammation. His face was very red and greatly swollen, so that his eyes were nearly closed. The ears were of nearly double their natural thickness, and were discharging serum. The œdema and redness extended downwards upon the neck as far as it was exposed to view only. There was also serous oozing and crust formation upon the chin.

It was evidently a case of severe artificial dermatitis, the exciting cause of which was not learned at that time. The ill-defined limits of the inflammation, the want of tenderness on pressure, and the slight constitutional disturbance showed that it was not erysipelas. On the following day, the 20th, the face presented a more general incrustation, and there was free oozing of serum from its surface. The eyes could be opened partially. On the 21st the skin of the face and neck remained as before, but the backs of the hands and fore-arms were covered with serous and sero-purulent vesicles. On the 22d the face was still more crusted, and the hair was falling in great quantity from the whole scalp. On the 23d the vesicles upon the hands and fore-arms had increased greatly in number and size, and by confluence some groups had been converted into large, prominent bullæ. There was some oozing from these parts, and crusts were beginning to form upon them. In the evening the patient's condition had become so much aggravated that I was sent for. The face was so swollen that it seemed ready to burst, and, indeed, was discharging serum profusely from numerous points. The eyes were entirely closed. The hands and arms were of enormous size, and were also dripping freely. There had been a great rise in body temperature through the day, and, as shown by the chart on next page, it was at my visit 102.5° F. The pulse was 100. The patient appeared to be in a very dull mental condition, and made but little complaint. On the following morning, the 24th, there was a free general sero-purulent exudation from the face, and the temperature rose again in the evening, but only to 101° F. From this time the inflammation of the skin subsided slowly. On the 28th the eyes could be opened, and the face was nearly free from crusts. On April 7th the patient was discharged well, although the skin of the parts affected was still reddened and desquamating.

It was learned during his illness that he had been engaged for three days previous to the appearance of the cutaneous symptoms in fastening pieces of white webbing into sample books, the paper linings of which were covered with green arsenical pigment, as determined by chemical analysis. I have seen one other case of severe dermatitis of hands and arms in a boy engaged in manufacturing elastic suspenders, but could not learn whether the fabric contained the poison. In this case, the most advanced form of cutaneous inflammation that I have ever seen of such artificial nature, and the only one accompanied by constitutional disturbance of any marked degree under my observation, there can be no doubt that the cause of the dermatitis was the arsenical paper. That other workmen employed in the same occupation were not affected in a similar manner is in accord with the general law of individuality. Another exceptional feature in the case was the stomatitis and loss of hair.

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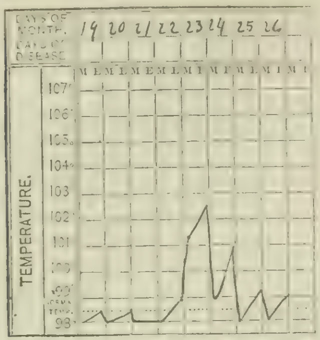
[1] Read at the meeting of the American Dermatological Association, August 27, 1884.



Case III. In the last week of November I was called to see a lady on account of an affection of the skin which presented to her attending physician some unusual features. She had given birth to her first child seven weeks previously, and had made a good recovery. The disturbance of the skin began to appear one week after rising from her confinement, and five weeks after delivery. It had been in progress, therefore, two weeks when I was consulted. At this time the whole trunk was thickly occupied by slightly elevated patches of a subdued red color, varying in size from a pin's head to a dime, circular or oval in shape, and covered with very thin, firmly adherent scales. Some of the largest and oldest patches had undergone involution at their central portions and had assumed an annular form. Upon the upper arms and thighs and upon the neck there were the same appearances, but less pronounced and abundant than upon the trunk. The subjective symptoms were a slight itching or burning of the skin of the parts thus affected, and there was no constitutional disturbance excepting a mild chilliness, such as accompanies many acute dermatoses of the general surface of similar grade. The appearances strongly resembled those of multiple ringworm of the skin, and at the beginning it was thought by the attendants that the disease might be of that nature. It was also not unlike the earliest manifestations of some rare forms of psoriasis of rapid onset and general distribution, in which the scale formation is exceptionally slight. Several of the patches were scraped, and the epidermal cells thus removed with difficulty were carefully examined for the presence of fungous growth, but none was found. Acetate of potash was prescribed internally, and a cooling wash was directed to be applied to the skin.

From this time the disease extended but little more and gradually faded out of existence. Its period of evolution was three weeks, and of decline nearly as long. At the end of six weeks the skin presented no signs of the disease. The diagnosis made at the first visit was pityriasis maculata et circinata, and this opinion was adhered to during the subsequent observation of the affection; indeed the appearances and course throughout were typical of this uncommon dermatosis. As in other cases which have come under my notice, I was again impressed by the inappropriateness of the name applied to it by the French dermatologists who first recognized and described its individual character, inasmuch as the scales are a very subordinate feature in the appearances at any stage of the efflorescence.

During my early attendance upon the case my attention was called to the condition of the baby, then about two months old. It had been feeding upon a wet nurse, and was plump and of healthy appearance. During the preceding week there had developed a papular eczema upon the cheeks and a slight intertrigo behind the ears and in the folds of the neck. In spite of the treatment advised the disease increased rapidly in extent and severity, the whole face presenting within ten days a papular eruption of vivid redness, confluent and excoriated, while a considerable portion of the scalp was affected to the same degree. Upon the neck the opposing surfaces of the integument within the deep folds were intensely reddened and excoriated at their juncture at the bottom of the furrows. In the folds of the axillæ, in the groins, and in several of the deep folds on the inner surface of the thighs the skin presented the same intense grade of intertrigo. Upon the lower legs there was an ordinary papular eczema.

I continued to treat the child from December 1st to February 6th by such methods as I am accustomed to use in similar forms of cutaneous inflammation, but with very little apparent success. One expects in infantile eczema more or less frequent relapses, and possibly an indefinite extension of the disease under treatment, but relapses imply a preceding improvement. In this case I never seemed to have it under temporary control even, and the intertriginous inflammation, which generally is easily managed, behaved as obstinately as the more advanced grades of the process. After the first two or three weeks the child's digestion became disturbed, and the stools assumed a bright green color and were overfrequent. It ceased to gain in weight also. The wet nurse was changed twice, the second one because she had several attacks of acute indigestion, but with the third, a florid, healthy woman in all respects, no improvement in the child's condition took place.

On February 6th the wall paper upon its room attracted my attention (the baby had at first been brought down-stairs for my inspection), and on analysis it was found to be highly arsenical. It was an old French paper, and the pigments were loosely laid on. The patient was removed to another room, and the nursery was repapered. An immediate change in the child took place. The intestinal discharges became less frequent, and after a few days lost their green color; the intertrigo became at once less red and moist;

and there was a gain in weight during the first week of three quarters of a pound. At the end of the second week another pound had been gained, the diarrhœa had wholly ceased, the intertrigo had disappeared everywhere, and there was only a little dry and scaly eczema left upon the cheeks. All these rapid changes ensued without any alteration in the treatment employed.

On the discovery of the arsenic in large amount upon the walls of the chamber the question naturally presented itself to me: May its presumably constant presence in the air of the room not have been the cause of these extraordinary dermatoses both in mother and child? What were the conditions which would warrant the conclusion of so direct a connection between them?

A young lady with an especially delicate skin lies for four weeks in a chamber the walls of which are heavily covered with an arsenical pigment loosely laid on. One week after leaving it for another apartment there is developed over a large cutaneous surface an inflammatory process of rare occurrence, so rare, in fact, that nothing whatever is known of its ætiological relations. As soon as this chamber is vacated by the mother the infant, who has spent the first month of its life in another apartment, with its wet nurse, is transferred to the arsenical room as its permanent nursery, and in ten days begins to present an inflammatory affection of the skin, one of most common occurrence at its age, but of an unusual type. Later it develops marked intestinal disturbances. Both sets of symptoms persist to an extraordinary degree, in spite of repeated changes of treatment and nurses, until the paper is removed from the walls, when the skin and intestines rapidly return to their natural condition. The first wet nurse did not sleep in the arsenical room. The second one was in the room nearly the whole day and night, and had several attacks of vomiting and diarrhœa. The third wet nurse was in the house but a short time before the discovery of the arsenic was made. She remained well, as did the monthly nurse who had charge of the mother during her confinement and subsequently of the child for two months. The two latter nurses were especially strong women.

These are the facts. Do they furnish evidence for a suspicion that arsenic was a factor in these manifestations of disease in this household, or are they explicable on the theory of mere coincidence? If pityriasis maculata et circinata is a well-defined entity, what possible relation can arsenic have to it as cause? Eczema is one of the most common affections of early infancy; why look for any unusual agency in its production here? Has arsenic been known to produce such effects? As just stated, pityriasis maculata et circinata is a rare disease, and we have no data collected to explain its occurrence. I do not know that its association with arsenic in any way has been hitherto observed. It may be that this case furnishes a clue to the ætiology of others which have been reported, could the circumstances attending them be recalled. It certainly should be remembered in connection with those which shall be observed hereafter. With regard to the eczema in the child, it did present some very unusual peculiarities. Intertrigo in the summer months is very common as the only manifestation or in connection with other phases of eczema, but I have never met with a case in which it was so marked in every possible locality for its existence, or so little influenced by treatment in all. This feature in the winter is still more exceptional. Moreover its very rapid disappearance on the removal from the arsenical chamber was a most significant sequence.

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WHAT IS REFRIGERATED BEEF?

BY H. LASSING, M. D.

Articles of food are very complex in their chemical constitution, and are exceedingly prone to return to the simpler and more stable compounds called inorganic. The principal promoters of such decomposition are moisture, oxygen, and certain minute organisms. The art of preserving food in a manner to retain its flavor and natural qualities is chiefly modern, as the ancients only understood rude methods, the principal of which were drying and salting.

Animal food may be preserved by several methods, of which the following are the chief: (1.) By immersion in a solution of common salt, to which a small portion of saltpetre is often added, called brine. This acts by abstracting the juices from the meat, and also by preventing the development of organic germs and lessening the tendency to molecular change. (2.) By packing the meat in salt, whereby the juices are abstracted, then removing it and allowing it to dry, and packing in boxes or barrels. (3.) By rubbing with common salt, and drying in the sun, or in a current of dry air. (4.) By salting and smoking, by which means, in addition to the abstraction of moisture by the salt, pyroligneous acid and creosote act upon the flesh, causing it to contract and harden, and also preventing the development of mould. (5.) By drying in a current of warm air at about 140° F., or in the open air at even a lower temperature, when the air is comparatively free from ferment germs. The latter method has long been practiced, especially for "jerked beef," throughout Spanish America and in the warmer parts of the United States. This dried meat may be reduced to powder, packed in air-tight cans, and preserved for a long time. When mixed with fat it forms the pemmican used in Arctic voyages. Spices and dried berries are sometimes added to it. (6.) By cooking to coagulate the albumen, and then inclosing in air-tight cans with exclusion of air, after the manner of canning fruits. (7.) By cooking and pickling in vinegar, a common method of preserving oysters, lobster, and fish. Cooking and seasoning and covering with melted lard or oil is a common method of preserving small fish, like sardines. (8.) By refrigerating and freezing, a process now extensively practiced in all civilized countries, fresh beef being carried from South America to all parts of the world, and in the United States from the Pacific to the Atlantic coast.

There are several special methods which might be classified under one of these heads. Appert's method, introduced in France about 1810, for which he received a prize of 12,000 francs, and which was afterwards patented in England and improved by Donkin, Hall, and Gamble, consists principally in cooking the meats at a temperature of about 240° F., and sealing in air-tight jars. The process has been improved on by McCall & Co., who add a small quantity of sulphite of soda (twelve grains to every pound of meat) to absorb traces of oxygen which may have been left. Still another improvement is the exhaustion of air from the cans by an air pump, and subsequently the passing through the can of nitrogen gas to remove all oxygen, and then of a small quantity of sulphurous acid, and after this of nitrogen, after which the can is hermetically sealed. The merit claimed for this process is that the meat may be preserved without cooking. The process of Professor Morgan, of Dublin, consists in forcing into the aorta of the recently slaughtered animal, and thence throughout the capillary and venous system, a strong brine containing a small portion of saltpetre, by which means the blood is forced out of the system at the same time that the meat is salted. It may then be cut into pieces, and dried and smoked or preserved in brine. One objection to this process is that it washes out nutritive material. By Dr. Endemann's process the meat is cut into thin slices, and dried in a current of warm air not exceeding 140° F. It may then be ground into powder, kept in air-tight cans, and used for making soup. Mr. Laujorrois has lately communicated to the French Academy a method of preserving food by the use of fuchsine (aniline red), but this is absolutely dangerous.

After all it was reserved for Yankee ingenuity to discover a method of preserving meat in its natural state, without the addition or use of any preservative agent, and by simply shrewd observation of the requirements of the natural laws governing the slaughtering, dressing, and keeping of beef.

To explain this matter intelligently it is necessary first to consider what are the characteristics of good beef, what should be avoided, and what required in its production.

Good beef, then, should be bright red in appearance, the muscular parts firm and elastic, the fat hard and light yellow or white; it should be free from all substances calculated to expedite putrefaction, such as exuded blood, bruises, or extraneous dirt. To produce such beef it follows that the animal from which it is taken must be in a perfectly healthy condition and of the proper age when slaughtered, and that the process of slaughtering and preparing for market must be conducted in such a way as to obviate anything tending to vary from the conditions just enumerated.

Certain conditions may be enumerated which invariably tend to produce poor, unhealthy, as well as unsavory beef, while others just as surely will result in good, healthy, and appetizing meat. No one can deny that long driving and exhausting railroad journeys in crowded cattle cars, with insufficient food and water, the animals goaded, beaten, and bruised by brutal drivers, frightened by unusual noises, will cause inflammatory, congested condition of the meat, and can never result in good, wholesome beef. Again, the careless handling of the dressed meat, filth and dirt allowed to accumulate about the meat in the slaughter-house, insufficient emptying of the blood from the carcass, all injure the quality of the beef.

The blood in its normal condition almost invariably contains noxious elements. From the very nature of the double office of the circulatory system this must be so, for while, on the one hand, the blood serves to renew the various parts of the system after their ordinary wear and tear, on the other it has to carry off the natural waste of the tissues. This waste or refuse is ultimately eliminated by means of the kidneys, the sudiparous glands, etc., and then appears in its avowed character of excrementitious matter; but it must always be, to a certain extent, present in the blood, and in the event of any derangement of the action of the kidneys accumulates in considerable and highly poisonous qualities. It must, therefore, be evident that the blood is always an undesirable article of food, especially as it is impossible when an animal is slaughtered to separate the arterial from the venous blood, which would be the only means of overcoming the difficulty. "We contend," says one writer, "that to use the blood as food approximates very closely to drinking urine, and is not merely loathsome, but, *pro tanto*, unsafe. That, like liquid and solid excrement, it is valuable for plant food, and that it serves as pabulum for certain classes of animals, is no proof that it is fit for human consumption."

The old Jewish rabbins well knew the importance of this, some 1700 years ago, when they recommended that in slaughtering animals, in addition to severing the trachea and œsophagus, the blood should be poured out from the vessels of the neck, and this at a time when it was believed that arteries contained only air.

And yet another consideration, which is that beef should be long enough killed before it is cooked to have allowed of complete relaxation of the muscular contraction of the fibre without permitting even the slightest decomposition to take place. We must not for a moment lose sight of the fact that any process of decomposition may be arrested by antiseptics, yet can never be undone, or, in other words, the destructive work can never be so remedied as if it had not taken place.

It is clear, then, that healthy animals of a proper age, well rested, fed, and watered, killed in such a manner as to produce the least fright and congestion, dressed in the cleanest possible manner, completely deprived of the excessive blood and animal heat, and so kept as to prevent even the slightest decomposition, will furnish the best, most wholesome, and appetizing beef.

The last consideration is the availability of such good beef to the largest number of people. The nearer to the point of production and the more direct a product is bought from the producer the cheaper it must be.

Having thus spoken of the characteristic requisites and cost of wholesome, well-tasting beef, we will now briefly consider if such can be so found within our reach.

In Chicago, one thousand miles nearer the vast cattle-producing pastures of the Far West, are the largest stock yards in the world. Connected with the entire Union by the most extensive system of railways centering here, cattle are brought here from all directions, but more largely from the vast ranches of Montana, Colorado, Nebraska, and Texas, and after being fully rested, fed, and watered, are picked out and bought by a vast army of buyers for local use as well as for reshipment. The principal grades of cattle here represented may be divided, for our purpose, into home-raised and range cattle, and it may be stated that the quality of these latter has been vastly improved during the last few years, not only by more careful breeding, but principally from the fact that so many railroads are now operated through the country that it no longer pays to drive these range cattle on foot save for the shortest distances to the nearest railway station.

The cattle, having thus been carefully selected and purchased, are driven to the cattle-pens of the different slaughter and packing houses which surround the stock yards and form a very large suburb of Chicago.

To give a correct idea of what seems the best method of slaughtering and dressing animals for the supply of wholesome, good beef for the Eastern markets we will now enter one of these establishments, and follow a steer from the pen to the market in Boston, New York, Liverpool, or London.

One of the largest of these beef-dressing places is located on the edge of the stock yards. These firms are known as Chicago beef dressers. It may be added here that beef dressing simply means the preparation of beef after killing by cleansing it of all uneatable débris and offal, and not, as some intelligent people even have imagined, the application to the meat of any preservative mixture or wash.

The bullock to be killed is driven from the inclosure wherein he is confined to a separate pen, and thence into a narrow stall, where he is alone by himself. Here he is stunned by one or two blows upon the head, which has a double object, — one to disable him, but the more important object is to drive all the blood possible to the brain and forward parts. After this a chain is fastened to him, and through a sliding door he is hauled upon what is called the bed of the slaughter-house. Overhead, throughout the entire buildings, are a system of iron tracks, intersecting and connected by switches, to which are attached sheaves and blocks with hooks, and these, being connected with powerful steam machinery, may be run in any direction. After the steer is thus placed upon the bed his fore feet are so placed as to open as wide as possible the opening which is to be made in his arteries, and thus make sure of the perfect and entire exit of blood. He is again knocked in the forehead until his muscles relax, when a man opens with a sharp knife one of the largest arteries in the body at the lower throat; his head is then entirely severed from the body, and by means of a chain on the hind legs he is hoisted up clear of the floor, and he is shoved into another place to make room for a fresh victim; he is again lowered on the floor, where he is placed on his back, his feet taken off, the skin taken off the belly and sides, the breast and crotch sawed open, and the caul taken off. This caul surrounding the stomach contains the purest fat in the steer, and is washed and cleansed to be converted into the finest and most valuable suet oil. At this stage the examination of the lungs is made, and if any evidence of disease is found the carcass is prepared for other uses than refrigerating, as it has already been shown that such meat will not keep. Thus in the self-interest of these Chicago beef dressers lies the greatest safety of the consumers of this kind of beef. The carcass is then wiped all over, washed free from all blood stains and other impurities; he is then hooked and hoisted up part way, the tail is cut out, furnishing ample material for the celebrated ox-tail soup, the rump is skinned, and, after being hoisted clear of the floor, two men beat down the fell on the hind legs, another takes the hide off the back, the entrails are removed, and the animal is sawn down the spine from the tail, the back is thoroughly washed off and wiped, and split down the middle; he is then hoisted further, and run on a track to more thoroughly drain out the blood; the hide is entirely cut off from fore legs, neck, the last attachment, and this is done in such a neat, careful way, with clean knives and hands, that the hides from this establishment bring an extra price in the market. The neck is split, and the carcass is trimmed, carefully cutting off all ragged pieces of fat or meat, all blood stains, or bruises. It is again thoroughly washed in two waters and wiped dry, when it is allowed to hang at the back of the beds near the cooler, where, after being allowed to thoroughly drip some fifteen minutes or more, it is again wiped and trimmed, and shoved in the cooler to be entirely deprived of its remaining animal heat. It will thus be seen that the carcass is not only kept very clean, thoroughly emptied of blood, being about one hour or more in transit from the pen to the cooler, but none of the meat is ever under any circumstances allowed to touch the floor. The number of men actually handling the animal from the pen to the cooler is forty-two. In addition to these there are large numbers carrying away offal, washing floors and posts, wiping the hooks and implements, so that at the close of each day's killing there is not any filthy débris or even blood left on the floor. While it is unavoidable for those who do the bloodiest work to keep from soiling their hands and clothing, they are, by the strictest discipline compelled constantly to wash their bodies, and the clothing is changed and washed at every resting spell. All débris is instantly removed and worked up to some useful purpose, so that there can be nothing remaining to cause any foul smell or decomposition; and in the various buildings on the grounds, though every process of manufacture of the débris is carried on, no smell of an objectionable nature is perceptible, and cleanliness is carried to such an extent that a lady with kid gloves could fearlessly handle the wood-work of the coolers and the meat therein contained without soil or stain. The floors of these coolers are covered with clean, dry sawdust, which is changed every other day. These coolers or refrigerators are very simple in construction, with hollow walls, having an ice chamber overhead, the cold air from which is conducted downward, and thus is kept up a constant circulation of pure air at an even temperature of about 40° F. These refrigerators have ample room to hold about 7000 cattle. The cars in which this beef is transported are built on a similar principle, and will each contain from twenty-five to thirty-four cattle. The meat is usually kept forty-three hours before shipment, by which time all animal heat is surely expelled from the meat. It is from three to four days on the way to New York, Boston, Philadelphia, or Baltimore, and on the way the ice is resupplied four times; thus beef sent from this place is at least seven days old when it reaches the New York market. In the winter time the same temperature is maintained, but the ice needs only to be replenished twice.

Beef which has been thus refrigerated will keep out of the refrigerators perfectly sweet and wholesome two days, even in the hottest weather. It is unnecessary to state that ordinary beef not so well cleansed, and not having the animal heat so thoroughly removed, will not keep nearly so long.

By actual experiment made this past summer, with the thermometer varying from 56° F. to 94° F., with two pieces of rib-roast bought in the open market, one being Chicago dressed, the other New York meat fresh killed, but both being from similar cattle as regards quality and weight, the New York killed beef decomposed the third day, while the Chicago beef was perfectly fresh and sweet on the twenty-second day, and was then cooked and eaten. Both were exposed together in the open air away from any ice box.

This concern uses about thirty-three car loads of fresh ice per day. As each car averages fourteen tons, this makes about 500 tons of ice per day.

Ice is very cheap in Chicago, so much so that it does not even pay to manufacture artificial ice, much less to use any chemical or other artificial means of cooling.

One notable fact connected with this process of slaughtering cattle is that the hearts of animals so killed are always empty of blood, whereas those killed by other processes are generally full. Beef thus prepared is sent by rail to the coast, shipped in similar refrigerators on steamers to Liverpool and London, where it is taken out of the coolers, carted and sent by ordinary rail car to Smithfield and other markets in England, and has always been in good condition and superior to English beef. In one instance meat was thus kept forty-three days on a disabled steamer, and yet was in fair condition on arrival in England.

There has been considerable prejudice created against this so-called Chicago dressed beef by ignorant and malignant misrepresentation, sometimes willfully confounding inferior canned beef, which, because it is also packed in Chicago, has been called "Chicago beef," and again, the writer has frequently seen butchers selling Chicago dressed beef as home dressed beef, while they were vigorously declaiming against this Chicago stuff, and pointing out inferior home beef as being Chicago meat. It has got to be quite customary now with careless reporters whenever, justly or unjustly, meat has to be spoken of as the cause of sickness, glibly to describe it as Chicago beef, thus creating an unfounded prejudice against what is really a wholesome, palatable, and cheap article of diet. Many districts of country which have heretofore suffered for the want of tender, toothsome beef are now well supplied from this source. (About four thousand head of cattle are daily slaughtered in these establishments.)

Some of the prejudice against this beef has been created by the ignorance of the so-called leaders of working men, who led them to believe that by using Chicago meat they were injuring their fellow workmen along the various railroads between Chicago and the Atlantic board, as well as those in the Eastern slaughter-houses. The fallacy of this belief is too evident to require argument.

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RAPID COCAINIZATION.

BY HENRY W. BRADFORD, M. D.,
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REPORTED BY WM. DUDLEY HALL, M. D.,
Second Ophthalmic and Aural Interne.

The anæsthesia of the cornea and conjunctiva produced by the instillation of solutions of cocaine of varying strengths into the lower palpebral sac will undoubtedly be of value in ocular surgery and therapeutics, but to what extent it will replace the anæsthesia of ether remains for a longer use of the alkaloid to determine. The results thus far are very gratifying, and it is to be hoped that there will be no cause for disappointment on the part of the gentlemen who favor its introduction. Cocaine, an alkaloid obtained from the Erythroxylon coca, has been known since 1855, but its application to diseases and injuries of the eye is due to the investigations of a brilliant young German physician, Dr. Koller, of the Vienna General Hospital.

The following are cases occurring in the service of Dr. Henry W. Bradford at the Massachusetts Charitable Eye and Ear Infirmary, in which he has used cocaine from T. Metcalf & Co. for local anæsthesia.

Case I. Male, aged twenty-five. Incised wound of the ciliary region with prolapse of the iris; right eye. Cocaine, two per cent. solution, the alkaloid having been rendered soluble by the addition of dilute hydrochloric acid. First instillation, one drop; end of third minute, cornea and conjunctiva somewhat anæsthetic, the sensibility being tested with the finger, a quill tooth-pick, blunt probes, and twisted linen cloth; end of fourth minute, one drop; end of sixth minute, cornea entirely insensible to pain, the patient being unable to indicate the precise moment of contact; end of ninth minute, third drop; twelfth minute, operation; prolapsed portion of iris seized with forceps and snipped with scissors, the patient, according to his own statement, not feeling the slightest pain.

Case II. Male, aged fifty-five. Traumatic ulcer of cornea with hypopion; right eye. Cocaine, two per cent. solution. Both corneæ found to possess the usual amount of sensitiveness when the tests enumerated under Case I. were applied. First instillation, one drop; end of second minute, anæsthesia commencing; end of fourth minute, one drop; end of ninth minute, complete anæsthesia of cornea; conjunctiva incomplete but considerable; twelfth minute, operation; paracentesis of the cornea with a Graefe knife. Upon the introduction of the iris-forceps to dilate the opening into the anterior chamber slight pain was complained of which was not experienced after placing a drop along the line of the incision. The usual pain due to evacuation of the aqueous was not noticed.

Case III. Male, aged forty-three. Iridectomy for lamellar cataract; left eye. Cocaine, eight per cent. solution. First instillation, one drop; end of first minute, one drop; end of second minute, one drop; no pain upon applying the usual tests; end of fourth minute, patient did not know when the finger of the operator touched the cornea unless considerable pressure was made; end of fifth minute, stop speculum was inserted, and the ordinary operation of iridectomy performed without the patient being conscious of any pain. The hæmorrhage into the anterior chamber was hardly perceptible. This patient was considerably terrified at the prospect of an operation without ether, but appeared very much surprised that it had been completed so quickly, not realizing that anything had been done beyond making an examination.

Case IV. Male, aged sixty. Needle operation for secondary cataract; left eye. Cocaine, eight per cent. solution. First instillation, one drop; end of first minute, one drop; end of second minute, cornea anæsthetic to the before-mentioned tests; end of fourth minute, operation; cornea perforated by the needles, and the capsule ruptured. The patient, after the operation was completed, said that the discomfort he experienced was no greater than if some one had gently pulled a fold of skin on the back of his hand, and was surprised that an operation had been performed.

Case V. Female, aged forty. Division of the internal rectus muscle for strabismus; right eye. Cocaine, eight per cent. solution. First instillation, one drop; end of first minute, one drop; end of second minute, cornea and conjunctiva anæsthetic to the usual tests, end of fourth minute, operation; stop speculum introduced; conjunctiva seized and divided. When the hook was placed under the tendon the patient resisted, and complained of pain. The hook was immediately removed, and a drop was placed near the muscle, after which the tendon was again drawn forward, and the muscle divided without much complaint. The resistance and complaint of the patient from her description of the sensations she had experienced during the operation seemed to be induced by the unaccustomed sensation caused by the speculum stretching the lids, and the traction on the muscle by the hook rather than by the acute pain usually felt by those who submit without an anæsthetic.

Case VI. Male, aged thirty-four. Division of internal rectus muscle; left eye. Cocaine, eight per cent. solution. First instillation, one drop; end of first minute, one drop; end of second minute, conjunctiva seized with forceps, cut, and dissected up and one drop placed near the site of the muscle, which was then divided. The patient said the operation was in no wise painful; the stop speculum was used.

Case VII. Female, aged forty-seven. Modified Graefe operation for cataract; right eye; cataract hypermature, duration seven years, projection and perception normal. Cocaine eight per cent. solution, one drop instilled; at end of first minute, one drop; end of second minute, one drop, cornea anæsthetic to usual tests; end of third minute, the speculum introduced without the slightest resistance on the part of the patient, care, however, being taken not to stretch the canthi; at three and a half minutes after the first instillation the conjunctiva was seized and the cut made; at the end of fourth minute, one drop was placed upon the incision, and half a minute later the iris was seized, drawn out, and divided, the patient complaining of only a slight twinge of pain; the cystotome was used at the end of the fifth and the expulsion was completed by the end of the sixth minute, without loss of vitreous; rubbing on the cornea with the curette for the expression of the cortical substance was not felt; the speculum was removed before the end of the seventh minute. There was but little cortical, the nucleus being very large and firm; the delivery of the lens was delayed somewhat, owing to a wax-like rigidity of the surrounding tissues. The hæmorrhage from the iridectomy was very slight and transient, being in marked contrast to an iridectomy under ether. On examination with the oblique light a thickened and opaque capsule was seen. The patient wished to take ether, but was persuaded to submit to cocaine anæsthesia, and like the others expressed surprise at the absence of pain which marked the various steps of the operation.

Case VIII. Male, aged twenty-three. Foreign body, cornea right eye. Cocaine, eight per cent. solution; three instillations and removal before the end of the third minute; no pain, though considerable force was used to dislodge the piece.

Case IX. Male, aged thirty-nine. Transplantation of pterygium; right eye. Cocaine, eight per cent. solution; one drop instilled; at end of first minute cornea anæsthetic, but patient flinched when conjunctiva was seized with forceps; second drop was instilled, and the operation completed during the third minute without pain.

Case X. Male, aged thirty. Foreign body in cornea of left eye. Cocaine, eight per cent. solution; one drop instilled; removal during the second minute without pain.

Case XI. Male, aged thirty-three. Foreign body in cornea of right eye. Cocaine, eight per cent. solution; one drop instilled, and removal effected during the third minute without pain. The time of operating in this case, as in several others, was delayed somewhat in order to give those who were present at the clinic an opportunity to test the completeness of the anæsthesia, which in foreign body cases is sufficient to permit the removal during the second minute, even though only one instillation has been made.

There have been thus far in this line of cases no bad results noticed; the patient mentioned in Case I., and who was operated upon October 25th, at nine P.M., passed a comfortable night, and his eye is none the worse for this anæsthetic. The patient mentioned under Case II. who underwent operation the same evening had some pain during the night, but the pus has not reappeared in the anterior chamber; Cases III. and IV. are presumably in as good a condition as they would have been if ether had been used; Cases V. and VI. were seen two days after the operation; there was no chemosis, and subconjunctival extravasation was absent; the wound had healed kindly, the only signs of operative interference being perhaps slight displacement of the edges of the incision, and a moderate injection of the blood-vessels.

Dr. Bradford's experience with the alkaloid, when placed in his own eye in the form of an eight per cent. solution, was as follows: First instillation of one drop; at end of the first minute considerable anæsthesia of the cornea; second instillation of one drop; at end of second minute complete anæsthesia of the cornea, and at end of fourth minute conjunctiva anæsthetic; end of seventh minute slight diminution of anæsthesia of the cornea; end of eleventh minute anæsthesia of cornea and conjunctiva nearly gone; end of fifteenth minute anæsthesia totally abolished, and mydriasis commencing; there was no change in the accommodation noticed from this application.

On another occasion he instilled one drop of an eight per cent. solution at intervals of one minute, till eight drops had been used; end of first minute beginning anæsthesia of the cornea; end of second minute anæsthesia of cornea and conjunctiva; sensation of pain and contact with any of the objects used in testing abolished; a sense of pressure if considerable force was applied still noticed; up to the end of the tenth minute the sensation of pressure demanded a constant increase in force in order to be recognized; at this point the pressure sense was abolished; the medium for transmitting the force was a finger or a pen-holder; this state continued till the end of the sixteenth minute, when the pupil commenced to dilate, and there was a feeling of dryness about the eye. Anæsthesia of the conjunctiva commenced to pass away at the end of the twenty-first minute, and sensibility returned to the cornea with the thirty-third minute. The mydriasis was about two thirds and lasted over five hours. Accommodation was affected to the extent of + 1.5 D. On this as on other occasions the cornea was affected first and recovered its sensibility last. The pressure, if considerable, caused a peculiar feeling of nausea.

The motive which impelled Dr. Bradford to have these cases collected, and to prepare this paper, was the hope that there might be a method of rapid cocainization, provided a sufficiently strong solution was used and the intervals between the successive instillations sufficiently short. By the experiments upon his own eyes he found that he could obtain a complete anæsthesia of his cornea by the end of the second minute when tested by the methods enumerated under Case I. The conjunctiva of the globe offered a greater resistance than the cornea, not becoming anæsthetic till the end of the fourth minute. By referring to Cases III.–XI. inclusive, it will be noticed that the instillations are at intervals of one minute, with almost immediate anæsthesia as a result; the reason for selecting this interval was because in his own eye there was considerable anæsthesia by the end of a minute, showing that absorption was rapid, and by continuing the instillations frequently he hoped to increase the existing anæsthesia of the first drop by each additional instillation, thus reaching the point of saturation sooner. The time for operating was when the cornea and conjunctiva lost their sensibility, excepting in certain instances, when the operation was delayed in order to give the gentlemen who were present an opportunity to examine the condition of the eye.

Case III. Iridectomy, performed during the sixth minute.

Case IV. Secondary cataract, operation during fifth minute.

Case V. Strabismus, operation during fifth and sixth minutes.

Case VI. Strabismus, operation during third minute.

Case VII. Cataract, operation during fourth, fifth, and sixth minutes.

Case VIII. Foreign body removed during third minute.

Case IX. Pterygium, operation during third minute.

Case X. Foreign body removed during second minute.

Case XI. Foreign body removed during third minute.

From the foregoing it will be seen that it is possible to perform these operations within seven minutes from the time the first instillation is made, which is a matter of considerable importance at a large clinic, where time is of value, and this celerity contrasts favorably with the delays incident upon etherization, and it is of not less importance that we have at our command an anæsthetic which permits of the utilization of artificial light without danger to the patient, the electric light being inconvenient outside of an office or hospital.

The sort of cases for which cocaine seems to be especially adapted are operations about the cornea or conjunctiva; in the removal of foreign bodies imbedded in the cornea it will probably have its widest application. Bowman's operation can be performed without pain, and the passage of probes probably facilitated by the injection of a solution into the canal or by lubricating them with the alkaloid incorporated with a proper vehicle. For a thorough examination when blepharospasm is present it is certainly of practical value.

The operations for pterygium and strabismus can be performed with ease, but a local application beneath the conjunctiva is advisable in the latter. In the operation for cataract and iridectomy it is preferable to ether, because the hyperæmic condition which exists during ordinary etherization is avoided, and there is no danger of straining, coughing, and vomiting on the part of the patient, which so tends to increase the vascularity of the part, and to favor free hæmorrhage into the anterior chamber. The mydriasis, unaccompanied by any prolonged disturbance of the accommodation, is of course an advantage over that produced by the present mydriatics when used to aid in diagnosis with ophthalmoscope. In the treatment of iritis it will probably not supersede atropine, though in combination it would perhaps be of value in relieving the nocturnal pain. In cases requiring long operative interference cocaine has a practical application from the fact that Dr. Bradford found it possible to maintain a continued anæsthesia for several hours.

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OCULAR ANÆSTHESIA PRODUCED BY COCAINE.

BY CHARLES H. WILLIAMS, M. D.

In the *Medical Record* of October 11th, Dr. H. D. Noyes published a letter calling attention to the discovery of Dr. Koller, that cocaine when applied to the conjunctiva caused a local anæsthesia. Since then several cases have been published in which it has been used, and the following cases will serve as additional evidence of the great advantages which may be expected to result from its use in ophthalmic surgery.

A four per cent. aqueous solution of cocaine was obtained from Messrs. Theodore Metcalf & Co., and its effect was first tried upon my own eye with the following result: In three minutes after the instillation of one drop of this solution into the conjunctival sac of the right eye a perceptible diminution of the sensitiveness of the cornea was noticed; in five minutes this was more marked; the cornea when touched with the point of a bit of note paper felt the touch, but there was no acute pain or involuntary flinching. This effect lasted about ten minutes, when the sensitiveness of the cornea slowly returned, and was completely reestablished in about twenty minutes from the time of the application. About twenty minutes after the instillation of the cocaine the pupil was seen to enlarge, and this slowly increased until it was about one and a half times the diameter of the unaffected pupil. This change continued for some three quarters of an hour, when it began to subside, and after an hour and a half only a trace of enlargement was noticeable. The range of accommodation remained nearly the same as before, but the near point was removed slightly from the affected eye. There was no change in the vision for far or near, nor any difference in the tension of the globe.

In the second experiment a drop of the same four per cent. aqueous solution was dropped into the conjunctival sac of the left eye, and this was repeated after an interval of one minute. Here, as in the other case, anæsthesia of the cornea began to be noticed in three minutes, and became quite marked in five, so that the conjunctiva could be seized with fixation forceps or the cornea rubbed with the point of note paper without producing pain, although here, as before, the touch was felt. In this case the anæsthesia of the cornea lasted nearly twenty minutes, though gradually diminishing during the last five. Enlargement of the pupil came on in about seventeen minutes, and lasted for about an hour. At one time the shape of the pupil was slightly irregular, but its reaction to light was always good. In this eye the same receding of the near point was noticed during the dilatation of the pupil, but the vision, tension, and range of accommodation remained nearly as in the other eye. Encouraged by these results I used the same solution in a case of extraction of cataract by the modified Graefe operation.

Case I. Mrs. C., sixty-four years old, rather stout and nervous, had double cataract. Three applications of a four per cent. solution of cocaine were made to the conjunctiva of the right eye at intervals of five minutes, and fifteen minutes after the first instillation the operation was performed. The ocular conjunctiva was seized by the fixation forceps, and the patient not being warned the corneal cut was made without her knowing it. The operation was completed without difficulty, and the patient was surprised to find that everything was finished.

Case II. Mr. E., traumatic cataract, with piece of metal lodged in the lens. August 8th, while using a hammer and chisel, a piece of metal flew into the right eye. Examination showed a penetrating wound of the cornea about one millimetre long at the upper and inner side of the pupil; also a slight wound of the capsule of the lens nearly in the centre, and imbedded in the lens at the outer and lower side of the pupil was a small, glistening fragment of metal. The fundus was normal. He was kept under observation for some days, but no opacity of the lens appearing, nor any irritability of the eye, he was allowed to go back to work. September 22d, nearly a month and a half after the original injury, he was again seen. The corneal and capsular scars remained unchanged; there was no opacity visible in the lens, and the bright metal could still be seen imbedded in the lenticular substance. Vision normal in the left eye and nearly normal in the injured eye. October 29th he presented himself suffering with much pain in the injured eye; there was a considerable circumcorneal injection; the lens was entirely opaque and swollen; the iris was pushed forward, and the pupil somewhat enlarged; given atropine one per cent. October 30th two drops of a four per cent. solution of cocaine were dropped into the conjunctival sac, and this was repeated in five minutes. After an interval of five minutes the foreign body and lens were removed by suction, without causing any discomfort to the patient. A spring speculum being placed between the lids, an opening was made through the upper part of the cornea with a bent, broad needle, large enough to admit easily a hollow suction tube measuring three millimetres across. Gentle suction being now made by the mouth, by means of a rubber tube and mouthpiece attached to the instrument, a portion of the lens was removed. It was then found that the tube had become clogged, and on withdrawing it the piece of steel, shaped like an arrow head, about one millimetre across, was found plugging the opening in the metal suction tube. This being removed, the rest of the lens was extracted by suction, and before the bandage was applied the patient could count fingers at one meter. There was no complaint of pain during the operation, nor any involuntary motion of the eye.

Case III. Stricture of the lower part of the lachrymal canal. On probing, after two applications of a four per cent. solution of cocaine, there was less pain than before without it, but even with the cocaine the pain was appreciable.

Case IV. Granular conjunctivitis with pannus. One application of the same solution of cocaine was made to the conjunctiva, and ten minutes later, when the lids were touched with the crayon of sulphate of copper, very little pain was felt, although in the other eye the pain was quite severe.

A DISCUSSION OF SOME OF THE QUESTIONS OF MEDICAL EDUCATION AND MEDICAL ETHICS.[1]

BY HENRY LEFFMANN, M. D., D. D. S.

From the valuable volume on medical education published by the State Board of Health of Illinois we learn that the United States contains 123 medical colleges, of which ninety-one are classed as regular. The Illinois Board has been an active one, has adopted a list of minimum requirements for admission and graduation, and in conjunction with other State Boards has accomplished much for medical reform, as the following figures will show: Prior to its present organization thirty of the regular colleges required an admission examination, now fifty-nine require it, and this number will doubtless be largely increased next year. Ten colleges formerly required three courses of lectures, sixteen now require them. The course of instruction has in many institutions been improved by the addition of chairs of hygiene and medical jurisprudence. A part of these improvements has been brought about by the natural progress of educational methods, and by the desire on the part of teachers to add to the attractions of their institutions, but a portion is also in deference to the demands of the State Boards.

A perusal of the volume referred to, in which the requirements and facilities of the colleges are set forth, shows us how very unequal is the character of the education given in different parts of the country. With some of these institutions the course of study must be a mere pretense.

It has been apparent for many years that active measures must be taken for securing reform in medical education. In considering the topic we must bear in mind the responsible position which the medical man holds in society. He is no longer called upon merely "to give the potions and the motions." Education and legislation, the control of which has for centuries been in the hands of clergymen and lawyers, is becoming largely a medical problem, and the well-informed physician becomes a factor of no mean importance in social progress. At the same time the requirements of a thorough medical education, in the narrowest sense of the term, — that is, a knowledge of disease and its treatment — has become a problem of far greater difficulty than it was a generation ago. A correct and sufficient knowledge of the instruments of precision requires an acquaintance with various accessory sciences. The laryngoscope and ophthalmoscope involve optical principles, the elaborate electrical machinery employed calls for a more than rudimentary acquaintance with mathematics and physics, and the many chemical tests which are required for diagnosis involve a need for some practice in the chemical laboratory. On the other hand, the importance of classical training has been overrated, and in the preliminaries to a medical education it may receive scarcely any attention, but its place is supplied by two of the modern languages in which so much of the important scientific literature is found.

In offering a synopsis of the directions which medical reform should take I may conveniently present the topic under four heads: first, the preliminary examination; second, the course of study; third, the method of graduation; fourth, the ethical relations.

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[1] Read before the Philadelphia County Medical Society, September 24, 1884.

The preliminary training presents great difficulties. It is nearly impossible to say what amount of actual information would be the minimum which should qualify a young man or woman to enter the study of medicine, and the opponents of the admission-examination system have urged this as an objection, and have spoken about "natural aptitude" in those comparatively uneducated, "rough diamonds," etc., which are likely to be unjustly excluded on account of technical deficiencies. Yet it must be noted that all colleges and high schools conferring degrees other than those of medicine have always had such conditions of admission, and no one has ever thought the obligation burdensome. I do not think that the requirements for admission to medical schools should include a knowledge of the dead languages, except, possibly, an acquaintance with the regular declensions of Latin nouns — a degree of information which could be acquired in a few hours; the value of the knowledge is only its bearing on correct prescription-writing. I take issue, therefore, with such conditions as those imposed by Harvard College, which requires the translation of easy Latin prose, and also the schedule of the Medical Society of this State, which imposes a knowledge of this tongue. On the other hand, an elementary knowledge of algebra and geometry is essential to a correct understanding of the teachings of chemistry, electro-therapeutics, and ophthalmology, and from practical experience I know that insufficient preparation in these matters has cost many a student a vast amount of labor and study. It is not at all improbable that as the standard rises some of the essentials of anatomy and chemistry will be entered among the preliminary requirements.

I must also object to the following requirements in the Pennsylvania schedule: botany, logic, drawing, Greek, political economy, and algebra, except to simple equations. Botany, as generally studied, is a mere accomplishment, and its practical value in medical science is very small. Political economy is, in my opinion, a department of science in which the danger of a little learning is very serious; it has no elements.

We must by all means regard the preliminary examination as a protection to the pupil. It is said that one of the head masters of Eton would not infrequently say to the scholar about to be thrashed, "Sir, this is the office of a true friendship." Pupils do not take kindly to admission examinations, and it will be more difficult to enforce them in medical colleges because every one has become accustomed to the unrestricted acceptance of students.

An effort will have to be made to secure for this examination an approach to uniformity among the different colleges. It will not amount to much if each institution is allowed to set up the standard for itself, and to determine privately how far each pupil attains it. It is hinted that in some institutions which have made great claims on account of their admission requirements, and the diplomas of which have received special privileges abroad, the examination is a mere form. The attitude which the Medical Society of Pennsylvania holds in reference to this topic is very unsatisfactory. For years it has been adopting resolutions and threatening punishment, but it seems never to get its courage up to the point of insisting on reform. These standing resolutions appear to be remarkable for little else than their hollowness and insincerity.

Opportunities for great improvement are to be found in the course of study. It would be curious to know under what circumstances originated the extraordinary method of medical instruction according to which the student is not to know anything, however easy, if he has heard it once, and to know everything, however difficult, when he has heard it twice. I cannot see that this state of affairs is materially improved by extending the term over three years. It relieves, perhaps, the pressure of study, but it only nominally lengthens the course. It is now generally thought that the science and art of medicine cannot be acquired in two years, and most of the American colleges state in their announcements that the candidate for graduation must have studied three years. The usual plan is, however, to allow these three years to be two courses of lectures, and one year under a preceptor, whose certificate to that effect is generally taken. When it is remembered how easy it is to secure such certificates, and how irregular and uncertain is the instruction often given by preceptors, it will be seen that this preliminary year may be a fiction. If a year outside of college is to be counted at all it should be upon a record dated at the beginning of the year; that is, the pupil should produce evidence of having declared his intention to pursue his studies for a year in a physician's office. I do not think, however, that this matter will require much attention, for the pre-college year will soon be abandoned. Another method by which the study is cut down to short periods and insufficient work is the practice of giving credit at one college for the time spent at another. As a general rule the evidence of the prior study is merely the statement of the pupil and the exhibition of a full set of tickets. Neither of these is sufficient proof of actual attendance, and even if they were there would still be no proof of the student's fitness to proceed with the second course. The proper test of the student's fitness to proceed with his studies is an examination. This is the test that non-medical colleges would apply.

The most radical improvement that I have to suggest is that to which I have already referred in a paper before the Medical Society of Pennsylvania, namely, that the full college course should include a recognition of each specialty, and offer the option of pursuing the study of one or more of them, not as side studies or post-graduate courses under junior teachers, but as part of the requirements of graduation. I have compared this plan to that under which the universities give courses of instruction in mechanical, mining, or civil engineering, the option of one or the other being left to the student. The whole tendency of medical practice is towards specialism, and one of the difficulties of maintaining the ethical standard is the constant struggle of specialists to draw attention of the community at large to their lines of practice. Forbidden to advertise directly, they seek methods that are illegitimate. I think it will be admitted that the best interests of the profession and the public are subserved when the patient is directed to the proper physician with the least inconvenience, delay, or confusion. Those who object to specialism forget that the degree of M. D. is itself a special degree, and limits the service of those who bear it. No one objects to the degree of D. D. S., and no one can deny that the value of dentistry has been vastly improved by the establishment of colleges and the creation of the degree. Why should we not multiply these degrees, and so arrange the college courses that each might be conferred on those who prepare for it? Doctor of ophthalmology, otology, or dermatology may seem strange to our ears, but they are as reasonable as the titles bachelor of science, of mining, or of music now conferred by the universities. *The Journal of the American Medical Association* has declared it allowable for a physician to put on his card "practice limited to such and such diseases," but I do not think that this view has been generally accepted. The proper method to secure recognition is by degrees, which indicate that studies have been pursued which fit the practitioner for the work undertaken. "John Smith, M. D., D. D. S.," is the legitimate manner of showing that the said person has pursued a course of study in general medicine, and then in a special department. I cannot see why "John Smith, M. D. O." should not indicate the same with regard to ophthalmology. I wish to present the idea that these special degrees should all be in the compass of a regular medical school; the studies for the first year would be the same for every degree, but in the second and third years they should be directed to the end in view. I consider this preferable to forcing all into the same studies and then resorting to post-graduate instruction as a preparation for practice. Instead of a faculty of seven chairs it would be more satisfactory to have fourteen. There is no good reason why the instructors of diseases of the eye, ear, or mind, and nervous system should not stand on an equal footing with the professor of gynæcology or obstetrics, instead of being, as they now are, mere appendages to some chair, or recognized only as subsidiary summer lectureships. That some of these departments cannot be satisfactorily included within the original chairs is because they are, for the most part, developments of late years. Sanitary science, psychiatry, and inebriety have become distinct sciences. The first has acquired so much importance that in some States of the Union a knowledge of it is necessary to the validity of a medical degree.

It is not possible to present here all the details of college instruction, but I think that a few words should be said about the thesis. As a rule, it is of little value. Under the system of preliminary and term examination it will have less value, for it is now looked upon mainly as an index of general proficiency in orthography and grammar. It would be unreasonable to expect students to produce anything of scientific value. There are, however, some exceptions, and it is not unwise to extend direct encouragement to those who seem to possess the means and desire for original work, and to reward the effort in proportion to its merit. I would, therefore, say that no theses should be exacted, except those that are to compete for prizes, and that, after the award is made, all that are deemed worthy of mention should be published.

In this connection I wish to allude to a department of instruction for which there is special need in this country, that is, medical jurisprudence. It is a common opinion that the mere fact of a man being a doctor fits him for expert service, whereas there is very little attention given to the topic in medical schools. The recent suggestion of Dr. Bronadel, made before the French Society of Legal Medicine, seems most admirable. It is that a regular college, or at least a regular course of instruction, should be instituted in medical jurisprudence, the evidence of proficiency being in the conferring of such a title as Doctor of Medical Jurisprudence. Only persons bearing such title would be competent experts, and undoubtedly in such an arrangement some of the objectionable features of expert testimony would disappear.

I think it cannot be denied that a feeling is gaining ground in the community that the right to practice medicine is one that should be more completely under State regulation than at present. The objects to be sought are that all practitioners shall be able, and as nearly as possible equally able, and the latter cannot be attained as long as the graduation is made to depend on the standard set up by individual institutions. The transfer of the work of examination to a State Board, and the conversion of the colleges to centres of instruction only, would solve several of the troublesome problems of college management. The faculties would surely not regret the loss of the labor of either the oral or written examination. It would place competent and efficient teachers on a much higher plane than they now are, while it would go far towards crowding out inefficient ones, for each examination would be a record of the manner in which the candidate was prepared. These State Boards should accept any one who could bring certificates of good moral character, proper age, sufficient preliminary training, three years' study under instructors recognized by the Board. Under the present arrangement a student attending any given college is obliged to take all his instruction from the Faculty thereof. If one or more of the professors are inefficient he must take extra time and spend extra money to get proper preparation. Under the system here advocated he could select his instructors from the dierent faculties accessible to him. Such a weeding process would very soon throw out the weak teachers, and form faculties strong at all points, and this surely would be to the advantage of the profession and its education.

A vital question that arises in reference to State Boards is their relation to the different schools of practice into which the medical profession is unfortunately broken. It is the fear of the homœopathic portion that has in part prevented the establishment of these boards. They are afraid that they will be used for the purpose of preventing any but regulars from getting into practice. They have insisted on, and I believe obtained in most cases, recognition and representation. I desire not to be narrow or bigoted, but I cannot divest myself of the impression that it is thoroughly absurd to suppose that there can be two systems of therapeutics; but, however this may be, the course to be pursued by the State is plain. The majority must rule, and the system which is most comprehensive must be insisted upon. There can be no question that the majority of both learned and unlearned persons in such a community as ours favors what is known as the regular system. On this ground, therefore, a knowledge of that system should be required for practice. Those who desire to pursue any special system might, in addition, be required to pass an examination in the special features of that system.

The adoption of the system of official supervision will be slow, but the profession, especially of the larger commonwealths, has it in its power to anticipate the system in a tolerably satisfactory manner; that is, by means of examinations before committees of the State or County Medical Society, these examinations being in addition to those given by the Faculty. One of the New England colleges already has this plan, and an analogous method has been in use in the College of

Pharmacy of this city, a committee of the Alumni Association giving a set of questions covering the principal branches of study.

The vexed question of medical ethics is not a suitable one for general discussion, but I cannot close this paper without expressing my agreement with the views advanced by Dr. Gihon, at the Cleveland (1883) meeting of the American Medical Association. Times have changed, and medical education has much changed, since the section of the Code was written which proscribes as irregular any one "whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry." Under State Boards, all students would be obliged to pursue these studies, even if the different colleges did not have them of their own accord. I am not disposed to advocate consultation with non-regulars, but I think that the ethical error at the present time is, that while many are excluded who are only nominally at variance with the requirements of the Code, many are admitted who are only nominally in agreement with it. The standard for admission of a physician to professional relations ought to be his moral character and educational attainments. Failing in these, it seems to me he is unfit, though he proclaim ever so loudly his faith in the letter of the law, and sign ever so often a printed promise to abide by it. In the words of Dr. Gihon, "Medical education is the true standard of medical ethics."

I have brought this paper forward with a view of eliciting discussion on all the points, but particularly on those that seem new. To me the fallacies, if any exist, in the arguments are not observable; but those who approach the question from a different point of view may discern them, and I trust any such weak spots will be pointed out. I expect that it will be urged in objection to some of the schemes that they would involve too complicated arrangements, but I think this is most in apprehension, not a reality. I presented views somewhat similar in a paper read before the Medical Society of Pennsylvania, but of course no opportunity was there presented to discuss it. The question of advance in medical education appears to be attracting more attention in the West than in the East, and we may infer that the reforms which the colleges will not of themselves make will be forced upon them by the official requirements. The Illinois State Board of Health has adopted the following as the minimum requirements to constitute a college in good standing, and the Nebraska State Medical Society has adopted them as conditions of eligibility to membership: —

Conditions of Admission. — Credible certificates of good moral character. Diplomas of Literary College or Preliminary Examination in English, Mathematics, and Elementary Physics.

Branches to be Taught. — Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Theory and Practice of Medicine, Pathology, Surgery, Obstetrics and Gynæcology, Hygiene, Medical Jurisprudence.

Length of Courses of Lectures. — Two of not less than twenty weeks, and not more than one course in one year.

Attendance. — Regular attendance, absence by sickness only allowed, and not to exceed twenty per cent of the course. Examinations by quiz twice a week. Final examination to be conducted when practicable by other than professors.

Dissecting and Hospital Work. — Two courses of each.

Duration of Study. — Not less than three years.

The college must show that it has a sufficient corps of instructors and facilities for hospital work.

The points presented for discussion to-night are: —

What should be the extent of the preliminary requirements, and how should they be ascertained?

How far should specialization of the course be carried, and would it be feasible to confer special degrees?

Could such a special degree, as Doctor of Medical Jurisprudence, be conferred, and would it be of advantage?

Would the profession and the community be benefited by a State Board of Examiners, who alone should have power to grant licenses?

If a State Board should be established, do the interests of the higher education require that any but regular practitioners should be represented on it?

In case a student transfers himself from one college to another of equal standing, should he be subjected to an examination with a view to determine his fitness to pursue his studies?

Reports of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

SEPTEMBER 24, 1884. DR. LEFFMANN read a paper on

MEDICAL EDUCATION.[1]

DR. OSCAR H. ALLIS, in opening the discussion by request of the Chair, said: The whole matter of medical education, as it confronts us to-day, is, not what we would desire, but what is the best course to pursue under existing circumstances.

Were I to map out a plan that I should feel would advance the student of medicine most rapidly, and prove of the highest permanent good, I would insist upon a judicious and adequate preliminary course of study.

But viewing matters as they are, such a standard is impractical, and this the lecturer knows too well. I would, then, take the student just as he is, presuming, of course, he has made sufficient advancement in the rudiments of an English education, and at the very outset of his medical education put him with instructors in the practical branches of his course, thus bringing teacher and pupil into daily and hourly contact, rather than have them meet but once, and that at the end of a short two years' course of study.

We all have our ideals. Were I to found a medical college, some such preparatory course would be adopted, and no one would be permitted to attend upon the lectures of the professors until he had mastered the elementary branches, such as anatomy, chemistry, materia medica, and the like, under competent teachers, and with all the advantages of laboratory and class instruction. For my own part I know of nothing more unsatisfactory, more distracting, than for a surgeon to attempt to explain the nature, importance, or difficulties of an operation to a class half of whom have never entered a dissecting room. He must either ignore the freshman or descend to his level, and in either case doing new-comers, the advance pupil, and himself, great injustice.

If I understand the lecturer correctly, he would dispense with the preliminary examination, such as now demanded by the Medical Society of the State of Pennsylvania and in many of the medical colleges throughout the land. With this I cannot agree. I know of no better time or place to ascertain the fitness of the student for his work than at home and at the outset of his studies. Preliminary examinations are meant to deter only those whose elementary studies have been grossly neglected.

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[1] See page 440 of this number of the JOURNAL.

Dr. William Pepper: Mr. President, when I received your special invitation, I determined to be present this evening in order to benefit from the views of others. I will, however, make a few brief remarks upon some of the points touched upon by Dr. Leffmann; and first, as to preliminary examination: I think it is a great thing to have one, and even though it be not adequate nor properly enforced, still the mere statement that there will be an examination deters lazy and badly-prepared students from even applying; and if a mere shadow of one be thus useful, we may imagine how valuable uniform and properly enforced examinations will be. Unfortunately, there are but few colleges which exact them, and it is a question for the profession at large to decide whether all colleges shall or shall not establish this essential requisite of good education.

So long as students are sent to colleges which have no such preliminary examination, and which have a comparatively low standard of requirements, so long will such colleges continue in their course. In regard to the character of the preliminary examinations, I consider a good knowledge of mathematics and of physics, together with the elements of a good English education, of much more consequence than the classics, and I would willingly accept proficiency in modern English as a substitute for the latter.

I do not believe in differentiation of medical studies at an early period. It is true that modern practice leads to more and more specialization, but unless we insist that the specialist shall have the broadest general education his value as a specialist is greatly endangered, and I cannot help feeling that if students were to be encouraged at an early period of their course, as being engaged for fitting themselves for this or that specialty, the tendency to concentrate their attention upon it to the serious neglect of the necessary elementary branches would be insuperable. Equally strenuously must I object to any increase in the number of degrees. Already the variety of degrees bestowed by American colleges is ridiculous, and if we were to enter upon the practice of giving different special degrees for attainments in different specialties no one could foretell the chaos of titles which would result. The truly reliable specialist readily becomes sufficiently distinguished in the esteem and confidence of the community.

I cordially agree with Dr. Leffmann with reference to a State Board of Examiners, but until that becomes possible our final examination should be made more practical. The candidate for graduation should be compelled to show his knowledge in actual diagnosis and the direction of treatment, and it will be easy to invite several disinterested physicians to attend such examinations, which would thus acquire almost the success of those conducted by a State Board. In colleges where a suitable preliminary examination is held, the thesis seems to me to no longer possess much value, and I would suggest substituting for it the preparation in each term of one or more clinical records by every student, which would certainly serve not only as a test of literary qualifications, but as evidence of their close attention to practical teaching. I would further offer prizes of special grade of merit for voluntary theses, based upon original investigations.

With reference to the time of beginning clinical studies: I realize the difficulty of lecturing to an audience a considerable portion of which are still ignorant of the very rudiments. There is, however, a kind of practical instruction which is really clinical, which should begin at the very outset of the student's course, and for which I am happy to say provision has now been made in the University of Pennsylvania. I refer to the demonstration before small sections, with careful training of each individual student in the perception of the normal physical signs. This will afford most valuable training for the first-year students, while it will enable the student in his last year to receive true clinical teaching in the wards, instead of being compelled, as is now too often the case, to spend his last year in elementary practical work, which could be mastered by the veriest tyro.

Dr. Charles K. Mills: I do not agree with the views presented by Dr. Leffmann on the granting of degrees for attainments in specialties, but rather with those of Dr. Pepper. It would be unfortunate to multiply the number of degrees. It is highly important, however, to have instruction and examinations more specialized. As it is now the examinations are only on seven or eight branches. Nothing so stimulates the student as the knowledge that he will be examined on his work. The thing to do, as long as examinations are still held by the colleges, is to specialize them as much as possible. There is no danger of this making specialists, though the giving of the degrees mentioned might have the tendency to check pseudo-specialists. It is well known that the University of Pennsylvania has recently added a fourth year for special instruction to under-graduates and graduates. An examination is held on each branch. Those who took this course last year went before the Examining Board of one of our large hospitals for examination for the position of internes. More than half were successful, though no specialists were on the Board; an excellent showing for the method of instruction and examination pursued in their cases.

Every institution should have at least a full and regular course on medical jurisprudence, but it is a mistake to suppose that a general course of this kind will of itself make medico-legal experts. It will further and more fully equip those who are already medical experts in special departments. The physician of the specialty concerned becomes the true expert in the case under trial, and as these are diverse there cannot be a general professional expert. The question involved may be one of insanity, nerve injury, ophthalmology, poisoning, etc., requiring a physician who has especially devoted himself to a certain line of work for many years.

Dr. J. E. Garretson: I compliment the man who, in this dollar-and-cent age, directs attention to the flaws in American medical education at the expense of his pocket. A full half of the young men that come to Philadelphia to study medicine should be turned face about and sent to a village school. Examinations are against big classes, while little classes are against the exchequer. It is a pity that the medical schools are not endowed; otherwise, it is a pity that American professors are not, like the Germans, able to subsist on lager beer and pretzels. Personally I favor preliminary examinations, or, if this be not democratic, be not what people call "giving a fair chance," why then let a student, even though he be dull as a clod, be allowed to enter the freshman class, but let him be kept in this class until he helps himself out of and over it. Going to school is synonymous with growing a medical junior. If a freshman fall short of an *m* in inflammation, or if he insist on spelling college with a *d*, it hardly seems unfair that time be allowed him to turn to a dictionary which shall be neither Dunglison's nor Thomas's. Perhaps, when all is said, time, and not examination, is the thing. Two years for the making of a doctor! Is it not farcical? This paper, by the essayist of the evening, should receive every attention; it has the ring of science, and not of silver. If it be not for a good to ourselves, why then for the benefit of the world, let not the doctorate be cheapened. Already the degree is not what it once was. The matter of standing is now in personality, not in a degree. No diploma seems safe in the hands of the democratic American. To-day boys are found full-grown doctors of philosophy.

Dr. John B. Roberts: Mr. President, I fully recognize the importance of a preliminary examination to the intending student himself, for I believe he had better prepare for the preliminary examination of the succeeding college year than to enter college a year earlier with a deficient knowledge of fundamental educational branches. The argument that a poor student, deficient in education, cannot afford to wait a year before beginning medical studies is specious. Let him work at the plow or desk that year, buy a few second-hand books, devote two hours a day to study, and he will not only be making money, but will, at the year's end, be able to pass a preliminary examination. Thereafter medical studies will be intelligible to him, the final examination more easy, and a higher professional income assured. A year will not be lost, but gained.

While I believe the preliminary examination advantageous to the pupil, and therefore indorse it, I deem it unnecessary if the medical colleges could be compelled to adopt a high-grade final examination. The examination then should be partially written. As the United States Naval and Army Boards need no preliminary examination, so would medical colleges need none. I know that in the Naval Board, and probably in the Army Board also, many candidates, though graduates of noted schools, are rejected because of inefficient general education before they come to the professional examination. A man who cannot write a simple record of his own life, in his mother tongue, is not apt to reach the professional examination before the Examining Boards, composed, as they are, of men whose duty is simply to find out what the candidate knows. This shows the advantage of examining boards whose income does not depend on the number of candidates passed.

My former experience as a quiz master gives me some right to speak of the defective knowledge often found in advanced medical students. I have also read some graduation theses. Perhaps some other members of this Society have enjoyed that high privilege. If any such are present they will remember the circumstance because of the ludicrousness of the high sounding name "thesis." The Paris theses are printed, and often referred to as sources of medical information. A collection of all the theses presented to the American medical colleges during the last five years would be more entertaining than that book of books, English as She is Spoke, and no Mark Twain's preface would be needed.

Does it not seem strange that the profession of Pennsylvania should take no radical step to elevate medical education, when Illinois, Virginia, and even the youthful Nebraska have struck terror into the heart of the half-educated graduate. The State Board of Health of Illinois will not recognize a diploma as entitling the holder to a certificate for permission to practice in Illinois if the college granting it falls below the minimum schedule. This schedule requires a preliminary examination or equivalent documentary evidence and teaching in hygiene and medical jurisprudence in addition to the ordinary branches. It also demands three full years of professional study, quizzes at least twice a week, and the final examinations to be conducted, when practicable, by examiners other than the professors.[1] How rigidly this standard is enforced I am unable to say, but I know that a graduate of last year in this city, who intended settling in Chicago, showed me a few months ago his papers telling him to appear for examination in hygiene before the Board. What a slur upon Pennsylvania medical teaching! A Philadelphia doctor who graduates with honors cannot practice on the western prairie until he is examined as to his professional knowledge. In other words, he is a good enough physician for old Philadelphia but not for the young West. Humiliating, truly! but not to Illinois.

Virginia has done even better, for she has established a State Board of Medical Examiners, before which every applicant for practice, after January 1, 1885, must pass a satisfactory examination before receiving a license to practice medicine or surgery. Two examiners-at-large are to be elected by the Society, three from each of the ten electoral districts of the State. A fine of $500 is to be imposed upon those who do not comply with the terms of the law.[2]

The Nebraska State Medical Society also is on the alert, and will accept as member no physician who is a graduate of a college falling below the requirements of the Illinois State Board of Health.[3] Those requirements I have already indicated. Philadelphia doctors will scarcely be welcomed in any part of the United States if this epidemic demand for educated physicians extends much farther. As we cannot control the epidemic, had we not better take the quickest possible steps to elevate ourselves to the level of the profession of the prairie and the plain.

New York, or at least the Erie County Society of New York, has endeavored to have a legislative enactment passed, providing for a State Board of Medical Examiners. Soon our graduates may be debarred from practice in New York also. The time has evidently come for conservative Pennsylvania to fall into line and act.

The Medical Society of the State of Pennsylvania has for many years been passing resolutions bearing on this question; but to resolve is not to act. I myself was one of those appointed by the State Society to prepare a schedule for preliminary examination of intending office students. The schedule was adopted by the Society, and the law became operative in some of the counties, but in Philadelphia it has been entirely unheeded up the present time.

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[1] Medical Education and the Regulation of the Practice of Medicine in the United States and Canada. Issued by the Illinois State Board of Health, 1883, p. 4.

[2] Medical News, September 20, 1884, p. 326.

[3] Medical News, June 7, 1884, p. 682; Journal American Medical Association, September 13, 1884, p. 306.

The correct remedy for defective education and examination in this State is, as Dr. Leffmann has said, the establishment of a non-teaching board, who shall examine all those proposing to practice in this Commonwealth. Let the colleges teach and grant degrees if they choose, but let no man practice in Pennsylvania who shall not have been examined by the State Board.

Dr. Benjamin Lee: It is sometimes charged, Mr. President, that bachelor uncles and maiden aunts know, or think they know, more about the education of children than their married brothers and sisters. In relation to the subject under discussion, I confess that I occupy the position of the bachelor uncle. I am not a practical educator; having been compelled, however, to give this question a great deal of serious consideration, my outside stand-point may, perhaps, have had its advantages. But in what little I have to contribute I shall not hesitate to avail myself of the published testimony of those who have had a practical experience in the education of medical and scientific students. A man recently apologized to me, on a street car, for the hilarious conduct of a companion by saying that he had just completed his six years' apprenticeship at the trade of blacksmithing. It made me blush for my profession. I said to myself, it takes but two years to teach a man to perform the manifold and arduous duties of a physician, yet, in the judgment of practical men, six years are required to learn to shoe a horse. It has been truly said by one of the speakers this evening that the medical profession does not now possess the high standing in the eyes of the community of former years. This is evidently owing to the fact that its literary status has deteriorated. But three colleges now demand the requirements held one hundred years ago in this city and country in order to enter upon the study of medicine.

In support of this assertion, allow me to quote for a moment from an introductory address of our distinguished fellow-member, Professor Pepper: —

"The first medical school was founded in 1767, though it is stated by Dr. J. B. Beck [1] that the State of New York is 'entitled to the honor of adopting the first effectual measures for regulating the practice of medicine.' This was in 1760, 'when the General Assembly of the Province ordered that no person shall practice as physician or surgeon in the City of New York before he shall have been examined in physic and surgery, and approved by one of His Majesty's Council, the judges of the Supreme Court, the mayor of the city, or by any three or more of them, taking to their assistance for such examination such proper person or persons as they in their discretion shall think fit.' A fine was attached to infraction of this law. In 1772 a similar law was passed in New Jersey. Those eminent men who formed the University of Pennsylvania boasted — and it was no idle boast — that their scheme of medical education was to have as extensive and liberal a plan as in the most respectable European seminaries, and that the utmost provision was made for rendering a degree a real mark of honor, the reward only of distinguished learning and abilities. This plan was, 'that all such students as have not taken a degree in any college shall, before admission to a degree in physic, satisfy the trustees and professors of the college concerning their knowledge of the Latin tongue, and in such branches of mathematics and natural and experimental philosophy as shall be judged requisite for a medical education.'"

From this it will be seen that not only at that early day was the preliminary examination, which has been so properly insisted on by the lecturer of the evening, demanded, but that it was an examination of an advanced character, including the Latin language, and that high dignitaries of the city were required to be present, and take part in it.

With the multiplication of medical schools, however, the conditions of entrance began to be debased, and the process of deterioration steadily continued until within a very few years, in spite of the earnest and repeated protests of many, both individuals and societies, who had the welfare of the profession at heart. And, in this connection, I confess, Mr. President, that I cannot sympathize with the lecturer in his criticism of the action of the Medical Society of this State in passing "empty" resolutions from year to year, urging a reform in this matter. The American Medical Association, from the first year of its inception, has made this one of the leading subjects of discussion. No State Medical Society has more persistently and vigorously seconded it than that of Pennsylvania. And so far from its efforts having been fruitless, I believe that it is just the agitation, agitation, agitation, of the question, which it has kept up from year to year, which has made such a paper as we have listened to, and such a discussion as we are now participating in, possible this evening. Another result of constant presentation of the subject has been the formation of a society in this county, having for its principal object the elevation of the literary and social status of our profession, by the introduction of a higher standard of education — a society already very respectable in numbers, as it has always been in character. I say, then, all honor to the men who have thus persistently, in the face of discouragement, and often of opposition from the leaders of the profession, year after year, devoted their energies to calling the attention of the profession, of the public, and especially of educators, to this crying evil. Allow me now, very briefly, to quote the opinions of some practical educators on the subjects introduced to our notice. And, first, in reference to the preliminary education: our late venerated fellow-member, Prof. S. D. Gross, than whom no one was better qualified to give an opinion on the subject of education, wrote in 1867: "A sound preliminary education cannot be too strongly insisted upon or too highly prized. It is a boon of inestimable value." Professor Gross enumerates in the preliminary studies English, Latin, Greek, logic, mathematics, history, and geography, such an education as every well-trained scholar should possess, and commends a knowledge of French and German.

Professor Gross took a very gloomy view of the situation.

Dr. Yarnall says: "My distinguished and honored master, Professor Gross, declares: 'The future holds out no promise of amendment. We shall go from bad to worse until the people can stand it no longer, and then we may hope to be able to effect some reform.'"

I cannot share in this pessimistic view. I believe that the reform has already commenced and feel confident that it will go on with increasing impetus.

In regard to the study of Latin: it does not seem to me that its true value as a factor in education has yet been sufficiently emphasized by previous speakers. It is not for the immense aid which it gives in the ready understanding of technical medical language and nomenclature that it is chiefly useful, but as a mental training, in developing habits of strict thought and application, in teaching the student how to study, how to arrange and utilize the great mass of facts which the strictly technical education will later furnish him, how to sift the numberless theories which will confront him, in short, how to use his mind. This view is amply confirmed by the results of an experiment made upon a grand scale in Germany and lasting over a period of ten years. From 1870 to 1880 students were admitted to the University of Berlin as well from the Real-Schule or scientific schools as from the Gymnasia or classic schools (colleges). The following are the opinions of several of the professors as to the comparative capacities for study and acquirement of those who had enjoyed the advantages of a classical education, and those who had been deprived of them, but had, instead, been trained in certain branches of modern education supposed to be an equivalent: —

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[1] Address before the State Medical Society of New York.

The professor of chemistry says, "That students from the scientific schools cannot, in this branch of study, be placed upon the same plane with the students of the gymnasia."

Professor Hoffman observes, "That the matriculates from the non-classical schools often show, at the beginning of their chemical studies in the University, a more rapid progress in acquiring a knowledge of the elementary principles of the science, as well as a greater dexterity in the early practice of chemical manipulation; but that before their studies have advanced very far these relations are reversed, and the non-classical students are left behind."

Professor Rammelsberg gives similar testimony in regard to students in the school of technology. He remarks, "That of those who take his lectures on chemistry during the first semester, the students trained in the gymnasia, though without any previous knowledge of the subject, take a far greater interest in the instruction than that shown by the students from the non-classical schools. At the final examinations the work of the non-classical students is generally inferior to what in advance would be expected, while the work of the classical students is almost invariably better."

Zupitza, the professor of English, says, "That the attainment of the non-classical student is greatly inferior; and what is of still greater importance, they almost invariably show a want of keenness of apprehension and independence of judgment that prevents them from taking any other than a prescribed method." He also testifies, "That, as a member of the Examining Committee of the Government, he has noticed that, although the students prepared in the scientific schools begin their studies of English before they go to the University, their knowledge of the language at the completion of their University course is generally much inferior to the knowledge shown by the classical students."

Herr Muhlenhoff, one of the professors of the German language and literature, uses these expressive words: "According to my experience, it is hopelessly impossible for a student prepared in a scientific school to acquire what may be called a thoroughly satisfactory development. No one ever acquires it through the study of the modern languages; no one ever will, without the solid foundation of a training in a gymnasium."

I submit, sir, that such testimony from those so well qualified to judge, and based upon so extended an experiment, is entitled to profound respect. This verdict was, I may add, concurred in by the scientific as well the classical professors.

DR. JOHN J. REESE: It is late in the day to find it necessary to advocate medical jurisprudence as an integral part of a medical man's education; yet of the ninety colleges in this country but few make it a necessity. Among the majority of these it is an appendage to various chairs, and, in point of fact, is not taught at all. In neither of the two schools here is it held to be a necessary part of education.

DR. JAMES TYSON: Much of the discussion, as well as action, in the matter of higher medical education during the next ten years, will circle about the subject of the admission examination. In my own experience the best and most successful students, who make the most successful physicians, are those who have had the broadest preliminary education. Such an education should include the ancient and modern languages and the natural sciences, as well as physics, and all the branches of a thorough English education. But since it is impossible, at the present day, to insist upon such requirements, we should agree upon a reasonable and practicable preliminary education, which the colleges, through professional opinion, should be required to adopt. It is not to be expected that the average college professor who has reached middle life will initiate a change which at first may effect a reduction in his income.

I hope the influence of the Society will be exerted to change the existing registration law, which requires the medical colleges of the State to indorse, after examination, the diplomas of the extra State graduates desiring to practice in Pennsylvania. This duty should be placed in the hands of a Board of Examiners, independent of the colleges; Indeed, I see no reason why the graduates of our own colleges should be exempt from examination by such a Board. All should be put upon a common plane.

DR. ULRICH, of Chester: Dr. Leffmann objects to the demands made by the State Society; as I happen to be a member of the committee to arrange the subjects for this preliminary examination, it seems proper that I should make some explanation as to the views of that committee. In doing so, I would say that I represented the minimum demand, and Dr. Finley, of Altoona, the maximum. We were in existence for at least two years, making at each meeting a majority and a minority report. Dr. Finley, whose demands were very high, making the minority report. I think the differences in our views were entirely due to the differences in our early educations. I did not think then, nor do I think now, that worthy students should be shut out, though I desire to advance the interest of the profession as much as possible.

At the time this report or programme was under discussion, the late Professor Gross suggested that it would have kept him out if it had then been enforced. No such man could have been shut out; he would have turned back and mastered the requirements. I often, very often, have regretted that my own preceptor had not advised me to a preparatory course; it would have saved me so much labor.

I take issue on the views in favor of specialists, presented by this lecture, and would object to any special teaching during the general or college course. I have always held that specialists should be well grounded in general medical knowledge, and it would lower my opinion of them to think otherwise. I hold that all specialists should be most thorough physicians. What signifies the ability of a man to diagnosticate an abnormal condition of the eye, ear, uterus, or skin, if he cannot estimate the constitutional relation to either? Mere local treatment is not all that is required in such troubles. There is no question in my mind but that those schools which have adopted the graded course will, in the very near future, command the best pupilage, and the greatest respect for their diplomas.

Dr. Jackson, of West Chester: While I would not be understood as holding that study of the classics was valueless, as a means of mental training, I certainly think that for such purpose it has been relatively too highly valued. Though the experiment of the last decade in Germany was held by the Faculty of the University of Berlin to show that such study best prepared the mind, even for the study of science, it must be remembered that this Faculty undertook the experiment with a strongly expressed prejudice in that direction, and that an opposite conclusion was reached by the Faculties of most other German Universities watching the same experiment. Then, too, the Gymnasia doubtless attracted the better class of students, because their diploma had, for generations, been necessary for admission to the Universities.

It is said that the requirements for the medical degree are not now as high as they have been in the past. This naturally results from the "downward competition" of the schools. A State Board of Examiners, by showing which schools do good work, would establish competition upward, and so raise the standard of medical education.

Dr. Keyser: From the remarks of Dr. Jackson, there would possibly be a misconception in the minds of those present as to the position of the German Real-Schule in the teaching of the classics. Greek, it is true, is not in the curriculum, but Latin is carefully and as thoroughly taught as in a Gymnasium. We have heard much, this evening, in relation to the necessity of a preliminary education before matriculation in a medical school; but another question is, "How are we to change the ever-continual quantity into the more proper quality of graduates of the medical schools.

We should so agitate this question as to cause students to go to the best and highest educational institutions; colleges which admit none but those well fitted by education and proper mental training as their matriculants, and where the teaching is in graded courses, and not the constant repeating of lectures year after year. It is also necessary to look to the final examinations for the medical degree. Let it be stringent, open to public, and in full faculty, instead of the accustomed way of going alone and quietly to the professor's office. No slipping quietly into the profession, as I have several times been informed by some of the graduates of our schools. To raise the standard as it should be we must have the preliminary requirements for matriculation and final examinations for the degree — both high, open and above board at all times.

Dr. Henry Leffmann: In reference to the attitude of the Medical Society of Pennsylvania, my objection is that it has been too tender in dealing with the matter. If it wishes to enforce the schedule of preliminary examination, let it resolve, that after a definite time — say, five years — no person shall be received as a member who is graduate of a college not respecting that schedule or its equivalent.

Recent Literature.

On the Use and Abuse of Pessaries. By George Granville Bantock, M. D., F. R. C. S., Edin. Second Edition. Entirely Rewritten. London. 1884.

This book is an amplification of a paper which first appeared in the *Lancet*, and afterwards was published in pamphlet form. It gives the author's views on the subject of pessaries together with a résumé of the opinions held by the principal gynæcologists. To illustrate the different points discussed in the book illustrative cases are added from the writer's experience.

On the whole the book strikes us as a very fair and intelligent exposition of this much-vexed subject. His position might be thus briefly stated: That a majority of the displacements of the uterus, uncomplicated by adhesions, may, after replacement, be kept in position by a pessary properly fitted to the individual case; that such replacement and adjustment of a pessary will definitely relieve very many symptoms, and that in a large proportion of cases a permanent cure is effected, and the pessary may be dispensed with.

For the author's special views on the relative frequency of the different displacements, on the way in which pessaries act, on the value of the stem pessary, and on a good many other kindred subjects, we would refer to the book itself, which will well pay perusal. The author is a man of large experience, and his cases illustrate the conscientious care which has doubtless contributed so largely to his success in this special line of treatment. His book can be recommended to the profession as a very safe guide.

Manual of Physiology, a Text-Book for Students of Medicine. By Gerald F. Yeo, M. D., F. R. C. S., Professor of Physiology in King's College, London, etc. Philadelphia: P. Blakiston, Son & Co. 1884. Pages xxiv., 749.

The modern publisher does not believe with the ancient Preacher that "much study [reading] is a weariness of flesh," and so Dr. Yeo has been persuaded, he informs us in his preface, to prepare this volume. He has no new tale to tell, no new point of view to develop, no "epoch making" presentation of any portion of the subject to give us; his only object has been to prepare a book which the first year's student shall find profitable reading. Once admitting the necessity of such a book it must be acknowledged that Dr. Yeo has excellently carried out his plan. The plan itself is such as to render any detailed criticism of the book unnecessary; in fact the most serious objection to be made to the book is that its goodness and size, with the expense and apparent completeness which that involves, will hinder many students from buying larger and better books after they shall have read this. It is but fair to say here, what we have had occasion to say before, that the kind of medical student Dr. Yeo seems to write for has great need to learn practical logic somewhere, and it will be much better if he do so in his physiology rather than to wait for the more laborious and dangerous experiences of his private practice.

This is one reason why all *large* books on physiology which profess to be but elementary are objectionable. This said, we have nothing but commendation for what Dr. Yeo has done in carrying out his plan. He has avoided theory with success — sometimes perhaps too completely. The book is liberally illustrated, many plates having been taken from the other sources, but are most commendably repeated as required. The plates in the American reproduction are not all of them very successfully printed. The text is much better printed, the only error which has attracted our attention is "*nitrate* of amyl" (p. 403). The index and the glossary are pretty full; the latter would be more acceptable to many students if it were liberally accented.

Medical and Surgical Journal.

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HYDROCHLORATE OF COCAINE AS A LOCAL ANÆSTHETIC.

AT the Ophthalmological Congress held in Heidelberg in September last Dr. Koller demonstrated the properties of cocaine, the alkaloid of coca, in temporarily abolishing the sensibility of the eye. Naturally the demonstration excited great interest, and the study of the alkaloid has been pushed with vigor. As yet the enthusiasm among ophthalmologists over the new anæsthetic has received no check, and seems rather on the increase, as proofs accumulate of its successful action. If the place which it promises to fill in ophthalmic therapeutics becomes assured, the introduction of the drug will mark an era in the surgery of this branch hardly less important than that ushered in by the discovery of anæsthesia by ether.

The drawbacks to the use of general anæsthesia are peculiarly prominent in operations on the eye, and in this of all surgical branches a reliable local anæsthetic possessing no injurious qualities is a desideratum. Up to this time no drawbacks to the use of cocaine have been reported, and it has been used in a variety of operations with results so uniform as to justify the statement that it is an unqualified success, producing local anæsthesia so complete that no form of contact is perceived, the mind and muscular power being left unimpaired. When we remember that in all cases reported up to the time of writing this result has been attained without unpleasant or detrimental after-effect, and with no element of danger, we can fully appreciate the enthusiasm of those members of the profession who have occasion to make use of this valuable discovery.

But there is no reason to suppose that the field of usefulness of cocaine as an anæsthetic will be limited to ophthalmology. Already for some time in use in laryngology, it has been of late tested to a certain degree on the nasal, buccal, urethral, and rectal mucous membranes, as well as in the ear, with results pointing towards its use in almost unlimited directions. It would seem to merit a thorough trial at the hands of the dental profession, for example, in the way of application during excavation, for there is every reason to believe that success may be attained in this direction, especially with exposed nerves.

The American profession has reason to congratulate itself on the alacrity with which the discovery has been assimilated and put on a practical basis in this country.

One needs but a short experience in medicine to learn to receive the first accounts of a new remedy or of a new application of an old one with some hesitation. A thing powerful for good is quite sure to have some limitation to its use, and with powerful remedial agents we are obliged to learn to secure the therapeutic and avoid the toxic effects. What drawbacks to the use of cocaine the future will develop cannot be foreseen; that none should be found is too much to expect.

ONE FEATURE OF THE RHINELANDER CASE.

AN important decision has just been rendered in New York in regard to the matter of insanity under the present Penal Code, by Recorder Smyth, in the case of William C. Rhinelander, who shot the lawyer, John Drake, last summer. A commission of three, including one physician, Dr. Detmold, recently decided by a majority vote that the prisoner was insane; but in this decision one of the commissioners did not concur. The District Attorney claimed that the determination of the Commissioners was conclusive, and that the only duty of the court was to grant an order committing him to the State Lunatic Asylum; but the Recorder, after a careful review of the case, now decides that Rhinelander is sane and must stand trial for the shooting. In his opinion, founded on a study of the statutes relating to commissions of lunacy in the cases of criminals, and the construing together of sections 658 and 659 of the Code of Criminal Procedure in the light of the common law (as they are apparently contradictory in terms), he declares that the determination of a commission is not final, and that the court has full power to review it and the proceedings on which it is based, and to adopt or reject it, as the evidence and the law may require.

In the course of his opinion Recorder Smyth thus expresses himself in regard to the expert medical testimony submitted in the case: —

"I agree with the learned commissioner (the dissenting one) that the expert evidence is of no value in this investigation. While the physicians called by the people to sustain the allegation of insanity say that the defendant is insane, they differ radically among themselves as to the classification of that alleged insanity. Two say that he has general paresis, one says that he is an imbecile, and another that he suffers from melancholia. . . . But whatever may be the views of the learned experts I have searched in vain through all their evidence to find any convincing proof of any one act of the defendant during the period embraced in the examination which itself proved insanity. Particular instances of foolish and impetuous acts, committed at long intervals, some of which being such as any self-willed or impulsive person might under certain circumstances do, cannot prove actual unsoundness of mind, and a general judgment passed to-day upon the quality of an isolated act, committed years ago, is of but little value in determining a question of present sanity."

We draw attention to this decision not only for its bearings upon the medico-legal questions of insanity, but also because it has so marked a bearing on the character of expert witnesses. Testimony subject to such a revision must be in reality worthy of respect to receive any consideration. Incompetent witnesses will hardly be in favor or care to appear. It seems to bid fair to help establish the distinction between expert and pseudo-expert witnesses.

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PREVENTIVE MEDICINE FOR THE AUTUMN.

The transition seasons of our American climate, corresponding in a general way with the periods of the year which the world has agreed to call spring and autumn, but more exactly with the early months of April and May, and the later ones of September and October, are characterized by sudden and violent oscillations of temperature. A change of twenty or thirty, and even more degrees, of Fahrenheit in the twenty-four or forty-eight hours is by no means phenomenal. These months bring with them a certain malaise exhibiting itself in general lassitude, and a certain class of maladies marked by local congestions — such as sore throats, nasal, bronchial, and intestinal catarrhs — which are familiar and expected, if not welcome visitors.

The extreme changes of temperature are, of course, peculiarly dangerous to the very old and the very young, that is, to those whose vitality and power of adaptability and resistance are especially limited. But in so far as the active and vigorous are less careful or less cared for than this former class, they, too, are liable to the penalties exacted by exposure to these climatic freaks.

To a certain extent an unremitting attention to the daily bulletins of the weather-bureau and a constant eye upon the barometer and thermometer give us an advantage over a preceding generation. But the leisure and ability to observe and profit by these warnings are not given to all, and even of those who are fortunate enough to possess a varied wardrobe and to live in a well ordered house, many prefer to run the risks of a chill or a sweat to numberless changes of outer and inner clothing and almost hourly directions about house heating and ventilation.

It must be confessed that practically American flesh must still consider itself, notwithstanding modern improvements, inevitably heir to a certain number of these afflictions. There are, however, a fair proportion which, without undue self-solicitude, may be escaped, and we desire to call attention, in the interest of preventive medicine, to one fertile source of headaches, sore throats, and diarrhœas peculiar to the months of September and October, which a very moderate degree of forethought might easily eliminate altogether. We refer to the reoccupation, without proper preparation, in the autumn, of houses and apartments which have been shut and vacant during the summer.

The custom of leaving the cities for the country or sea-shore during a certain number of summer weeks or months is becoming every year more general among a larger class of our city populations, and not only that but every year the length of the period of absence is increasing. Now the return to town from the country, the exchange of the open air for the house, of the fields, or the beach, or the piazza for the pavements and the streets, of an active life for a sedentary one is of itself a sufficient shock to the sensibilities of any one's system, however accommodating. But when, in addition to this inevitable shock, the individual or family neglects to secure such mitigations of the conditions as are easily within every one's reach, a cry of distress from the overtaxed constitution is, it must be allowed, indeed justifiable.

It is too common to return to a town house which has been closed and uninhabited without taking the simple precautions of thoroughly ventilating the rooms and passages, and flushing the drains. This ought always to be done, and physicians should remind clients who are too careless to think of these things for themselves.

November would be a less solemn month than it now is were these simple precautions taken in September and October, and many a case of febricula, or typhoid fever even, for which the country is now held responsible, would be averted altogether.

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MEDICAL NOTES.

— We learn with regret that Professor Huxley has become so worn by his multitudinous labors that he has been ordered by his medical attendant to leave England for some months of perfect quiet and freedom from work.

— The prescription ℞ Aerismaris, which was formerly supposed to necessitate a pilgrimage to the shore, can, it seems, be filled by any inland apothecary. Dr. B. W. Richardson, who nearly a score of years ago called attention to the possibility of getting a sea atmosphere without going near the ocean, has recently revived his suggestion in the *Asclepiad.* The pharmacy of the prescription is as follows: The solution to be used and diffused as spray consists of peroxide of hydrogen (ten volumes strength), containing one per cent. of ozonic ether, iodine to saturation, and 2.50 per cent. of sea-salt. The solution, placed in a steam or hand-spray diffuser, can be distributed in the finest spray in the sick room at the rate of two fluid ounces in a quarter of an hour. It communicates a pleasant sea odor, and is the best purifier of the air. It is also a powerful disinfectant. A large spray-producer has been recently invented which will diffuse the artificial sea air through a hospital ward.

— The proposition has been made in the general medical council of Great Britain to raise the limit of age at which legal qualification to practice medicine shall be obtainable. A definite motion to fix the age at twenty-three years was, however, rejected.

— Broad streets are not, it seems, the unmixed blessing that might be *a priori* supposed. For instance, in the State of Illinois the excessive width of the streets is reported as having of itself become a source of nuisance and of danger to health. Sixty feet and more are ordinarily given to new streets even in the smaller towns. Eight feet on either side are paved and devoted to pedestrians, and the remaining space, varying usually from forty-four to fifty-four feet, is devoted to carriage traffic. The result is that this wide carriage road, so often in excess of the requirements of the vehicles that have to travel over it, becomes a source of such expense as to forbid its being properly paved, cleansed, and channeled. The street consequently is soon turned into a vast surface of dirt mixed with filth, horse droppings, and other refuse, and when the weather is so dry that dust is formed the air which is inhaled as the dust flies about is calculated to cause disease as well as discomfort instead of promoting the health of pedestrians. Dr. Gregory in bringing forward this subject fully concurs in the great importance of providing wide thoroughfares, and of keeping the number of inhabitants to each acre down to a proper maximum, and hence he declares that he would not on any consideration diminish by a single foot the width of the streets, but he would curtail the actual roadway so that it shall only suffice for the proper demands of the carriage traffic, and between that limited space, which could then be properly kept at a reasonable cost, and the foot-paths he would plant trees and lay down grass, so as really to provide in towns and cities such freshness and greenness as would go far to induce people to take that form of exercise which is most conducive to health.

— A case was reported to the *Société des Sciences Médicales de Lyon* (*Lyon Medical*, 5th October), in which *lavage* was applied to the removal of a foreign body from the stomach. A pin had been swallowed by a dressmaker, and emetics, cathartics, etc., freely used for a week, had failed to dislodge it. The point could be felt by the patient giving a pricking feeling at the epigastrium, and it was believed by the physician that the pin had become caught in a fold of the mucous membrane. He accordingly washed out the stomach by means of a large tube (fifteen millimetres external diameter), using fifteen litres of water. The washing did not bring away the pin, though after it the patient felt relieved of the pricking sensation, and soon after vomited it. It was twenty-five millimetres long. It was believed by the operator that the washing dislodged the pin from its resting place and enabled it to be ejected by the act of vomiting.

— An interesting case having an important bearing on the question of the marriage of syphilitic subjects is reported by Mr. Cooper Forster, in the *Lancet*, August, 1884: A man, aged thirty, had a hard chancre in 1862; he was treated for four months with mercury and iodide of potassium, and from 1863 until the spring of 1882 he had no symptoms of syphilis. In 1865 he married a strong, healthy girl, who aborted four months afterwards, after having had sores on the vulva, sore throat, and a copper scaly rash. In May, 1866, a seven months' child was born, with marked symptoms of syphilis; this died in ten weeks. In May, 1868, the wife was again pregnant, when she was suddenly seized with difficulty of breathing, and died before medical aid was obtained. In 1872 the patient married again, his second wife miscarried at the sixth month, but did not again become pregnant for some years. In 1876 the patient and his wife were put under a course of mercury and iodide of potassium for over two months. In 1878 a healthy eight months' child was born, and in March, 1880, a healthy child was born at full time. In January, 1881, the husband had a fall, the effects of which he felt for a time, and then they passed off. In the spring he showed signs of locomotor ataxy, and in the autumn of 1882 he died, in spite of treatment with mercury and iodide of potassium.

— An unusual case of congenital hypertrophy of one foot is recorded by Dr. Blakader, of Montreal, in the *Archives of Pediatrics* (October 15th) with figure. The relative size of the two feet may be seen from the following table: —

	Normal foot. January.	Hypertrophied foot. January.
Length (inches)	4	5¾
Circumference around ball of foot	4¼	7½
Circumference around heel and ankle	6	6½
Circumference around calf	7	7½
Circumference around thigh	9	9½

As the hypertrophy was increasing an operation was resorted to, and the second and third toes, with the anterior two thirds of the metatarsal bones, were removed. The tumor proved to be a diffuse lipoma, with hypertrophy of cartilages and tendons.

NEW YORK.

— The members of a medical commission which has recently visited the cow stables at Blissville, Long Island, where pleuro-pneumonia has prevailed at intervals for quite a long time, are of the opinion that the only way to effectually suppress the disease is to burn the old buildings now used for stables.

— At the recent annual meeting of the Society of St. Luke's Hospital the report of the Board of Managers showed that during the year ending Saturday, October 18th, there were treated in the institution 1497 patients, of whom 129 died, and 601 were discharged cured. Of the whole number 1190 were charity patients. The average daily number of patients was 155.

and the total number of days of hospital care was 56,691 — an average of more than thirty-seven days to each patient — of which 47,090 days were gratuitous. The average daily cost of treatment per capita was $\$1.21\frac{1}{10}$. During the year legacies amounting to $32,560, and donations for the endowment of free beds to the amount of over $13,000, were received. In addition, Mrs. James Morris endowed the hospital with a special fund, the income of which is to be used in providing vocal and instrumental music for the chapel and wards. The total income from endowments was $28,645.53, which, added to the sum received from paying patients, amounted to about half the sum required for the support of the institution.

— The Montefiore Home for Chronic Invalids, at the corner of Eighty-fourth Street and the Eastern Boulevard, was formally opened on the 26th of October. Sir Moses Montefiore was the first contributor to the institution, and the Jewish residents of New York furnished the remainder of the fund for its support.

— At the annual meeting of the County Medical Society (New Code), held October 27th, Dr. Daniel Lewis was elected President; Dr. Lawrence Johnson, Vice-President; Dr. W. M. Carpenter, Secretary, and Dr. O. B. Douglas, Treasurer. Two *homœopaths* who had applied for membership in the Society were *unanimously* elected.

— At the competitive examination for the positions of first and third assistant physicians at the State Hospital for the Insane at Poughkeepsie, held October 22d at the building of the New York Academy of Medicine, thirteen candidates presented themselves. The Examining Board consisted of Mr. Silas W. Burt, Chairman of the Civil Service Commission, Dr. Stephen Smith, State Commissioner in Lunacy, Prof. Henry Drisler, of Columbia College, and Drs. James R. Leaming, E. Darwin Hudson, J. A. McLean Hamilton, Theodore H. Kellogg, A. N. Bell, and A. E. MacDonald. On the day following the candidates were tested in regard to their practical knowledge of insanity in the wards of the City Insane Asylum on Ward's Island, by Dr. MacDonald, the Superintendent. The names of the successful competitors have not yet been announced.

— At the Academy of Medicine, on the 22d ult., non-competitive examinations for Superintendent of the Asylum for Idiots at Syracuse, at a yearly salary of $3,000, and for the position of assistant physician at the Willard Insane Asylum, at a salary of $1800, were also held.

— The wife of a citizen of Waterford, New York, has presented her husband with four children at a birth. They are all girls, and are said to have weighed seven pounds apiece when born.

— The Board of Health asks an appropriation of $437,408 for its expenses during the year 1885; but the Board of Estimate and Apportionment has reduced this amount by $17,126.

— Dr. James Faulkner, who died at Dansville, Livingston County, on the 19th of October, would have been ninety-five years old had he lived to January 21, 1885. He was born at Cambridgetown, Washington County, and served through the war of 1812 as a surgeon in General McClure's command. After the war he gave up the practice of medicine and engaged in business. He also entered public life, holding many positions of trust and honor, and at the time of his death was the oldest bank president in the United States.

— Dr. Allen S. Church, a well-known and highly respected New York physician, and Treasurer of the County Medical Association, died October 24th.

Correspondence.

"WEIGHT AS AN INDICATION OF THE CHARACTER OF RISKS FOR LIFE INSURANCE."

Augusta, Me., *October* 25, 1884.

Mr. Editor, — The article in this week's Journal on "Weight as an Indication of the Character of Risks for Life Insurance" is interesting and suggestive, and its conclusions may be and probably are correct, but it seems to me to furnish an additional example, where we had enough already, of the fallacy of statistics and of reasoning from insufficient premises. If the conclusions are correct they are so independently of the data furnished in the paper. In order to acquire any value they must be supplemented by tables showing the number of members of the Society who are *at*, *below*, and *above* the normal weight, and what proportion of these vary fifteen per cent., twenty per cent., etc., from the standard. As the paper now stands it does not show that the death-rate is any higher among those whose weight varies from the standard than among those of standard weight.

As medical examiner of three of the largest life companies and a large beneficiary organization I am greatly interested in this subject, and wish that Dr. Seaverns, from the material at his command, would furnish us some statistics of real value.

Yours truly, J. O. Webster, M. D.

Roxbury, Mass., *October* 28, 1884.

Mr. Editor, — I cheerfully concede the imperfections of my article as referred to by Dr. Webster, for it was prepared in haste at a time when I was much fatigued.

It would, no doubt, be interesting and valuable to collect, as he suggests, tables of the members of our Society who are at, below, and above the normal standard of weight, but on the 1st of March last there were 48,912 of such members, and life is short.

I do not claim that my statistics *prove* anything *conclusively*, and it is very seldom that any statistics in medicine do more than establish a probability; and if (as I think my data show) among the 900 or more deaths it appears that a large proportion of those light in weight die of consumption and other wasting diseases, and if among the heavy weights many of them die of diseases of the circulatory system, there is, *probably*, a special tendency of the one class to the one form of disease, and of the other class to the other form of disease. And since phthisis is confessedly one of the most fatal diseases encountered in life insurance, I think I am justified in inferring that the examiner should be especially on his guard against those whose light weights show that they have a special proclivity thereto.

I am obliged to Dr. Webster for his courteous criticism. Yours very truly,

Joel Seaverns.

Miscellany.

LOCAL TEMPERATURE IN BILIARY COLIC.

Dr. Jules Cyr calls attention to the diagnostic value of local thermometry during the attack, in a monograph that has recently appeared (*Traité sur l'Affection calculeuse*, Paris, 1884).[1] If, during the paroxysm, the thermometer be applied to the area of greatest pain there is observed a local rise of a quarter, half, or even one degree centigrade above the normal temperature of the region. This local rise may, indeed, reach the level of the axillary temperature, which, under normal circumstances, is a degree and a half higher than that of the epigastrium or the right hypochondrium. This fact was first brought to the notice of the profession by Professor Peter, at La Charité, in whose service the author had, in March, 1883, the opportunity of observing an interesting case, of which the following particulars are stated: A young woman, confined for two or three years to bed by disease of the spine, was seized during her sojourn in the hospital, and at the end of the second year of decubitus, with a paroxysm of biliary colic, which was speedily followed by others of a like kind, one of which was attended by jaundice. The trace which displayed the axillary temperature, that of the left hypochondrium, and that of the right hypochondrium, during a period of three months, demonstrated (1) a constant parallelism between the elevation of the axillary temperature and the elevation of that of the right hypochondrium; (2) in the periods in which the attacks of biliary colic were absent the tendency to a uniform temperature in the two hypochondriac regions, sometimes without appreciable difference, sometimes with a variation of a quarter or a half degree C.; (3) during the paroxysms the temperature of the right hypochondrium was higher than that of the left to the extent of 1° C. to 1.3° C. It sometimes attained, and on one occasion even exceeded, that of the axilla. In a second case, where the focus of pain was in the epigastrium, the temperature at this point, which had been 36.1° C., rose to 37.8° C. and 37.9° C., while the axillary temperature varied between 36.6° C. and 37.5° C. In a third case, characterized by violent and frequent almost quotidian paroxysms, the temperature of the right hypochondrium almost always exceeded that of the axilla of the same side. This element of symptomatology, heretofore overlooked, M. Cyr has, on several occasions, studied, with the result of fully confirming the observations of Professor Peter. He has, further, found the difficulties attending the application of the surface thermometer, under the circumstances, less serious than he was at first led to expect that they would prove. Pain constitutes the essential element of the paroxysm of biliary colic. Other phenomena accompanying it are accessory, and may all be absent in particular cases, for their presence is dependent upon circumstances not at all necessary to the paroxysm. To this general statement, however, it appears that an exception may now be made in favor of the local elevation of temperature. This, in the absence of any cause beyond the paroxysm adequate to explain it, constitutes an important element of diagnosis, especially when we consider that in gastralgia and intercostal neuralgia — maladies in many respects closely resembling the attack of hepatic colic — local elevation of temperature does not occur.

STRICTURES.

We find in a small volume entitled Medical Rhymes, recently compiled by Dr. Hugo Erichsen from various sources, the following stanzas, published originally in the *Western Lancet* in 1857. As they are probably unfamiliar to our readers we reproduce them. They purport to have been "left on a doctor's table by a patient who was about to start for Niagara Falls, where the water runs down hill with nothing on earth to hinder it."

"When sorrow's cloud is cast athwart
The sunshine of my mind,
When I with gloomy care distraught
No recreation find:
When sighing o'er my hapless lot
And what I used to be,
I 'll seek some quiet, tranquil spot,
And pass a small bougie.

"Let strictures on my conduct pass,
Unnoticed let them be;
A stricture somewhere else, alas!
Is more deplored by me.
In hope this blight on manhood's bloom
I yet effaced may see,
I 'll hie me to my quiet room,
And pass a small bougie."

AN UNUSUALLY PROTRACTED CASE OF DIPHTHERIA.

The *Archives of Pediatrics* (October 15th) quotes from the *Revue Mensuelle des Maladies de l'Enfance* (July, 1884), a remarkable case, by Wins, in which diphtheria lasted seventy days.

"The author refers to the fact that Cadet de Gassicourt, Empis, Barthez, and Isambert have already recorded cases of diphtheria which lasted much longer than its usual duration, and adds in his paper a similar case which occurred under his observation. The case occurred in a child six years of age. A general eruption was present for nine days, at the end of which period there was pain in the throat, with elevation of the body temperature. Two days later a false membrane appeared upon the left tonsil, then the right one, and the pillars of the pharynx became involved, and the cervical glands enlarged. After twelve days the false membrane disappeared, but an abscess formed in the right cervical region. This was opened and soon healed. The urine contained a small quantity of albumen, but this disappeared with the disappearance of the false membrane from the pharynx. During the course of the angina a diphtheritic patch two centimetres in diameter appeared upon the left side of the lower lip. Three days later two new patches appeared upon the right side of the lip. These remained for a short time and were then replaced by others, the process continuing until the seventieth day from the beginning of the disease, when they disappeared entirely, without recurrence. These membranes upon the lip were thin, grayish in color, developed upon a red base without consequent ulceration, and were not attended with pain or with difficulty of mastication. After the general disease had disappeared, these secondary phenomena appeared to be entirely local, being unattended by elevation of temperature, or by albuminous urine. The child did not recover his accustomed health and spirits, however, until the final disappearance of the patches upon the lip. The author agrees with Cadet de Gassicourt in his opinion that the danger in these protracted cases of diphtheria depends exclusively upon the location of the diphtheritic phenomena."

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[1] Philadelphia Medical Times, May 31, 1884.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 25, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	658	278	26.70	15.90	9.15	2.10	9.00
Philadelphia	927,995	308	119	16.96	14.72	1.92	3.20	9.60
Brooklyn	644,526	258	97	24.96	14.04	7.41	2.34	8.58
Chicago	632,100	187	92	29.15	9.01	7.42	2.65	12.19
Boston	423,800	197	76	29.07	15.30	8.16	4.59	12.24
Baltimore	408,520	159	58	18.90	14.25	5.04	1.89	9.45
St. Louis	400,000	152	59	31.68	9.90	16.56	5.28	7.92
Cincinnati	272,400	106	42	25.38	11.28	12.22	5.64	5.64
New Orleans	234,000	118	29	19.55	11.05	13.70	.85	5.20
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	96	34	24.96	11.44	4.16	9.36	1.04
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	53	17	30.08	18.86	11.28	7.52	1.88
New Haven	62,882	23	12	30.35	17.40	4.35	4.35	17.40
Nashville	54,400	16	3	56.25	12.50	25.00	6.25	18.75
Charleston	52,286	41	12	9.76	7.22	4 88	2.44	—
Lowell	71,447	16	5	12.50	12.50	—	6.25	—
Worcester	69,442	22	10	31.85	4.55	9.11	9.11	13.65
Fall River	62,674	30	18	43.33	3.33	20.00	13.33	6.66
Cambridge	60,995	17	5	5.88	23.55	—	—	—
Lawrence	45,516	17	8	88.20	5.88	—	—	70.56
Lynn	44,895	15	6	20.00	6.66	6.66	13.33	—
Springfield	38,090	11	4	27.27	9.09	18.18	—	9.09
Somerville	31,350	12	7	16.66	8.33	—	—	8.33
Holyoke	30,515	3	3	66.66	—	—	—	66.66
New Bedford	30,144	18	5	27.77	16.66	16.66	5.55	5.55
Salem	29,503	9	4	22.22	—	—	11.11	—
Chelsea	24,347	—	—	—	—	—	—	—
Taunton	22,693	7	0	14.84	28.56	—	—	42.84
Gloucester	21,400	6	1	16.66	16.66	—	—	—
Haverhill	20,905	10	2	10.00	10.00	—	10.00	—
Newton	19,421	5	0	—	20.00	—	—	—
Brockton	18,323	7	2	—	14.28	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	5	1	20.00	40 00	—	20.00	—
Fitchburg	13,433	—	—	—	—	—	—	—
Eighty-nine Massachusetts towns.	337,046	58	10	8.50	22.36	1.72	5.16	1.72

Deaths reported 2550 (no reports from Buffalo, Pittsburg, and Milwaukee): under five years of age, 1019; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 664, consumption 367, diphtheria and croup 223, diarrhœal diseases 201, lung diseases 197, typhoid fever 93, malarial fevers 60, scarlet fever 39, whooping-cough 24, cerebro-spinal meningitis nine, measles eight, erysipelas three, puerperal fever three, typhus fever one. From *malarial fevers*, New York 14, New Orleans 13, Brooklyn eight, St. Louis seven, District of Columbia nine, Philadelphia and Baltimore two each, Chicago, New Haven, Nashville, and Charleston one each. From *whooping-cough*, New York 12, Brooklyn six, Boston three, Baltimore, District of Columbia, and Somerville one each. From *cerebro-spinal meningitis*, New York six, Philadelphia, Charleston, and Fall River one each. From *measles*, New York four, Cincinnati two, Brooklyn and Gloucester one each. From *puerperal fever*, Chicago, Boston, and St. Louis one each. From *erysipelas*, Brooklyn, Chicago, and Boston one each. From *typhus fever*, Chicago one.

Cases reported in Boston: scarlatina 45, typhoid fever 44, diphtheria 24, and measles eight.

In 105 cities and towns of Massachusetts, with an estimated population of 1,332,401 (estimated population of the State 1,955,104), the total death-rate for the week was 17.70 against 17.62 and 17.84 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending October 18th, the death-rate was 21.1. Deaths reported 3545: infants under one year of age 946; acute diseases of the respiratory organs (London) 286, diarrhœal diseases 167, scarlet fever 74, fever 68, whooping-cough 56, measles 39, diphtheria 33, small-pox (London 10, Sunderland two, Birkenhead and Liverpool one each) 14. The death-rates ranged from 13.6 in Halifax to 30.2 in Bolton; Birmingham 17.0; Bradford 20.7; Leeds 23.9; Leicester 21.6; Liverpool 28.2; London 19.7; Manchester 23.6; Nottingham 23.9; Sheffield 24.3; Sunderland 23.3. In Edinburgh 18.2; Glasgow 23.1; Dublin 30.2.

For the week ending October 11th, in the Swiss cities, there were 20 deaths from consumption; diarrhœal diseases 14, lung diseases five, diphtheria and croup two, erysipelas two, puerperal fever two, small-pox one, scarlet fever one, typhoid fever one. The death-rates were, at Geneva 5.1; Zurich 3.9; Basle 15.5; Berne 15.5.

The meteorological record for the week ending October 25th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Oct., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 19	30.356	44	50	32	62	32	71	55	NW	SW	SW	8	11	16	F	F	O	—	—
Mon., 20	30.232	64	77	48	62	35	62	53	SW	SW	SW	15	17	13	C	C	C	—	—
Tues., 21	30.254	53	65	49	74	88	94	85	W	NE	W	7	12	4	C	C	F	—	—
Wed., 22	29.894	65	75	48	87	45	92	75	SW	SW	S	12	24	13	C	C	R	—	—
Thurs., 23	29.819	49	62	41	80	31	71	61	W	NW	W	13	14	17	O	F	C	—	—
Fri., 24	30.203	41	48	36	66	39	58	54	W	W	NE	14	10	4	C	C	C	—	—
Sat., 25	30.187	42	49	37	55	53	53	53	SW	W	NW	7	11	12	O	O	C	—	—
Mean, the Week.	30.135	51.0	60.7	48.3				62.3										9.05	0.63

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY FROM OCTOBER 25, 1884, TO OCTOBER 31, 1884.

Alden, Charles H., major and surgeon. Relieved from duty at Fort Yates, D. T., and ordered for duty at Fort Snelling, Minn. S. O. 125, Department of Dakota, October 20, 1884.

Alden, C. H., major and surgeon. In addition to his duties at Fort Snelling, Minn., to perform the duty of attending surgeon at department headquarters. S. O. 127, headquarters Department of Dakota, October 23, 1884.

Wilson, W. J., captain and assistant surgeon. Assigned to temporary duty at Fort Trumbull, Conn. S. O. 220, Department of the East, October 27, 1884.

Corbusier, W. H., captain and assistant surgeon. Assigned to duty at Fort Bowie, A. T., S. O. 99, Department of Arizona, October 22, 1884.

LaGarde, L. A., captain and assistant surgeon. Assigned to duty at Fort Ellis, M. T., relieving First Lieutenant G. E. Bushnell, assistant surgeon U. S. A., who, upon being relieved, will report for duty at Fort Snelling, Minn. S. O. 126, Department of Dakota, October 22, 1884.

Everts, Edward, first lieutenant and assistant surgeon. Leave of absence extended one month. S. O. 107, headquarters Division of the Pacific, October 21, 1884.

McCaw, Walter D., first lieutenant and assistant surgeon. Ordered from Fort Craig, N. M., to Fort Wingate, N. M., for duty. S. O. 92, headquarters District of New Mexico, October 21, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY DURING THE WEEK ENDING NOVEMBER 1, 1884.

Beardsley, Grove S., surgeon. To Washington, D. C., for examination preliminary to promotion and as to qualifications for sea duty. October 31, 1884.

Craig, Thomas C., passed assistant surgeon. To the Alliance for temporary duty. October 31, 1884.

Gardner, James E., passed assistant surgeon. To the Naval Hospital, Norfolk, Va. October 28, 1884.

Hall, John H., passed assistant surgeon. From the Naval Hospital, New York, to the Navy Yard, Mare Island, Cal. October 24, 1884.

Hord, William T., medical director. To continue duty as member of the Retiring Board until January 1, 1885. October 27, 1884.

Lovering, P. A., passed assistant surgeon. To the Naval Dispensary, Washington, D. C., for temporary duty. October 25, 1884.

Turner, Thomas J., medical director. To continue duty as member of the Retiring Board until January 1, 1885. October 27, 1884.

Steele, John M., passed assistant surgeon. To the Naval Hospital, New York. October 24, 1884.

Massachusetts Medical Benevolent Society. — By invitation of the Faculty the annual meeting of the Society will be held at the Harvard Medical College, Boylston Street, on Thursday, November 6th, at 3.30 P. M. Members will have an opportunity to inspect the new building.

Henry W. Williams, *President.*

Gynæcological Society of Boston. — The next regular meeting will be held on the second Thursday of November, at the Medical Library Rooms, No. 19 Boylston Place, at four o'clock, P. M. A paper on Treatment of Uterine Flexions will be read by Dr. A. P. Clarke. Discussion will be opened by Dr. L. F. Warner.

H. J. Harriman, M. D., *Assistant Secretary.*

DEATHS.

Died, — At Dorchester (Boston), Mass., October 31, 1884, Edward Jarvis, M. D., M. M. S. S., aged eighty-one years.

At Marlborough, Mass., October 31, 1884, Nathan Savery Chamberlain, M. D., M. M. S. S., aged thirty-nine years.

Books and Pamphlets Received. — The Science and Art of Surgery. A Treatise on Surgical Injuries, Diseases, and Operations. By John Eric Erichsen, F. R. S., LL. D., F. R. C. S., Eighth Edition. Revised and Edited by Marcus Beck, M. S. and M. B. London, F. R. C. S. With 984 Engravings on Wood. Vol. I. Philadelphia: Henry C. Lea's Son & Co. 1884.

A Practical Treatise on Fractures and Dislocations. By Frank Hastings Hamilton, A. B., A. M., M. D., LL. D. Seventh American Edition Revised and Improved. Illustrated with 379 Wood-Cuts. Philadelphia: Henry C. Lea's Son & Co. 1884.

The Brain and the Nerves: Their Ailments and their Exhaustion. By Thomas Stretch Dowse, M. D., F. R. C. P. E., etc. New York: G. P. Putnam's Sons. 1884.

Transactions of the Louisiana State Medical Society at its Sixth Annual Session, held at Baton Rouge, La., May 21–23, 1884.

The Lockjaw of Infants (Trismus Nascentium), or Nine-Day Fits, Crying Spasms, etc. Its History, Cause, Prevention, and Cure. By J. F. Hartigan, M. D., Washington, D. C., Member of the American Medical Association, etc. New York: Bermingham & Co.

Cases of Interest. By Prof. Wm. H. Carmalt, M. D., of New Haven. (From Proceedings of Connecticut State Medical Society, 1884.) Hartford, Conn.

On Branchial Cysts of the Neck. By N. Senn, M. D., Milwaukee, Wis. Read in the Section on Surgery and Anatomy of the American Medical Association. (Reprint.) 1884.

Diphtheria Spread by Adults. By A. Jacobi, M. D. (Reprint from New York Medical Journal.) 1884.

Address in Ophthalmology. Delivered before the Medical Society of the State of Pennsylvania by W. S. Little, A. M., M. D., of Philadelphia, at its Annual Meeting, held at Philadelphia, May, 1884. (Reprint from its Transactions.)

Annual Report of the Secretary of the Navy for the Year 1883. In Two Volumes. Vol. II. Washington, D. C. 1883.

Lectures.

ÆTIOLOGY AND PROPAGATION OF CHOLERA.

LECTURE DELIVERED BEFORE THE SOCIETY OF ARTS, OCTOBER 23, 1884.

BY GEORGE B. SHATTUCK, M. D.,
Visiting Physician Boston City Hospital.

Gentlemen, — The subject to which your attention is asked this evening is the origin or cause and the mode of propagation or progression of cholera. Under the first head I shall touch upon the history of the disease, and under the second upon the measures adopted for its control, hitherto known under the generic name of quarantine. I shall try to condense what I have to say intelligibly within the limits of your patience, and at the same time take a broad, philosophical view of this great epidemic disease, avoiding as far as possible the details peculiar to local outbreaks.

Great epidemic diseases like the plague, like yellow fever, like cholera, have their rise, their culmination, their decline, just as great races, great social movements, or great religions have; and there is being gradually evolved a philosophical epidemiology, as there is a philosophy of ethnology, of sociology, of history. An individual outbreak of an epidemic bears the same relations to this as does a great battle to the fortunes of a race or form of civilization. Its signification lies in the causes which led up to it, and in the lessons it leaves, not in the number of killed and wounded or the names of the victors and vanquished.

In epidemiology, as in other departments, there are some matters of fact upon which authorities are agreed, some upon which they differ, and some matters of opinion and observation which are being now actively prosecuted, and I shall try to keep them separate.

Cholera has its myths and mythology, which need not detain us. It is thought by some to be one of the most ancient diseases of which distinct descriptions exist, and in support of this passages are cited from Hippocrates, from writers in Sanskrit, from Celsus, Aretæus, Galen, and plenty of other ancients; but the same thing is said with the same uncertainty of interpretation in regard to syphilis and other comparatively modern maladies. There is but little doubt, however, that cholera, as it presents itself to-day, has prevailed in India, in the province of Bengal, in the delta formed by the mouths of the Ganges and Brahmapootra Rivers for an indefinite period — perhaps as long as the human race itself. There, as is now generally agreed, is its home, there it is indigenous, there it is endemic, as the plague still is in Asia Minor or yellow fever in Havana, and from thence it starts out periodically to invade the civilized countries of the Western Hemisphere as did the plague from its home in the Middle Ages.

The reliable history of cholera, with which alone we will concern ourselves, dates back scarcely farther than the middle of the last century, when the English began to occupy India, and it is only since the beginning of this century that any really accurate records of its movements are to be found.

The first world-famous epidemic extending beyond the limits of Bengal was that of 1817. This was a year for one of the great twelfth yearly festivals or pilgrimages which are held every year in all parts of India, but increase in sanctity every third, sixth, and ninth year, and still more every twelfth and sixtieth year. It was also a year of marked climatological peculiarities. This epidemic traveled slowly, in conformity with the means of communication in India at that time, but in the course of six years it covered nearly the whole of Asia and a large part of India, moving especially toward the northwest, and reaching the borders of Persia and Arabia in 1822–1823. From this time there was a period of comparative quiescence for two or three years, but in 1825–1826 it was again on the march, and in August, 1829, the first fatal case of cholera occurred in Europe at Orenboorg, a town in the Russian Ural, on the borders of Tartary, and on the line of the caravans trading with China, Persia, and the East. The disease had now reached virgin soil and comparatively rapid modes of transit, and soon availed itself of its privileges.

In September of 1830 Moscow was attacked, and St. Petersburg in June of 1831, by which time it had already spread through Poland, and presented itself at Prussian towns on the Baltic. England was reached from Hamburg in October of this year, London being attacked in January, Edinburgh in February, and Dublin in March of 1832, in which month — crossing from England to France — it showed itself at Calais and at Paris, pursuing this same course in the epidemics of 1849 and 1853. It crossed the Atlantic with emigrants, and presented itself in the St. Lawrence River at the end of April, though not heard of as spreading in Montreal and Quebec until early in June. New York is suspected of having received the disease about the same time, but if so it was unacknowledged, and quarantine records for the months of April, May, and June of that year are, strange to say, not to be found.

This epidemic was especially severe in Canada, from whence it crept down the valley of Lake Champlain and the Hudson River, and attacked towns on our northern frontier by July, among the earliest Detroit. Some of the earliest cases of the disease in this first invasion of our country are said to have followed the stranding of a brig on the coast of South Carolina. Eventually all the cities of the Atlantic sea-board were invaded, but Boston and Massachusetts practically escaped.

New Orleans was reached in November, and Mexico invaded in the summer of 1833. In the mean time having remained quiescent in Europe it again broke out in epidemic form in June, 1833, this time in Portugal, and prevailed in one country or another until toward the end of 1837. Having prevailed in India and Persia during the interval, it again broke out in Europe in 1847, the first case occurring at Constantinople. During 1848 cholera traveled nearly all over Europe, entering England as before from Hamburg, and reaching Paris in March of 1849. It reached the United States this time almost simultaneously at New York and New Orleans early in December, 1848, the disease at each place being introduced by German emigrants, sailing themselves in good health from an unaffected port — Havre — but bringing infected clothing, which, on account of changes in the weather, was unpacked on the voyage. The first cases occurred when the vessels had been sixteen and twenty-seven days at sea respectively. Quarantine and cold weather checked the cholera at Staten Island, but it spread from New Orleans up the Mississippi Valley, and New York was invaded later. The fatal cases, 611 in number, during this epidemic in Boston were proved to be remarkably confined to the crowded dirty parts of the city. The cholera hospital was at Fort Hill.

Toward the end of 1852 cholera again invaded Europe from the East, pursuing a very similar course to its previous one. It was during this outbreak in London in 1854 that Dr. Snow performed his now famous experiment of removing a pump handle, thereby depriving the inhabitants of Broad Street and its neighborhood at once of contaminated drinking water and of further disease. In 1853 and 1854 the United States and the West Indies were visited. The next general epidemic in Europe and this country was in 1865–1866, during the Austro-Prussian war. In this year cholera was particularly severe in London at the East End, a portion of the city supplied by a water company whose reservoir was little better than a sewage receptacle.

In the autumn of 1865 cholera arrived in New York but did not spread, and in the spring of 1866 it was brought both to Halifax and New York. During this epidemic St. Louis was an especial sufferer, having 3500 deaths in a population of 200,000. Boston again escaped with a very light visitation. In the last epidemic of 1873–1874 cholera visited this country before it appeared in Paris. It was first brought to New Orleans by an infected Bremen barque; many cases, however, were early imported directly through New York on non-infected vessels, the disease being subsequently developed at various points from the infected personal effects of emigrants when unpacked at their final destination.

The outbreak in Egypt last year was preliminary to that in France this year, and its details are sufficiently recent to be remembered by you.

The exact origin of the present outbreak is, but ought not to be, a mystery. The medical commissioners sent by the government from Paris to investigate it declare themselves unable to discover the origin of the first case reported to have occurred, June 14th, on board the Montebello of the French navy, a vessel which had been lying in port fifteen months. They exculpate the Sarthe, a transport from Cochin China, which had been peculiarly incriminated. It is most probable, whether unacknowledged or really not known, that this or some other transport returning from the East brought the poison in clothing, if not otherwise. The port of Toulon is one of the dirtiest places in Europe, famous for typhoid fever. The weather was hot, the nature of the malady was not distinctly acknowledged for at least ten days, and the epidemic was started, Marseilles, another very dirty city, being presently attacked.

The subsequent occurrences in Spain and Italy, the most quarantined countries in Europe, are still fresh in the minds of all of you, and I need not recapitulate them. In the three countries at least sixteen thousand victims have fallen this summer since June, of whom nearly two thirds were Italians and about six thousand five hundred Neapolitans.

All past experience leads to the belief that the present epidemic will sooner or later visit a much wider extent of the commercial world. Such countries as Germany, England, and our own, it may be said, were never so little favorable to its reception, but there is still in all of them food enough for the poison to feed upon, and on the other hand the more rapid the methods of travel and interchange of commodities the quicker the progress of such pests. A low temperature, though inimical to is by no means preventive of cholera, as shown at Orenboorg and Moscow, where, other conditions being favorable, it progressed under temperatures of —22° F. and —4° F. respectively. We may be invaded from Canada as in 1832, from New Orleans or some other Southern port as in 1848 and 1873, from New York as in 1866 and 1873. The federal authorities of the State and Treasury Departments, the State Boards of Health and city boards — at least at ports on the Northern Atlantic sea-coast — are awake to the possibilities of the situation. Public authorities, however, must be seconded by individual effort.

From this brief review of the history of cholera since the existence of accurate records, and of its course in the Western Hemisphere since its first appearance in Europe in 1829–1830, one learns two facts upon which epidemiologists are pretty well agreed: (1.) That cholera is constantly present in some part of India, where it has its periods of recrudescence, which precede the European outbreaks. (2.) That Europe is, as a rule, invaded along the lines of travel; the first epidemic followed the course of the caravans to Orenboorg in Central Russia, the last the line of the steamers up the Red Sea to Alexandria and the Mediterranean ports in Southern France.

Being agreed upon these points, the question naturally presenting itself is, Why India and the province of Bengal in India should be the home and breeding ground of cholera. And the answer is to be found in the very character of the Ganges Delta, in its climate, soil, water-courses, and consequent habits of immense neighboring populations. This is as fair an explanation as one gives for the existence of the Negro in Africa, the Mongolian in Asia, the Caucasian in Europe. In neither case need we be required to account for the appearance of the primordial representative.

The characteristics of the Ganges Delta have been often described, but I will give them to you in the words of the now famous Dr. Koch,[1] who has been a recent visitor and went to study cholera: —

"On the map of the province of Bengal you will see the Delta of the Ganges, which is bordered on the west by the river Hooghly, an arm of the Ganges, and on the east by the Brahmapootra.

"The cholera prevails continuously in the whole of this region, and on the banks of the Ganges as far up as Benares. The upper part of the Delta is not thickly set with villages, whilst the base of the triangle seems entirely uninhabited. This uninhabited district, called Sunderbunds, comprises an area of 7500 English square miles, and is separated from the thickly populated northern portion of the Delta by an extremely sharp line. Here the large rivers, Ganges and Brahmapootra, break up into a net-work of streams, in which, at the tides, the sea-water, mixing with the river water, flows backwards and forwards, completely flooding wide tracts of the Sunderbunds at high tide.

"A luxuriant vegetation and an abundant variety of animal life have developed in this uninhabited district, a district which is not only unapproachable for man owing to the inundations and numerous tigers to be found here, but is chiefly avoided owing to the pernicious fevers which attack anybody who stops there for only a very short time. One can easily imagine what quantities of vegetable and animal matter are exposed to putrefaction in the boggy district of the Sunderbunds, and that an opportunity, scarcely to be found in any other place in the world, is offered here for the development of micro-organisms. In this respect the boundary between the inhabited and uninhabited part of the Delta is especially favorable, where the refuse from an exceptionally thickly populated country is floated down by the small streams, and mixes with the brackish water of the Sunderbunds that flows backwards and forwards, and is already saturated with putrefied matter. Under peculiar circumstances a thoroughly special fauna and flora of micro-organisms must develop here, to which in all probability the comma bacillus belongs. For everything points to the supposition that cholera derives its origin from this frontier territory. All the greater epidemics commence with an increase of cholera in the south of Bengal. Jessore, from which place the first news about the epidemic of 1817 came, lies on the borders of the Sunderbunds, and Calcutta, which is now the constant habitat of cholera, is connected with the neighboring Sunderbunds by a boggy and scantily inhabited tract of land.

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[1] Extract from an Address before the Imperial Board of Health, Berlin. Translation in Brit. Med. Journal, September 6, 1884.

" But further, the comma bacillus finds, in the districts adjoining the supposed habitat, the most favorable conditions that can be imagined for obtaining a footing and transferring itself from one man to another. For lower Bengal is a perfectly flat country, only very slightly raised above the level of the sea, and during the tropical rains almost the whole extent of it is under water. Hence everybody who settles there must, in order to protect himself from these annual inundations, build his hut on raised ground. This kind of building is seen in all the villages of the Delta, even in Calcutta itself, especially in the immediate neighborhood and in the suburbs of Calcutta, which more or less bear the character of villages. Every house or group of houses stands on a flat, rising ground, which has been made by taking the earth from a spot near where the hut is built in order to raise the ground on which the house stands. The excavation thus made becomes filled with water and forms a so-called tank.

" Every hut or group of huts must, therefore, have a tank, more or less large, and the number of these tanks is accordingly very great. The town of Calcutta alone had, till a short time ago, about eight hundred tanks, although a large number of them had been filled up for sanitary reasons. In the suburbs of Calcutta there are, besides, more than a thousand tanks still existing. I have already mentioned the part that the tanks play in the household of the Indian population, and how adapted they are for spreading the cholera. . . .

" In the interior of the town of Calcutta, amongst massive houses and villas looking like palaces, groups of huts, crowded together and resembling villages, are to be found, exclusively inhabited by natives. These villages in the interior of the town are called bustees. The huts of a bustee possess no drains, sewerage, or anything of this kind. All the dirt is collected between the houses, and, owing to the narrow mode of building, can only be removed in a very incomplete manner; and, finally, reaches the tanks directly, or is brought thither by the rain; so that the tanks become the natural places of collection for all liquid filth. . . .

" In India, also, the spread of cholera depends upon the intercourse of human beings, and is chiefly caused by the pilgrimages, which have developed in quite an unusual manner in India. We can scarcely form an idea how widely diffused these pilgrimages are in India. In order to give you an example I will only cite the two chief places of pilgrimage, Hurdwar and Puri. These are places to which hundreds of thousands of people, sometimes more than a million, flock annually from all parts of India. The pilgrims remain there for several weeks; they are penned together in a confined space, and live in a most miserable manner. Tanks are to be found everywhere in these places also, in which thousands of people bathe; they also drink the water from these tanks. It is by no means astonishing if, under these conditions, the disease, when it does break out amongst the flocks of pilgrims, is speedily scattered over the whole of India and reaches every place."

As far as anything is known of the subject cholera epidemics have never broken out " spontaneously," as it were, outside of India, and they depend upon the intercourse of human beings for their propagation. Moreover, outside of India and Cochin China their tendency is always to die out after a comparatively short space of time. These points are to-day fixed and settled, and constitute a great gain in knowledge over a very recent time when the partisans of many hypotheses, or notions rather, as to the cause and progress of cholera were in constant collision with each other and with facts. According to one of the earlier suppostions " the disease advanced as a great morbific wave rolling slowly and steadily westward, enveloping place after place, and country after country, with a certain steady progress at nearly regular intervals; next it was supposed, as it often seemed to come with ships, and the commerce of the world was then carried on by sailing vessels, that it was blown about by the same winds which brought the ships; but as land-travelers brought the pestilence in spite of and in the teeth of winds it was found necessary to suppose that ships brought it in their holds and well travelers in their soiled clothes, especially in those which had been boxed up." [1]

The present position of the best authorities, which meets facts as observed, and may be accepted as correct, may be briefly stated thus: That cholera is conveyed by individuals, and its poison is contained in and is propagated by the discharges from the bowels of those infected, which finding access to drinking water, or resting upon food or upon the hands, gain entrance to the digestive tract of others. It is not certain that in a heavily charged atmosphere the poison may not be swallowed with the air, but the infection must always take place through the alimentary canal, and in this very limited sense alone can cholera be spoken of as " contagious," thus probably resembling typhoid fever. In other words, an individual who could avoid swallowing the poison might safely associate with cholera patients, and the digestive functions being quite healthy he would probably escape even if swallowing a moderate dose.

I purposely abstain from going into the minute pathology of cholera, from calling the poison a germ, much less a microbe, and still less a bacillus or spirillum. This whole department of minute pathology is, it seems to me, too technical and still too unsettled for our purposes this evening. Its introduction would, moreover, make a long story much longer.

We will now turn to the second part of the subject of the evening, the progress and propagation of cholera, which leads us to the measures to be adopted for its prevention — so long and unfortunately known as quarantine. A review of the history of cholera and a statement of its ætiology and mode of propagation suggest immediately its mode of progress and the means of prevention. The flux of the bowel contains the poison, moist filth nourishes and breeds it, the deranged alimentary canal invites and entertains it anew.

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[1] Congressional Report, 1874.

Hence to prevent the entrance of the disease to a place or country we require cleanliness of person and purlieus, a plentiful and pure water supply, perfect drainage, and wholesome living. To oppose its spread, once being in, we demand occasional isolation of the sick, and constant destruction or disinfection of contaminated discharges and effects.

Just in proportion as communities are conscious of shortcomings in sanitation, in water supplies, in drainage, and are too poor or too lazy to reform such, they may and will call for a quarantine whose rigidity shall be in direct ratio to these deficiencies. They may thus deceive but will not protect themselves. The worthlessness of a perfunctory quarantine of a fixed number of days — whether of five or of forty — for every vessel if on the sea-board, or for every individual if in the interior, has been proved over and over again, and never more forcibly than in the late invasions of Italy and Spain. If declared only against infected ports or localities it is insufficient, if against every outside place it is impossible. The enormous and intimate commerce of the day abhors such obstructions, and ingenious human nature evades them. A French sanitarian well expressed this in his reply when asked why the inhabitants of Toulon were permitted to infect the outside country: "If we had built a wall around the city the people would have burrowed under it." A *cordon sanitaire* is always foolish and often wicked. There are also especial difficulties in excluding and controlling such a disease at a town like Toulon, with its population. What might be comparatively simple in Boston, or even in New York, would be impossible there. The French Minister of the Interior gave expression to these perplexities in saying, that it would be easier to revise the Constitution than to renovate Toulon.

The period of incubation of cholera is believed to be over twelve hours and under five days. On an average two to three days. The life of the poison outside the bowel, even when favored by moisture, is believed to be rather short — probably under thirty days. Based on these observations the best aid to sanitary supervision at home for the exclusion of cholera is notification from foreign ports or places by competent authorities of the departure of infected vessels or individuals, and inspection upon arrival by trained sanitary officers with a certain latitude of action. More reliance being placed upon the judgment of the individual official than upon the rigid phraseology of a State or national proclamation.

A conference of State Boards of Health met at St. Louis last week and adopted a series of recommendations for "practical work required for the prevention of cholera in this country," to be urged upon the government at Washington, upon State authorities, and upon individual citizens, a copy of which I hold in my hand.

The representatives of interior countries and of those on the sea-board necessarily take somewhat different views of the value of quarantine and of the relative reliance to be placed upon external and internal quarantine. There appears in the recommendations adopted a desire to harmonize conflicting views, and to secure the coöperation of all concerned.

There will always be the inclination to place the responsibility for the introduction of a disastrous epidemic at some remote point, and upon some one else's shortcomings. In our own country States situated in the Mississippi Valley feel that New Orleans should protect them from and not furnish them with yellow fever. Illinois is, naturally, aggrieved if New York and Boston send unvaccinated immigrants, with smallpox contagion among them, by through trains into her borders. In some degree in these matters there is cause for complaint, in some degree fear and feeling and an unwillingness to put things to rights at home have at times usurped the place of reason and judgment.

If I have been in any way obscure or unsatisfactory in what I have said let me hope that you will in some degree at least attribute it to the want of proportion between the subject and the time of the Society which I felt at liberty to allow myself.

And in conclusion let me again remind you that a good water supply, good drainage, wholesome living, a tranquil spirit, these are the true safeguards against cholera preëminently, as against sundry other epidemic disorders in a lesser degree. These are the agents dreaded by epidemic poisons even if really residing in microbes with pathological tendencies, and whether presenting themselves in the bacillar or the spirillar forms, or as hybrids with comma-like extremities.

Original Articles.

THE PREPARATION OF LIEBIG'S FOOD.[1]

BY E. T. WILLIAMS, M. D.

THE earliest announcement of Liebig's method of preparing infants' food was received with the warmest enthusiasm by the profession and the public. The idea of using malt as an artificial digestive for starch was certainly a brilliant one, and seemed to promise an infallible cure for every form of starchy dyspepsia both in children and adults. It must be confessed, however, that time and experience have not fully borne out these expectations. The results obtained from its use were found to vary. Many gave it up in disappointment. Others altered and tried to improve it. In fact it has never been generally adopted. Notwithstanding all this its benefits in many cases are decided, so that we shall find, I think, that the trouble lies not in the thing itself, or the principle on which it rests, but in a faulty method of preparing it.

The commonest objection to Liebig's original formula is that it is too complicated. I consider this objection entirely frivolous. It is no more complicated than making bread or pastry, or any other of the common operations of cookery. I give here in substance Liebig's own directions, though I shall take the liberty of simplifying a little both the language and the process:

Mix half an ounce of wheat flour with five ounces of milk in a saucepan, taking care not to lump it. Heat it to boiling, stirring carefully; let it boil from three to four minutes, and remove from the fire. Now mix half an ounce of malt flour, one ounce of water, and seven and a quarter grains of bicarbonate of potash, and add it to the milk porridge, stirring steadily. This has the effect of thinning it out and making it sweet. Now cover up the vessel and let it stand half an hour where it will keep warm but not boil. Finally set it back on the fire, let it boil up once, and strain it through a fine hair sieve to remove the bran.

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[1] Read before the Norfolk District Medical Society, October 28, 1884.

The temperature at which the mixture should be kept after the addition of the malt should be about 150° F. Be sure that the porridge has entirely ceased boiling before the malt is added. The food when done should be quite thin and sweet.

It will be seen that there is nothing difficult about this process. No one can say so who has tried it, however hard it may look on paper. Every physician ought to be able to teach the mother, nurse, or cook how to make it.

It may be remembered, as Liebig remarks, to save the trouble of weighing, that a heaping tablespoonful of wheat flour weighs just about half an ounce. One half of a heaping tablespoonful of malt flour weighs the same. The liquids may be measured in a tablespoon or wine-glass. The former contains one half ounce, the latter two ounces of liquid. The potash should be put up in powders by the apothecary. Most cooks could "pinch" it up pretty accurately with the thumb and finger.

On the subject of malt, Liebig's directions are as follows: —

"Barley malt can be readily bought of any brewer. . . . A common coffee-mill answers for the preparation of the malt flour. It must be separated from the bran by passing it through a coarse hair sieve."

Such is the original formula, simplified a little, from Liebig. In many cases it answers every purpose perfectly well. There is, however, one serious objection to it. The food sometimes loosens the bowels. Such is my own experience; such is the general testimony of those who have used it. The trouble seems to be this: the coffee-mill grinds up too much bran, which gives a laxative quality to the food. I do not know what sort of a mill Liebig used, or what kind is most common in Germany, but the American mill (and I have tried this experiment many times) grinds husk and grain together, so that it is impossible to purify it effectually by sifting, thus rendering the food quite unfit for dyspeptic children, or those subject to a loose or washy state of the bowels. Whoever will try the experiment of grinding malt in this way and examine the flour (no matter how carefully sifted) under the microscope will find it quite full of angular pieces of husk, fully sufficient to explain its irritating action on the intestinal lining. I believe this to be the radical defect of the Liebig process, and the grand reason why the food has never come into more extended use.

It was long since discovered by practical men that the food was uncertain in its action, and apt to disagree. This led many to look for a better way of making it.

One of the best plans is to use a prepared malt extract in place of the malt flour. A liquid malt extract is now officinal in the United States, and is prepared by dissolving out the soluble part of the malt in water, and evaporating down to a syrupy consistence. This, of course, eliminates completely the insoluble husks. There are several brands of malt extract in the market, of which Trommer's is perhaps the best known. It makes excellent Liebig's food, and, as far as my experience goes, is entirely devoid of laxative properties. Keasby and Mattison's extract, and Reed and Carnrick's "Maltine" (in spite of its objectionable name), seem to answer equally well.

I have tried several forms of "dry" extract of malt, Horlick's, Thayer's, and Tilden's. The samples tested were purchased in the open market and were apparently fresh. I am sorry to say that their diastatic action was extremely slight. Not one of them could turn its own weight of starch into sugar. This is readily tested by boiling a little flour or starch with water in a test tube or saucepan till it thickens up, then removing from the fire till it stops boiling, then stirring in the malt or malt extract previously wetted. If diastase in proper amount is present the starch paste soon thins out and becomes quite fluid, from the change of the starch into gum (dextrine) and sugar. The same change takes place in making Liebig's food. It is then sweet to the taste, and continues to grow more so the longer it is heated, until all the dextrine is changed into glucose. When tested with iodine it shows an entire absence of starch. Under these tests the dry malt extracts which I examined showed themselves to be of little value. The action of the liquid extracts was good, though not so good as fresh malt. I attribute this superiority of the liquid extracts to the syrup, which, as I fancy, acts as a preservative to the diastase.

I ought here to mention that the experiments above quoted were made during the last season at the Sea-Shore Home with the assistance of the house physician, Mr. Charles W. Townsend, of the Harvard Medical School. We tried most of them separately and together, so that I feel able to state the results with confidence.

It is evident, therefore, that a liquid malt extract like that of the Pharmacopœia may be satisfactorily substituted for malt flour in the preparation of Liebig's food. Being free from insoluble matter it may be relied on not to scour or purge. The only objection is the high cost of the extracts now in the market. The Trommer extract sells for one dollar a pint; Keasby and Mattison's the same; the "Maltine" bottle is larger, containing about a pint and a half; the price is the same. Malt itself is worth from five to ten cents a pound.

The notion of a manufactured Liebig's food prepared to hand and ready for use was a natural conception, and has much in its favor. This does away with the trouble of cooking, and secures a perfectly uniform product. One of Liebig's sons, with the "help and approval" of his father, as he states,[1] is or was concerned in the manufacture of such an article under the name of an extract of Liebig's food. Similar preparations under less honest names have been sold in England and America. They are made or should be made by digesting malt and water in the form of a "mash," as brewers do, till the starch changes to glucose, and then evaporating to dryness in a vacuum. They are nothing more than Liebig's food ready made and evaporated down for convenience of keeping and dispensing. The popular Mellin's and Horlick's foods are supposed to be articles of this sort. They consist mainly of grape sugar with the nitrogenous and mineral elements of grain. The objections to their use are the misleading names under which they are sold, and their high price. A half-pound bottle of Mellin's food costs seventy-five cents. A one-pound can of Horlick's food sells for the same price. It is not easy to understand why these articles should cost much more than common sugar. Malt and other grains cost but a few cents a pound. The mashing process is the same as in making beer. The evaporation *in vacuo*, the only expensive part of the operation, is similarly employed in making sugar. Making all allowance for the outlay on machinery, the expenses of selling and advertising, and for loss by spoiling, it is clear that the profits on these foods must be enormously large. On the other hand, it is fair to say that they are good foods as far as nutritive purposes go, and suit children extremely well. It is to be hoped that greater competition and a more enlightened public opinion may bring the prices within reasonable limits. The same hope may be expressed with regard to the malt extracts. At present prices these preparations are entirely beyond the means of the poor people, who form the bulk of our patients.

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[1] Vide J. v. Liebig, Suppe fur Sänglinge, dritte Auflage, Seite 37. Braunschweig. Vieweg und Sohn. 1877.

This drives us back again to a closer consideration of the original formula. Its cheapness and ready availability make it by all means the most desirable method if we can only find a way to remedy its one serious defect, the presence of the indigestible husks.

I believe I have hit on a way to do this in an improved method of preparing the malt flour. Instead of grinding the malt in a coffee-mill I have adopted the plan of crushing or braying it with a mortar and pestle. This breaks up the kernel but does not, unless carried too far, grind and tear the husk. It is highly important to use the pestle lightly, not to put but a small quantity in the mortar at once, and not to pound or grind too long, as this breaks up the husk too much. The meal should then be "bolted" or sifted through a fine wire or hair sieve. This makes a fairly good imitation of the miller's way of grinding. The fine malt flour thus obtained should not exceed in bulk more than half the mass of separated husks and bran. Examined under the microscope the proportion of seed coats and hairs is found to be far less than in that made by the coffee-mill process. This fact was carefully verified by Mr. Townsend, who was good enough to make the examination for me, and who showed me the slides which he had prepared. I am sorry I have not yet had the opportunity of testing the flour as fully as I should like upon sick children, as the season was nearly closed when the idea first suggested itself to my mind. Another year I intend to give it a thorough trial.

It will be objected, of course, that this is a troublesome plan. Few housewives make it much of a task to pound up sugar and spices for the making of indigestible cake and pastry. Few mothers would think it a hardship to do as much for a beloved child provided they understood exactly how to do it. It should be the duty of the physician to go down into the kitchen and instruct the household in every detail of the operation.

A few minor considerations before I close the subject.

Liebig directs the food to be made of nearly clear milk. For children within the month it ought to be at least two thirds water; from one to three months, half and half; at four and five months, two thirds milk; at six months, the full strength.

Liebig alkalizes the food with bicarbonate of potash to prevent its curdling on the stomach. In cases of diarrhœa lime-water should be substituted in the proportion of a tablespoonful, or more if necessary, to six ounces of the food.

Liebig recommends the food as a nutritious drink for adults as well as children. Its suitability for invalids and convalescents, for nursing mothers, and starchy dyspeptics goes without saying. Liebig recommends it in coffee in the place of cream. I have found it very good in chocolate. With coffee especially, in the style of *café au lait*, I have found it a capital breakfast drink. I think that both coffee and chocolate *à la Liebig*, if they could be made fashionable, would make a most useful addition to our dietary.

I should say, in conclusion, that malt may be purchased of any grain dealer. As it spoils very quickly it should be bought only in the smallest quantities, and closely kept in a glass-stoppered bottle or tin canister. Only enough for a few days' use should be ground at a time.

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UNILATERAL ATROPHY.

BY H. L. BURRELL, M. D.

A DECIDED inequality in the two halves of the body is extremely rare; slight inequalities are the rule rather than the exception.

A decided inequality in the halves of the body is considered a deformity, and the cases which are presented in this paper are looked upon in the light of deformity, passing as they do the boundary line of normal asymmetry into the interesting field of pathology. On looking at these photographs it is at once recognized that we have before us a strange condition. A female child of nine years, each half of its body perfectly developed, but the left two or three years behind the right half in its stage of development. The face is not shown, at the mother's request, it being practically symmetrical; the whole left half of the trunk, however, is markedly diminished in size; this is especially marked in comparing the clavicles and the halves of the pelvis. The circumference and length of the arm, fore-arm, thigh, leg, and foot of the left side are less than the right, and one is particularly struck with the posture the child assumes, it being very suggestive of hip trouble; a glance, however, at the posterior view of the child shows neither flattening of the nates or obliteration of the normal sulci, but shows in a very clear manner the compensatory obliquity that takes place in the pelvis and the resulting spinal curve.

Of much interest in connection with these deformities is a consideration of the fallacies surrounding measurements of the lower limbs and the normal asymmetry of the human form.

Sculptors, artists, hatters, tailors and shoemakers have always been familiar with this fact, and it is surprising that surgeons should not have more generally appreciated this source of fallacy in their measurements of the extremities. Hunt,[2] of Philadelphia, claims to be the first to have suggested that "bilateral symmetry as to length is exceptional," a fact of great importance in suits of malpractice.

W. C. Cox called attention[3] "to the difference in

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[1] Read before the Surgical Section of the Suffolk District Medical Society, March 7, 1884.

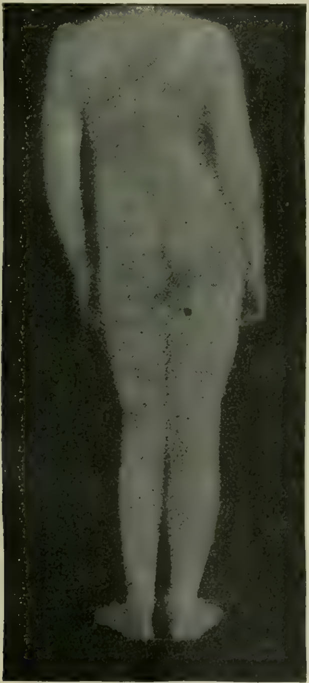
[2] Am. Jour. Med. Sc., January, 1879.

[3] Am. Jour. Med. Sc., 1875, vol. lxix., p. 438.

measurements of the opposite sides of persons never diseased or injured." Out of sixty-two persons examined only six were found with extremities of the same length.

Dr. Wight[1] gives the measurements of sixty persons, and concludes that one person in every five has limbs of the same length. Dr. Morton in the Pennsylvania Hospital Reports[2] states that he has examined the length of the lower limbs in 513 boys from eight to eighteen years old. In 272 there was inequality.

Then come statistics which seem to settle the question. Roberts[3] found asymmetry the rule in femora and tibiæ of eight skeletons. Dr. Thomas Dwight[4] reports the measurements in eleven skeletons, and found only five in which the femora were equal; and J. G. Garson reports[5] the measurements of seventy skeletons, and found asymmetry in ninety per cent. During the last year three cases of unilateral atrophy have presented themselves at the Children's Hospital Out-patient's Department, and in looking up the literature of the subject it is found that only a few cases are recorded.



Paul Broca[6] reports a boy aged eleven as appearing "as if the two halves of the body were different sized persons joined together."

In 1863 Mons. L. Ollier recorded[7] a number of experiments in animals by tying the various arteries and by section of the nerves supplying the different extremities. No satisfactory conclusion can be drawn from these experiments, and one can only surmise that some disturbance of the trophic centres exists as a factor in the causation of the atrophy.

A. Stadfeldt[8] and Jacobi[9] consider the causation anterior to the sixth month of fœtal life, and Jacobi has a theory that the condition is of pre-placental origin.

Mr. Howden gives a case[10] of an insane woman, aged thirty, who had atrophy of the right hemisphere of the cerebrum and left side of the cerebellum, with atrophy of the left side of the body.

A case of unilateral atrophy was exhibited before the Clinical Society of London of left-sided atrophy with athetosis, in a woman aged twenty-two, by Dr. T. Taylor.[11] Another case of marked left-sided atrophy was shown to the Société Anatomique by Henry C. Beyer.[12]

Two other cases are recorded: one of congenital unilateral atrophy by Sumner Pixley,[13] the other a case of semi-facial atrophy by Schiek.[14]

The first case observed was that of a bright girl, M. B., aged nine, born in Canada, and living in South Boston. The child had always been rather delicate, but no difference was noticed in the development of the halves of the body until the child began to walk. She applies at the out-patient's department on account of limping. On removing the clothing one notices that the whole of the upper and lower extremity of the left side are smaller than the right. The left arm is one inch shorter than the right; the left thigh one and a half inches shorter; the left leg and left foot are each one half inch shorter than their fellow.

No difference in the development of the halves of the face is apparent.

The left fore-arm is a quarter inch smaller than the right; the left thigh a half inch, and the left leg a quarter inch less than the right.

Second case. J. R. M., aged four, born in Boston. He is a ruddy, sturdy little boy, who "has always been well." The mother noticed a slight limp when he began to walk. The right thigh and leg together are a half inch shorter than the left; the thigh is a half inch, the leg a quarter inch, smaller than the left. The child is left handed, and left arm and fore-arm are perhaps slightly larger than the right. The right foot measures a quarter of an inch in length.

Each lower extremity is perfectly developed up to its standard, but on comparison one notices that the right is decidedly the smaller of the two. The head and upper extremity are apparently nearly equally developed.

The last case is a female child, S. M., aged two years and three months, who lives in Waltham. The mother states that the child has always been strong and healthy, but when eighteen months old began to walk, and from the first with a limp. There has never been any loss of power in the limb. The child is very bright and well nourished, but walks with a decided limp of left leg. When the child stands erect, resting both feet upon the ground, the right knee is bent slightly forward. When the right leg is perfectly straight and pelvis horizontal the left leg does not fully reach the ground. Measurements give three quarters of an inch shortening in left leg, three eighths of an inch of the shortening being in the thigh. There is half an inch of atrophy of the left thigh, and a quarter of an inch of the leg. The left foot is decidedly smaller than the right (seemingly more marked than the tracing would show). By measurement in its longest diameter the left foot is a quarter of an inch less than its fellow. There is beginning valgus of the right foot. The face and upper extremities were closely examined, and were found to be slightly smaller than the unaffected side.

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[1] Arch. Clin. Surgery, vol. i., No. 8, February, 1877.

[2] Boston Med. and Surg. Jour., April 15, 1880.

[3] Phil. Med. Times, August 3, 1878.

[4] Identification of the Human Skeleton, Mass. Med. Soc. Communications. 1878, p. 175.

[5] Jour. Anat. and Physiol., Lond., 1878 and 1879, vol. xiii., pp. 502 to 507.

[6] Canstatt's Jahresbericht, 1859, vol. iv., p. 6.

[7] J. de la Physiol. de l'Homme, Par., 1863, vol. vi., pp. 106 to 116.

[8] On the Asymmetry of the Body of the Human Skeleton.

[9] Trans. New York Obst. Soc., 1871.

[10] In Jour. Anat. and Physiol., vol. ix., p. 288.

[11] Lancet, 1878, vol. i., p. 387.

[12] Le Progress Medicale, 1878, p. 142.

[13] Phil. Med. News, 1883, vol. xliii., p. 146.

[14] Berlin. klin. Wochenschrift, 1883, November 5th.

The treatment in all these cases has been an extra sole on the shoe to horizontallize the pelvis.

The writer has not considered measurements under a quarter of an inch, believing that the finding of bony prominences covered with soft parts as a point of departure in making any given measurement allows a latitude of at least an eighth of an inch in the hands of the most accurate observers; and pertinent to this question is an apt remark made by the late Dr. T. B. Curtis, who believed "that to find the anterior superior spinous process of the ilium in a living subject was as difficult as to precisely determine the top of a hill."

As far as the parents' observations go the atrophy is not progressive, and although these cases are not termed congenital there can be but little doubt that this is not an acquired deformity.[1] Whether the disproportion has been caused by an excessive growth on the one side or a retarded growth on the other is not easy to decide. Beyond this I cannot venture into the region of speculation as to cause.

In considering these cases as a class one finds that the mother's labors have been perfectly normal; that there is no difference in the pulse, temperature, consistency, tendon reflex or ankle clonus of the affected side; that the children are in good health; that they have never received any injury; that they simply apply for relief to the lameness; that the mother first noticed the trouble when the child began to walk; and that there has never been any loss of power in the affected limbs. The practical importance of these cases rests upon a recognition of the deformity, its differential diagnosis from various diseases having as a symptom lameness and atrophy of one of the limbs, and the general influence it will have in causing deviations in the spinal column, by obliquity of the pelvis. The important bearing which inequality in the length of limbs may have in producing lateral curvature is well set forth in a recent paper by Henry Ling Taylor,[2] where he reports thirty-two cases of primary crural asymmetry. The left leg was found to be longer in twenty-eight cases, the right in four. Dr. Taylor's differences in measurements are not in eighths or fourths of an inch; in sixteen cases the difference is over one half an inch, and in six it is an inch or more.

Not only may obliquity of the pelvis result from this lack of symmetry, but it is probable that in female children important changes may take place in the pelvic cavity that may interfere very seriously with parturition. Finally, in one of our cases we have a beginning valgus which is apparently compensatory, and this deformity superadded to the asymmetry would seriously interfere with the locomotion of any child.

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A FATAL CASE OF PUERPERAL CONVULSIONS PRECEDED BY EXCESSIVE EPIGASTRIC PAIN.

BY F. W. GOSS, M. D.

MARCH 1, 1884, I was called to a lady, thirty-two years of age, seven and one half months advanced in her fourth pregnancy, with the following history: —

Two years ago she had a miscarriage. Her confinements in 1876 and 1879 were, she thought, a little premature, but not otherwise abnormal. During the present pregnancy she has been quite comfortable most of the time, and appeared to be in a satisfactory condition when, six weeks ago, she called to engage me for her confinement, since which time I have not seen her until now.

At 12.30 A. M., March 1st, I found her suffering with intense pain in the epigastrium, extending through to the back. She said that for two days past she had had some discomfort in these parts, which she attributed to having taken cold in going into town in the horse cars three days ago. She ate a good dinner at six o'clock last evening, and was quite comfortable till within an hour, when the severe pain above mentioned came on. She has no headache, nor has she suffered from it, excepting occasionally, and no more than for years. No trouble with eyesight. Slight œdema of feet; none elsewhere. Cardiac and pulmonary sounds normal. No signs of labor. She thinks her urine may have been more abundant than usual for a few days past.

As stated above, I found her suffering from agonizing pain in the epigastrium and the opposite part of the back. She was restless, cold, pulse 76. Had a load at stomach, but had not vomited.

At one A. M. she vomited, evidently her dinner undigested. She felt easier for a few minutes, but the pain soon returned. Under the administration of morphia by the mouth and subcutaneously, and the application of chloroform liniment, she gradually became more comfortable, and at 4.30 A. M. I left her sleeping. I requested a specimen of urine as soon as any should be passed.

7.30 A. M. Has slept two hours, and is much refreshed. Has been thirsty, and has drunk a large amount of ice-water, which she is now vomiting. Mind perfectly clear. Has considerable headache, which may be due to opiates. Pulse normal. Skin warm. No urine has yet been passed. I left with the promise to call again at noon.

She vomited twice after this, and with some difficulty passed several ounces of dark-colored urine. At 9.30 A. M. her husband lay down beside her on the bed to sleep. At 10.30 he was awakened by his wife, who said she felt terribly, and believed she was dying. She immediately had a severe convulsion, and never recovered consciousness. The messenger not finding me at home, a professional friend promptly responded to the summons. He found no indication of labor, and at once proceeded to deliver the patient by manual dilatation of the os uteri. When I reached the scene, soon after eleven o'clock, she had been delivered of a female, still-born child, and was rapidly sinking. She died at 11.30 A. M.

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[1] In this connection it is well to say that were the writer positive [illegible] congenital he would prefer the term [illegible]

[2] New York Med. Rec., 1884, April 26th, p. 456.

A subsequent examination of the specimen of urine which had been saved showed a specific gravity of 1030. It was dark in color. Under the microscope no blood was found, but there were an immense number of granular casts, and a few fatty and partially hyaline ones.

The object of this report is to call attention to a premonitory symptom of puerperal convulsions not often referred to. In looking through a large number of obstetrical works contained in the Boston Medical Library I fail to find but infrequent mention of the symptom in question. Braun, Ingleby, and Winckel translated by Chadwick, incidentally mention pain in the epigastric region as among the phenomena foreboding convulsions. Thomas Denman, to whom Churchill refers, says: "Convulsions preceded by violent pain or cramp at the stomach are usually more dangerous than those which are preceded by affections of the brain only." But Chaussier, as quoted by Leishman,[1] gives the most distinct reference to the symptom under discussion as follows: "There are three symptoms [of puerperal eclampsia] which, as premonitory indications, deserve special attention: these are cephalalgia, derangements of vision, and epigastric pain. . . . The third of the premonitory symptoms of Chaussier, epigastric pain, is of less frequent occurrence than the other two. The suffering is described as being extremely severe, lasting often for hours; and, when it is of unusual severity, it is said to be an almost certain precursor of a convulsive attack."

In view of these statements, and of the case here reported, ought we not, when called to a pregnant woman suffering from severe epigastric pain not clearly arising from indigestion, to bear in mind the possibility that she is threatened with convulsions of the gravest character?

PROGRESS IN DERMATOLOGY.

BY GEORGE H. TILDEN, M. D.

CUTANEOUS PIGMENT.

In order to arrive at correct conclusions with regard to the formation and distribution of the cutaneous pigment Dr. S. Ehrmann[2] has made study of the skins of frogs and salamanders. From such investigations it is evident that the formation of pigment takes place only in the direct neighborhood of the blood-vessels, and that a necessary factor in the process is cell activity. Pigment is never manufactured in the epidermis, but is transferred to the latter from the corium, where it takes its origin, by means of currents of protoplasm. Demonstration of these facts is best given by the study of frogs. In these animals, namely, there exists under the epidermis, in the upper part of the corium, a continuous layer of movable and pigmented connective-tissue cells. Circumscribed collections of these cells are occasionally met with, however, which do not contain pigment, in which case the region of epidermis situated immediately over these cells, is pigmented to a much greater degree than the surrounding epidermis. It is manifest that the pigment has been transferred from these localized regions of the corium to the overlying epidermis, while the connective-tissue cells of the corium in which the pigment is manufactured, remain in place. The coloring matter of the epidermis is contained in the cells of the deeper layers of the rete Malpighii, which are possessed of amœboid prolongations, and also in peculiarly branched and movable cells from which extend processes between the epidermal cells. Pigment is taken up from the deepest layer of epidermal cells, and is further transmitted, partly by means of the bridges of substance which connect the epidermal cells, and also in part by the above mentioned branched amœboid cells. This transportation of pigment is carried on by currents of protoplasm from one cell to another, and is not due to the currents of fluid in the tissues. The above facts with regard to the pigment in the skins of amphibians, where the conditions are of the simplest, hold true also, with slight modifications, of the movements of pigment in the human skin and hair. With regard to the latter, the cells which form the pigment are situated in the hair papilla, in a structure, namely, which belongs to the corium. In the root of the hair are to be seen branched cells, which send their prolongations between the epidermal cells of the hair, and which are in connection with the latter. These cells take up the pigment from the hair papilla, and transmit the same to the upper portions of the hair, and the common cause of grayness of the hair is the destruction and absence of these cells. Pigment cells are contained not only in the matrix and papilla of the hair, but are also situated between the two, these intermediate cells being connected by their prolongations both with the pigment cells in the hair papilla and with the similar cells in the hair itself. Even in the case of entirely white hairs the hair papillæ always contain pigmented cells, a single exception to this rule being furnished by the condition of senile atrophy of the skin. It may, therefore, happen that in spite of uninterrupted production of pigment in the corium the hair remains white because the cells do not exist, which transfer the pigment from its seat of manufacture to the hair itself. In the case of a man, twenty-eight years of age, who was possessed of numerous white hairs, the author found that the uncolored hairs, although otherwise normal, contained none of these pigment-transferring cells, while in the colored hairs belonging to the same individual these cells were invariably present. In another man, twenty-six years of age, there coexisted with a like condition of things in the hair a well-marked and progressive vitiligo, situated mainly upon the hands and face, a connection which well illustrates the near relationship between the two processes, canities being merely a vitiligo which is confined to the hair. In pigmented hairs, pigment cells are found in the root of the hair as well as in the hair papilla, but against the assumption that such cells wander from one position to the other is the fact that in the case of gray hairs, although typical pigment cells are present in the hair papilla, none are to be found in the root of the hair, there being at the same time no evident reason why these cells should not wander from the hair papilla into the roots of the hairs, since the tissues are normal in appearance, and in their behavior with respect to artificial coloring matters and chemical reagents the same as in pigmented hairs.

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[1] Leishman's System of Midwifery, pages 640-641. Philadelphia, 1873.

[2] Allgemeine Wiener med. Zeitung, No. 29, 1884.

The formation and disappearance of pigment in the skin follows the same general laws as in the hair. Congenital albinism or deficiency of pigment in all the tissues of the body is not to be classed with the above instances of partial want of pigment, inasmuch as it is here not a question of insufficient transfer of pigment, but rather of a total and universal lack of cells, whose function it is to manufacture pigment. The difference between vitiligo and albinism is the same as that between spotted animals and albinos of the same species. In vitiligo, pigment is formed in the corium, but is not transferred to the epidermis because the peculiar pigment-transferring cells are, for some reason or other, wanting in the epidermis. In spotted animals the process is analogous, and may be regarded as a physiological vitiligo. The pigment which is formed in the corium in cases of vitiligo does not remain there, but is in a great measure reabsorbed, while a certain portion of it is transferred to the immediate vicinity, and is taken up by the neighboring cells in the epidermis, and it is for this reason that the vicinity of a patch of vitiligo is more strongly pigmented than normal. By reason of the facts that in regions affected by vitiligo the pigment-transferring cells in the epidermal layers of the skin are wanting, and that the epidermal structures of themselves do not form pigment, the hairs which are situated in the diseased portions of skin are also devoid of pigment. If a spot of vitiligo be subjected to the action of a vesicant, there ensues pigmentation, which, however, entirely disappears in a short time. In such case the cells of the corium, being stimulated thereto by the action of the vesicant, form pigment, which is in a short time reabsorbed, since the cells of the corium, although competent to produce pigment, are not capable of retaining it, and since the cells which should transfer it from the corium to the epidermis are wanting. If, on the other hand, a normal region of skin is irritated by means of a blister oftentimes this portion of skin may be recognized long afterwards by its increased amount of pigmentation, for in this instance the cells are present which transfer pigment to the epidermis, where it is preserved for a long time. The cause of the destruction or absence of these peculiar pigment-carrying cells in cases of vitiligo and in canities is entirely unknown.

Dr. Gustav Riehl[1] also publishes a contribution to the study of the pigment in human hair. The numerous variations in the color of human hair are essentially dependent upon the differing amounts of pigment contained in the horny substance of the hair, other conditions, such as the individual color of the epidermal cells of the hair, the quantity of fatty sebaceous matter upon its surface, and the amount of air contained within the hair, being of comparative unimportance in this connection. Cross sections through the hair papilla at its point of greatest circumference show that there are present, in the tissues of the papilla, irregularly-shaped cells containing granular and deeply-pigmented protoplasm, and without well-marked nuclei. Some of these cells are round, others spindle-shaped, while many are possessed of exceedingly irregular outline. They also differ from one another in the quantity of coloring matter they contain, and occasionally in the same cell, one end may be seen to be more strongly pigmented than the other. These pigment cells are also situated directly beneath the matrix of the hair, being in contact with the same, and in their sections it may be demonstrated that filiform, bulbous, or wedge-shaped prolongations of these pigment cells are inserted between the cells which compose the root of the hair. Not unfrequently these processes or branches are as long as the combined diameters of three or four cells, and extend beyond the cells of the matrix of the hair to those situated immediately above. Occasionally pigment cells are met with whose body is of very small size, from which several prolongations of very irregular form and dimension insinuate themselves in the interstices between the epithelial cells. If examination of the hair be made further up, at the region, for example, in which Huxley's layer is undergoing the change into horny substance, only small fragments of these pigment cells or their prolongations, in the shape of short pigmented filaments, are to be detected between the cells of the hair, while at the same time pigment is to be seen in the protoplasm of the epithelial hair cells, the nuclei of the same being entirely wanting in pigment. The coloring matter is in the form of fine granules, which are thickly clustered about the nucleus, and but loosely and irregularly distributed throughout the rest of the cell. In the older cells of the hair the pigment is more diffused, with here and there a clump of pigment granules, the coloring matter being intimately mingled with the horny substance of the cells, which is thereby stained, as it were. The manner in which pigment is transferred from the pigment cells to the epithelial cells is shown by thin sections of hair, in which it may often be seen that the prolongations from such pigment cells are sharply defined until they reach the epithelial cells, at which point their distinctness of outline is lost, and the end which is in contact with an epithelial cell acquires a vagueness of contour which obscures its recognition. The protoplasm of the epithelial cells in the neighborhood of these prolongations of the pigment cells becomes of a uniform yellowish-brown color, and contains collections of pigment granules, which are grouped together in that portion of the cell situated nearest to the end of such prolongations, giving one the impression as if the pigment tissue had become melted and was imbibed by the epithelial cells. The process resembles that by which the lower amœboid organisms take up granules of coloring matter from the water in which they are contained. Whether the protoplasm as well as the pigment of the pigment cells is absorbed by the epithelial cells is not evident, as the author has not yet been able to detect either decolorized pigment cells or free pigment between the epithelial cells of the hair. The author concludes that the pigment of hair is always contained in the cells, being situated in the wandering pigment cells of the papilla and root of the hair, and, in other regions of the hair, in the epithelial cells themselves.

DERMATOSIS DIABETICA.

Kaposi[2] reports a rare case of "gangrena diabetica bullosa serpiginosa" occurring in a woman fifty-one years of age. About one month before she was seen by Kaposi there began to show themselves upon the leg cutaneous lesions of a gangrenous nature. The initial form of the above lesions consisted in one or more blebs, tensely filled with an opaque fluid, and upon removal of the epidermal covering of these blebs it was evident that their base was formed of a yellowish white slough in the corium. Further development of the pathological process resulted in the formation of large spots of cutaneous necrosis, in which were manifest three distinct stages of progress. The gangrenous lesions were of rounded, triangular shape, and at their convex side, in which direction the pathological process was advancing, the tissues were in a condition of dry gangrene, the skin being mummified, of a leathery consistence, and sunken somewhat below the general cutaneous level. The edge of this mummified region was not in immediate contact with sound skin, but was separated from it by a narrow and flabby fringe of discolored epidermis which had been raised from its bed by serous exudation. In the centre of the lesion the gangrene was of the moist variety, the cutaneous tissues being reduced to a greenish pulp, and on the concave side of the lesion, bordering upon the moist gangrene, were lively red and profusely suppurating granulations, the edge of which was defined by a sharply-marked line of normal skin, not elevated, and having a narrow, bluish-white border of young and advancing epidermis. The process was, therefore, one of destruction followed by repair. There were three such gangrenous lesions upon the left lower leg, the largest of which was larger than the palm of the hand, the smallest the size of a thaler. They were situated, one just below and outward from the anterior superior spine of the tibia, another at about the middle of the leg on the inner side, and the third at the middle of the leg on the anterior and outer side. Their convex edges were directed away from the anterior middle line of the limb, and upon the region of skin which was inclosed, so to speak, by the three lesions, were situated from ten to fifteen blebs, each one the size of a bean. The general surface of the skin between the blebs and around the gangrenous spots was entirely normal in appearance.

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[1] Vierteljahresschrift für Derm. und Syph., Heft 1 u. 2, 1884.

[2] Wiener med. Wochenschrift, Nos. 1, 2, 3, and 4, 1884, and M[illegible], Heft 1, 1884.

The case in question had nothing in common with the ordinary forms of gangrene of one or both lower extremities. In senile gangrene, in gangrene due to marasmus, and in death of tissue caused by embolism or thrombosis of the blood-vessels, the process begins in the toes and their neighborhood, and is preceded by a gradual or sudden lowering of the temperature of the parts and by inflammatory processes. The cessation of the circulation from some cause or another is in these cases the determining condition, and the arrest of blood supply is generally announced by inflammatory and congestive phenomena, while the necrosis which follows attacks without distinction all the tissues "en masse," the skin, muscles, tendons, and bones. The same is true of the interesting variety of gangrene due to endarteritis obliterans, which has been observed and described by Winiwarter and Billroth. Gangrene as the result of mechanical violence, chemical insult, or extremes of temperature was out of the question. The forms of cutaneous gangrene occasionally seen by the author, in connection with pityriasis rubra, chronic general eczema, severe psoriasis, and pemphigus, were all situated upon a diffusely reddened and thickened skin, whereas in the case described the bridges and islands of skin between the blebs and gangrenous spots were entirely normal, being pale and supple, the necrotic lesions occurring upon previously sound skin. The entire absence of any symptoms, subjective or objective, from the side of the nervous system, excluded from consideration any of the tropho-neurotic varieties of gangrene, and after having convinced himself by physical examination that there was no reason for suspecting atheromatous change in the blood-vessels, the author came to the conclusion, that the cutaneous gangrene in this case was due to the presence in the tissues of some foreign substance, possibly sugar. The patient suffered neither from polyuria nor polydipsia, but an examination of the urine by Professor Ludwig showed the presence of sugar in the quantity of 5.15 per cent.

Under suitable treatment the amount of sugar contained in the urine became very much diminished, and the pathological process in the skin was arrested, so much so, that all the necrosed tissues were cast off and cicatrization began. Relief was only temporary, however, and the patient died six months after the beginning of her malady, cutaneous gangrene reappearing with renewed vigor, about two months before death.

The author discusses the following varieties of cutaneous disease, to which diabetes may bear a causal relation: —

(1.) Anidrosis or asteatosis cutis (Xerosis).
(2.) Pruritus cutaneus.
(3.) Urticaria chronica papulosa.
(4.) Acne cachecticorum.
(5.) Roseola and erythema.
(6.) Eczema (more especially eczema genitalium, balanitis, vulvitis, mycotica, furunculosa, and gangrenosa.)
(7.) Paronychia diabetica.
(8.) Furunculosis and carbuncle.
(9.) Gangræna cutis.
(10.) Papillomatosis diabetica.

All the different varieties of dermatosis diabetica have a common cause, the presence, namely, of sugar in the cutaneous tissues. This is found in all the tissues, exudations, and secretions of diabetic patients, and its presence was demonstrated in pus from the case reported. The irritation set up by the sugar itself or by one of its products of decomposition, affects sometimes the sensory nerves, in this way causing pruritus, in other cases the secretory and vaso-motor nerves are acted upon, thus giving rise to anidrosis, asteatosis or urticaria, and finally, inflammatory changes may be set up by direct irritation of the blood-vessels and cutaneous tissues. As a rule in these cases the tissues manifest only slight tendency to inflammatory proliferation, but on the contrary are prone to undergo necrobiosis.

TREATMENT OF LUPUS.

Doutrelepont[1] is a firm believer in the tuberculous nature of lupus, and is of the opinion that this disease should be ranked with the chronic infectious maladies of the skin. With the idea of killing the bacillus, which he considers to be the cause of the disease, he has treated lupus by the application of corrosive sublimate. Compresses soaked in a solution of corrosive sublimate were applied to the diseased regions of skin, covered with gutta-percha paper, and secured in place by a bandage. Beginning with a solution of bichloride of mercury, of a strength of one part to 20,000, it was soon found that a solution of one tenth of one per cent. was well borne, and followed by no untoward consequences. It was seldom that a dressing of the latter strength caused any pain, and under its application fungous granulations became levelled and disappeared. Suppuration was much diminished, and cicatrization at the borders of ulceration soon became manifest. The diseased regions which had not ulcerated and were still covered with epidermis became softened and in part cast off, while the tubercles and nodules peculiar to the disease disappeared. Thickened and infiltrated portions of the skin became more flexible and less reddened, while the neighboring and healthy regions of skin were in no way irritated or inflamed, but, on the contrary, the surrounding cutaneous hyperæmia diminished, and the only effect produced upon sound skin was to cause moderate desquamation. The resulting cicatrices were smooth, and under this form of treatment an advance of the pathological process was not observed. In no case did salivation occur. A modification of the above treatment was adopted in some cases by Doutrelepont, in which the application of corrosive sublimate was preceded by scraping with the sharp spoon.

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[1] Monatshefte fur prak. Derm., No. 1, 1884.

Unna,[1] likewise inspired by the conviction that lupus is cutaneous tuberculosis, strongly recommends the use of corrosive sublimate in the treatment of this disease. The best manner of application he considers to be in the form of a plaster, containing for each part of corrosive sublimate ten portions of sulphoichthyolate of potash. The part played by the sulphoichthyolate of potash in this method of treatment is to counteract the keratolytic (epidermis loosening) action of the corrosive sublimate, and thus insure a more rapid healing. Six cases of lupus have been treated in this way by Unna, each one with good result.

Schulz,[2] also with bactericidal intent, has for the last ten years treated lupus by the application of a saturated solution of permanganate of potash in cold water. Such a solution is painted over the diseased regions of skin daily, or every other day, until a thin, black crust is formed. An ointment containing five per cent. of permanganate of potash or simple ointment, according to the sensitiveness of the skin, is applied upon the days when the solution of permanganate of potash is not employed. After several repeated applications of the latter at one sitting there ensue a moderate amount of pain and some redness of the surrounding skin. The lupus nodules are, so to speak, loosened by this method of treatment, and after each sitting portions of diseased tissue may be wiped out with a bunch of cotton. The above treatment is continued for a long time after the destruction of the nodules peculiar to the disease, and at the same time the sound skin in the vicinity is also subjected to vigorous painting with the same solution. The defects of tissue heal slowly from below, and there ensues a flat, red scar, which, under continued treatment, becomes paler, and finally so resembles the normal skin in color that the formerly diseased region is only to be detected by careful examination. There is no disfiguring loss of substance, and the pathological process is arrested. Relapses are uncommon, and are always easily controlled by renewed treatment. In some instances before the application of the permanganate of potash the lupus nodules were removed with the sharp spoon, the effect of which was to increase the pain, but shorten the duration of treatment. The length of time necessary for the cure of outpatients by this method of treatment is stated by the writer to be from eight to ten weeks.

Schwimmer[3] has treated lupus by the application of an ointment containing from ten to fifteen per cent. of pyrogallic acid followed by ung. hydrarg. Upon the entrance of the patients to the hospital all crusts and scales were removed from the diseased regions of skin by the liberal use of vaseline. There was then applied to the whole of the diseased surface a salve containing ten per cent. of pyrogallic acid. This dressing was retained for from four to six days, being renewed two or three times in every twenty-four hours. At the end of this time the face was again anointed with vaseline for a day, and the diseased surface was then covered with mercurial plaster, which was kept continuously applied, the frequency of its renewal being determined by the amount of suppuration present. Cicatrization was almost complete by the end of from ten days to two weeks, although there usually remained behind several nodules, which were visible in the forming cicatrix. In such cases the application of pyrogallic acid was renewed, to be again followed by mercurial plaster. Occasionally the second application of pyrogallic acid caused much pain, in which case it was replaced immediately by the mercurial plaster. In certain cases in which the skin was indolent and tolerant of treatment as many as three such cycles of treatment were employed, but more than this number was never found to be necessary. The mercurial plaster was always kept applied until cicatrization was complete. Of ten cases of lupus treated in this manner the results in eight were eminently satisfactory, and the average duration of treatment was about eleven weeks.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

OCTOBER 27, 1884. The President, DR. CHARLES D. HOMANS, in the chair.

CYSTIN IN URINE.

In the unavoidable absence of DR. W. C. B. FIFIELD the following notes of his case were read by DR. E. G. CUTLER: —

W. S., aged twenty-two years. Born in Scotland. Came to this country in April, 1884. About five years ago, being then seventeen years old, had an attack of frequent and painful micturition. When the desire to pass water was felt it had to be attended to or the pain became doubly severe. This condition of affairs had soon disappeared, and he had felt perfectly well until September 27th of the present year. Being then away on a vacation, he was seized with a peculiar pain in the left flank, very sudden in its attack. On the following day (Sunday) the pain continued, but water was freely passed until the next (Monday) morning. Then pain beyond endurance was experienced on making water. The pain was felt in the penis during micturition, but when the act was accomplished it vanished for the moment. He was obliged to urinate every hour and a half for six hours. When I saw the patient he described his urine as coming in gusts, as though when passing it was interrupted by blasts of air. Fluid extract of buchu was prescribed, and by the following night all symptoms had passed away.

DR. E. G. CUTLER said that in examining the urine Dr. Fifield met with certain crystals in the sediment, and not readily determining their nature brought the specimen to him. The crystals were flat, six-sided, colorless plates, which dissolved on the addition of nitric acid, and on heating left a brownish-colored mass, which did not give the murexid reaction of uric acid when treated with ammonia. The rest of the crystals were collected, dissolved, and reprecipitated by acetic acid. The crystals then were determined to be cystin. The remaining portion of the urine was allowed to undergo the acid fermentation, when more cystin crystals were deposited. Cystin is a substance rich in sulphur, and readily splits up, giving rise to sulphuretted hydrogen. It is not known where cystin is produced in the body, but it has been found once in the kidneys and once in the liver; also in the sweat. The only danger arises from the liability to the formation of calculi. The disease appears chiefly in the male, in the proportion of two or three to one, and infants and young adults are the persons chiefly affected; it rarely or never has been seen after the age of fifty.

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[1] Monatshefte f. prakt. Derm., Nos. 2 & 3, 1884.
[2] [illegible] Central Zeitung, No. [illegible], 1884.
[3] W[illegible] W[illegible], Nos. 19, 20 and 22, 1884.

Through the kindness of Dr. Wood the dried crystals of cystin were shown under the microscope. A specimen of the above urine was obtained a couple of days ago, and found to be free from albumen, pus, or any organic matter except cystin. This urine had, at the time of the meeting, undergone decomposition with the development of sulphuretted hydrogen.

Dr. E. S. Wood spoke as follows: When cystinuria occurs the crystals are almost always found in the sediment, and are easy to distinguish if the following points are remembered, namely: that cystin crystals are colorless, and occur in the form of hexagonal plates, which sometimes show lines radiating from the centre, or in prisms; that these crystals are soluble in hydrochloric acid or other mineral acids, in the fixed alkaline hydrates and carbonates, and in ammonia, but are insoluble in acetic acid, by which cystin may be precipitated from the urine when it exists in solution. It differs, therefore, from hexagonal or prismatic crystals of uric acid in color, the latter being more or less deeply colored, and in solubility, the uric acid being insoluble in hydrochloric acid, while cystin is soluble.

Cystin contains twenty-six per cent. of sulphur, and readily undergoes decomposition in urine which has become ammoniacal, sulphuretted hydrogen being one of the products of the decomposition, hence the strong odor of this gas which this specimen of Dr. Cutler's possesses.

Cystin is also sometimes eliminated by other glands, as the sweat glands, and may then become decomposed and evolve sulphuretted hydrogen, in which case it causes silver coins in the pocket to become black, a fact which should always lead to the examination of the urine for cystin.

He also said that although the fixed alkaline carbonates dissolve cystin, these should never be used as drugs in the treatment, since they may cause a deposit of earthy phosphates to form around the cystin concretion as a nucleus.

Dr. E. G. Cutler reported a case of

DOUBLE PNEUMONIA IN A MAN WITH SLIGHT AORTIC STENOSIS OF LONG STANDING AND POSSIBLE ATHEROMA OF THE CORONARY ARTERIES. RECOVERY.

In October, 1883, I was suddenly called to see Mr. P., seventy-two years of age, a large, stout man who had for many years suffered from some form of heart disease following rheumatism, and had been told ten years before by his attending physician that he might die at any moment. He was found to be suffering great pain in the cardiac region, brought on apparently by a little over-exertion. This was the second very severe attack he had had, though there had been numerous slighter ones for a long time, apparently due to the same cause. At times he had been dizzy, but had never fallen, though frequently obliged on such occasions to sit down. The pain often extended through the back, and was of a sharp, agonizing character. Going up a flight of stairs caused dyspnœa, and was likely to bring on the pain.

Physical examination gave a very feeble cardiac impulse in the fourth intercostal space just outside the nipple. The percussion area of dullness was a little increased. The cardiac sounds were rather feeble, heard loudest at the apex on the fifth rib, just outside the nipple. There was a systolic murmur heard loudest at the apex and not propagated to the left, and an aortic direct murmur followed into the carotids and not succeeded by a distinct second sound. There was accentuation of the pulmonic second sound and slight enlargement of the right side of the heart. The pulse at the wrist was powerful, 60 to 70 in the minute, and regular. The recumbent position was impossible on account of dyspnœa.

Half grain doses of morphia by the mouth were required for a few days to ease the patient. With tincture of chloride of iron and wine of coca the man was as well as usual in two weeks. The pulse remained 64 to 66 in the minute, the physical signs were the same, the mitral murmur was recorded as slight, and there were several attacks of sudden dizziness during the next month, when the patient passed from observation. A diagnosis of slight stenosis of the aortic orifice was made, with possibly atheromatous coronary arteries which was cause of pain. For the next three months the patient was not seen.

On January 20, 1884, I was again called, and found that he had suffered from a bad cold for a week past, attended with cough and expectoration, but no fever. At noon that day he had suddenly been seized with pain in the left side under and below the nipple, which caused the respiration to be suppressed. The face was very red, the skin hot; pulse 120 in the minute, temperature 103.5° F. On physical examination merely general coarse mucous râles and percussion resonance all over the chest were found. The respirations were thirty-two in the minute. There were slight cough and slight expectoration. At night the pulse and temperature were considerably higher, otherwise the condition was the same. Dyspnœa was very marked. Cough troublesome and frequent.

The next day the cough was a little less frequent, expectoration more abundant and extremely sticky. Some sleep had been procured by means of morphia.

The following day rusty sputa were observed. The pulse, temperature, and respiration had all along remained high, and the dyspnœa and cyanosis had increased. The physical examination of the chest gave coarse râles and undiminished resonance till the 23d, when at my first visit I found a pulse of 105, a temperature of 104.5° F., and beginning flatness at the lower angle of the scapula and bronchial respiration. These physical signs increased in area till they occupied the entire lower lobe. The pulse then rapidly fell to 98, temperature to 99° F., and the respiration to 26.

Resolution began thirty-six hours after the consolidation was observed, and went on with intermissions for the next three days, when it was nearly complete, leaving the patient very weak.

During the succeeding night there was a sudden pain in the right side, a great accession of dyspnœa, cough, and temperature, and, on being hastily summoned, I found to my dismay that the same thing was beginning on the right side at the root of the lower lobe. It hardly seemed possible that the patient could survive this new attack. But a relatively small portion of the lower lobe of the right lung became involved, however (certainly not more than half). The process of resolution began at the end of the second day and ended in less than a week. In the mean time the physical signs had increased again in the left so that it was not till the 5th of February that all signs had disappeared in the right and nearly so in the left lung. On the 10th of March he was well enough to be allowed to walk out in the sunlight for a short time in the middle of pleasant days.

The treatment consisted of alcoholic stimulants, morphia, quinine, and ipecacuanha at first. During the great dyspnœa, as ordinary food seemed to increase his distress, he was given peptonized liquids, and poultices of bran mixed with red pepper and mustard were applied.

It was eighteen days before every physical sign of pneumonia disappeared.

Dr. Cutler also reported a case of

PNEUMONIA COMPLICATING CHRONIC ENDOCARDITIS AND ACUTE PERICARDITIS.

In February, 1884, Charles K., aged twelve, came under my charge with severe acute articular rheumatism. A mitral systolic murmur developed, and after an illness of several weeks he was left with a seriously impaired heart. During the past summer he has been unable to do much except slowly walk about at the sea-shore. At this time the cardiac area of flatness extended nearly one inch to the right of the sternum in the third intercostal space. The upper border of flatness began at the second rib and extended below to the fifth interspace, one inch outside the nipple. A loud systolic murmur was heard, most distinct at the apex, propagated towards the left, and audible in the back. Extra exertion was not possible, and the patient appeared quite anæmic. Swelling of the feet occurred several times, but disappeared.

October 19th I was called as the patient had suffered from pain in the legs, and had been feverish for the past three days or more. There was much pain, redness, and swelling of the right knee and wrist, and below left nipple, and some pain in the left shoulder. The temperature was 103.5° F., the pulse 120, respiration 46, and catching. That night, in addition, pain in the præcordia was complained of, the respiration was very labored, and dyspnœa great; patient had to sit erect the whole time. As my attention was attracted to the rheumatism chiefly, and it gave such pain to move him, I first examined the heart alone, and did not attempt to see what was the condition of the lung. The next morning a marked friction sound was found at the base of the heart, which quickly spread all over the cardiac area. Consolidation of the left lower lobe was found, with bronchial breathing and flatness on percussion. The dyspnœa was excessive, and the patient's mother sat holding him up with a pillow all that day and most of the succeeding night. On the 23d the whole lobe was solid, and the patient was found to be decidedly easier. The extent of pericardiac distention must have been great at the height of the disease, but its boundaries could not be accurately determined because of the pain caused by percussion. Until the 26th the pericardial friction sound has masked all cardiac sounds heard in front. The bronchial respiration and flatness of the lower lobe continue, but beginning moist râles are to-day found in the middle of the left back. The patient has a respiration of about 26 to the minute; the temperature is 100.2° F. He feels fairly comfortable, though for the past two nights he has had two rather severe suffocative attacks.

(November 4, 1884. The condition remains essentially the same as at last report. Several very severe attacks of rheumatic pain have occurred in the joints accompanied by high fever. The lung is still solid, and loud bronchial breathing is heard throughout the greater part of the left chest.)

Dr. F. C. Shattuck expressed his deep interest in Dr. Cutler's paper, which emphasizes so pointedly the fact that a patient with organic disease of the heart may not only live many years in comfort, but also be able to withstand such a serious disease as pneumonia. The two cases of mitral disease are especially noteworthy in this latter respect by reason of the great strain thrown on the already burdened right side of the heart by the pulmonary consolidation. In the case of the old gentleman it would seem that the murmur heard at the base and propagated into the carotid must have been due rather to roughening at or near the aortic orifice than to actual stenosis. The physical signs do not indicate such an increase in the power of the left ventricle as is characteristic of aortic constriction in a state of fair compensation. In this condition the capacity of the ventricle and consequently the size of the heart is apt, other things being equal, to be less increased than in aortic regurgitation, in which the cavity receives supplies of blood from two sources at once while relaxing in diastole; but compensation implies a powerful muscle to overcome the obstruction to the blood current. Physicians generally take a far less hopeless view of valvular heart disease than they formerly did, and patients are reaping the benefits of the change.

Dr. S. L. Abbot remarked that the last speaker had anticipated him in speaking of the importance of using great caution in communicating to a patient any evidence which a physician might detect of cardiac disease, especially where the consciousness of the patient had not excited apprehension of any such trouble. The announcement of any organic trouble of this kind was regarded by most people as a sentence to sudden death. Of course it was not necessary before this Society to say that in a majority of such cases death followed a longer or shorter condition of invalidism, and was not instantaneous. The gentlemen present who had made examinations for life insurance must have had occasion, as he had done in a limited experience of this kind, to detect valvular murmurs which had not been associated with any subjective symptoms whatever. The announcement of such a discovery, unless circumstances made it absolutely necessary, he thought should be avoided if possible, or the nature of the trouble detected communicated in such a way as to avoid the terrible construction which most people put upon it. Instances are not uncommon, as of course was well known to the gentlemen present, in which such a murmur, even when supposed to be due to organic cause, subsequently disappeared, or, if it continued, was only followed after a long interval, if ever, by serious discomfort to the patient, and which did not terminate in sudden death. He instanced a case of a patient now in perfect health so far as the heart is concerned, who, years ago, was thrown into a state of great alarm, as well as all the members of the family, by the announcement of the existence of heart disease, based on the discovery by the family physician of a slight aortic souffle. The patient was a lady in delicate health, of highly nervous organization. Not a trace of this murmur has existed now for ten or twelve years. In another recent instance similar alarm has been excited by the announcement of valvular disease of the heart to a lady, of his acquaintance, in whom no marked evidence of cardiac disability had shown itself, at least not enough to excite any apprehension of organic disease on the part of the patient or her friends, who all now feel that she may fall dead at any moment. Such an apprehension is hard to remove by any explanation, and he feared that too often physicians in their conscientious desire for accuracy of diagnosis in such cases were led into statements which conveyed a more serious meaning than they appreciated or than the indications justified.

DR. F. W. GOSS reported

A FATAL CASE OF PUERPERAL CONVULSIONS PRECEDED BY EXCESSIVE EPIGASTRIC PAIN.[1]

DR. C. M. GREEN said that since hearing of Dr. Goss's case he had searched for the literature of the subject, but without finding other cases than those mentioned by the reader. The description by Leishman is most vivid. He suggested that elimination of urea by the stomach might give rise to gastralgia.

DR. O. W. DOE said he had listened with great interest to Dr. Goss's paper, as it recalled a similar case occurring in his own practice. The patient, a primipara, thirty-two years of age, had a very easy confinement with twins. There had been no symptoms suggesting renal trouble either before, during, or directly after labor, which took place at about two A. M. At noon she began to complain of severe epigastric pain, which steadily increased, and at five P. M. she had a bad convulsion. Others followed in rapid succession, and she died at about eleven P. M., never having regained her consciousness after the first convulsion. He saw her at noon, when she first began to complain of pain, but considered it as arising from indigestion, and advised simple remedies accordingly.

DR. ABBOT said that the case reported and the supposed significance of gastralgia as a precursor of convulsions, brought to his mind the case of a lady in his practice, who in two successive pregnancies had suffered from this symptom even in a more marked degree than in Dr. Goss's patient, but without convulsions. She was at the eighth month of pregnancy, and in the absence of her physician Dr. Abbot was called. She had been suffering for some weeks from a pain at the epigastrium, which at first had been regarded as due to indigestion, and was treated as such. No relief had been obtained, and of late the symptom had increased in severity and frequency. During five days it had increased so as to amount to agony, causing great dyspnœa from interference with the movements of the diaphragm, coming on in paroxysms of some minutes' duration, and recurring at shorter and shorter intervals, sometimes as short as fifteen minutes. In degree it could only be compared to that of the severest labor pains. The urine was loaded with albumen, but of a specific gravity of 1028. The case had now become very urgent, calling for relief by premature delivery. This it was decided, on consultation with Dr. Storer, to produce. On making examination it was found that the process was already beginning, the os being dilated to the size of a quarter of a dollar. So intense, however, was the gastralgia that these pains had not been noticed by the patient. Active labor set in in a few hours, and the child was born living in about eleven hours after the commencement of the labor was detected. During this time there was no headache, and the gastralgia disappeared as the labor progressed and did not return. Albumen disappeared rapidly from the urine after the birth of the child, and a large amount of uric acid crystals with some fragments of gravel came away. During convalescence the patient suffered much from temporal and facial neuralgia. The child lived but a few hours.

Three years and a half afterward the patient went through a repetition of her experience in a subsequent pregnancy. The symptoms were, if anything, more severe than on the first occasion. The labor was premature, spontaneous, at the seventh month. There had been the same agonizing gastralgia as on the previous occasion, and for five months, as was afterwards learned, the patient had not been able to lie on her back with comfort on account of pain through the kidneys. The labor was short, only one hour and a half. Gastralgia, however, only subsided gradually after the birth of the child, requiring treatment for some days. The urine after the labor was scanty, loaded with uric acid, and contained much albumen and abundant casts; specific gravity 1014. She was nearly blind, being unable to recognize the features of a person by her bed-side until the third day after confinement. There was also much renal pain. For two weeks she suffered much from neuralgia in various places, and sight was fully restored only after some weeks. There was no headache during labor or the blind period following, nor were there any convulsions at any time. The patient made a good recovery, the kidneys gradually returning to a normal condition. She has since been in perfect health, but she has not been again pregnant.

DR. J. P. REYNOLDS said: It did not seem to him that we need assign a special cause for the epigastric cramp. In the presence of the central nervous disturbance which is impending, severe localized pain is set up. That which is so well recognized on one or the other side of the head is one instance of this; the epigastric agony is another. While listening to the remarks of the last speakers he had recalled a fatal case of eclampsia, in a multipara, in which there were two convulsions separated by an interval of three or four hours; and during that interval the burden of the patient's constant complaint was pain over the uterus, from which a fœtus of six and a half months had been expelled. In this instance a most interesting autopsy showed both kidneys enormously swollen, engorged with blood, as in some specimens of acute scarlatinous nephritis.

The Society is under especial obligations to the reader for reporting these rare and interesting symptoms; and it is still more indebted to him and to Dr.

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[1] See page 464 of this number of the JOURNAL.

Green for their careful investigation of the scanty literature of the subject. We shall all be set upon the watch for other similar cases.

OPHTHALMIC SYMPTOMS ACCOMPANYING IMPETIGO HERPETIFORMIS.

DR. F. B. GREENOUGH said that he had seen a case of skin disease on the face and side of the head, of a girl aged seven, that seemed interesting to him on account of the accompanying ophthalmic symptoms. The patient, by the report of her mother, an intelligent woman apparently, showed an impetiginous eruption about forty-eight hours before she was seen. At the time of visit there was a round patch on the right temporal region, just above the zygomatic process, nearly the size of a silver quarter of a dollar, covered with a yellowish honeylike crust, not surrounded by an areola of inflammation; another irregularly shaped and larger one above and behind the right ear, not extending outside of the hair, and a third one, oval in contour, about the size of a pigeon's egg, on the dorsum of the right hand. The pupil of the right eye was dilated so that the amount of the iris seen was not more than a line in thickness. The conjunctiva was not injected, and the other pupil was normal, reacting to light perfectly. The child was unable to give any intelligent account of her feelings as to the existence of pain, etc., nor could anything be decided as to vision.

The mother insisted that the only thing that had been applied to the eruption was some fresh lard, and denied the possibility of any atropine or belladonna having got into the eye.

The case was evidently not one of zoster, the character of the efflorescence being entirely different. It was, however, different from an ordinary case of impetigo, and was one of several that Dr. Greenough had seen in children recently, which he thought had been described as impetigo herpetiformis. Even if, however, the eruption had been a typical zoster, he thought the simple dilatation of the pupil without any symptoms of congestion, as shown by the perfectly normal conjunctiva, would be extraordinary, as in all the cases of zoster which he had seen in the region of the superior branch of the fifth pair, the affection of the vaso-motor filaments was manifested by decided ophthalmic inflammation, that is to say, where any ophthalmic symptoms existed. The mother stated that when she first saw the child, on the morning of visit, the right pupil was very much contracted.

DR. H. W. WILLIAMS said, in reply to a question by Dr. Greenough, that more or less of conjunctivitis, with disposition to corneal ulceration, is a common accompaniment of herpes zoster frontalis; as is also dilatation of the pupil; and when these conditions precede the appearance of the herpetic eruption they may give rise to the supposition that atropia or belladonna has been applied to the eye.

— An epic poem by Dr. F. W. Weber, a medical practitioner resident at Lippspringe, a health resort of N. W. Germany, entitled *Dreizehn Linden*, is spoken of by the English *Spectator* as the most important contribution made to the poetical literature of Germany since the days of Heine. Its scene is laid among the Saxons and Franks in the period following the death of Charlemagne.

Recent Literature.

A Treatise on Physiology and Hygiene. By JOSEPH C. HUTCHISON, M. D., LL. D. New York: Clark & Maynard. 1884. 319 pages.

This book, "for educational institutions and general readers," has reached the stage of being a "revised edition," and the circular of the publishers assures us that the youth of many cities are busily engaged in learning from it important hygienic lessons. If they are fortunate in having teachers well enough versed in physiological knowledge to bring in the not infrequently necessary corrections such lessons may be profitable, for the book contains much that is commendable in matter and in arrangement. The treatment of alcohol and tobacco is rather didactic, leaving the student to explain to himself why the older male members of the family have not become driveling idiots or afflicted with various complicated and wasting diseases. There is a chapter on the use of the microscope, but of the briefest and most meagre description. A longish appendix treats of poisons and emergency matters in a way to require much supplementary explanation and qualification from the competent teacher.

The illustrations of the Treatise are generally good and well printed; we have been unable, however, to decide whether the young woman, whose tight lacing furnished Fig. 5 (page 20), had only eleven ribs in the right half of her thorax.

A Practical Treatise on Surgical Diagnosis. By AMBROSE L. RANNEY, A. M., M. D. Third Edition. Wm. R. Wood, Publisher. 1884.

The appearance of a third edition of Ranney's Surgical Diagnosis within five years of the original work attests the popularity which it has acquired.

It is especially useful as a text-book and guide for students or beginners who are endeavoring to acquire a systematic habit in the investigation of disease. The present volume contains 137 more pages than the previous edition; the additional space being devoted to two new chapters upon diseases of the brain and spinal cord, in which the author treats at some length the localization of cerebral and spinal diseases.

The whole work has undergone careful revision, and is further enriched by numerous illustrations which do much to facilitate an understanding of the text.

Lectures on the Principles of Surgery. By W. H. VAN BUREN, M. D. Edited by LEWIS A. STIMSON, M. D. New York: D. Appleton & Co. 1884.

These lectures of Professor Van Buren's, beginning with the consideration of wounds and their various accompanying accidents, such as hæmorrhage, suppuration, shock, tetanus, septicæmia, pyæmia, erysipelas, etc., go on to treat of fractures, dislocations, and tumors under their more general aspects.

While the subjects are treated popularly as for presentation to a class of students, their scientific and pathological bearings are not neglected.

The book is well worth the attention of students, who will find in it vigorous statements of truths that will be constantly applicable in their future surgical work.

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ATONIC DILATATION OF THE STOMACH.

In a preceding number (October 30th) we referred to the pathogenesis of atonic dilatation of the stomach as set forth by MM. Sée and Mathieu in the *Revue de Médicine.* In a later issue[1] of the same periodical these writers develop their views in regard to the symptomatology, diagnosis, and treatment of this condition which unquestionably, though sufficiently common, is often overlooked or but ill understood. Even in the latest editions of our most approved text-books atonic dilatation of the stomach, as distinguished from dilatation the result of obstruction, is dismissed rather cursorily.

The symptoms vary considerably in the acute and chronic forms, in the earlier and later stages, but in general the muscular walls of the stomach are thin and the vomitus is free from blood, two points upon which to base a differential diagnosis as against obstructive dilatation. A reliable diagnosis can only follow repeated examinations.

The symptoms may be divided into physical and functional. The former declare themselves upon inspection, percussion, succussion, and auscultation and internal exploration; the latter — the functional symptoms — declare themselves by flatulence, pains (which may be spontaneous or provoked), vomiting, constipation, dyspepsia (deranged gastric chemistry), and general constitutional disturbance.

According to the predominance of one or another set of these symptoms, MM. Sée and Mathieu find it convenient to divide their cases into a simple class, a painful class, a class characterized by gastric repletion, and a dyspeptic class.

Inspection furnishes but little reliable information. The epigastrium may be unduly prominent or even very much distended, but the value of this symptom can only be determined by percussion. Sometimes peristaltic movements of greater or less energy can be seen through the abdominal walls. Percussion yields far more important information, but must be pursued methodically and with precision, and repeated frequently under varying conditions and positions. The vertical extent of the gastric tympany is the principal point. By percussing from several points of departure the upper border of the stomach can be determined without much difficulty, but the lower border is sometimes not made out so easily, though frequently, by percussing carefully upward from a point about midway between the pubes and the umbilicus until the small intestine is reached, and then diverging towards the border of the false ribs at the mammillary line, the line of the greater curvature may be also marked out. When difficulty is encountered the splashing sound of liquid in the stomach or of liquid introduced for the purpose may be of much assistance; and in all cases further information may be gained as to the gastric distention or distensibility by emptying the stomach with the siphon tube or by introducing effervescing mixtures. The healthy stomach and the dilated stomach both vary greatly, of course, in their size under different circumstances, — and even at times during an examination, — but these writers think one is justified in diagnosticating a *distention* when the upper and lower borders of the gastric tympany are found on a single occasion twelve to fourteen centimetres (five to six inches) apart, and a *dilatation* when that space is found constant at five or six successive examinations under varying conditions, and in various attitudes. The introduction of a sound into the stomach as a means, combined with external palpation, of determining the size of the stomach, as suggested and practiced by Leube, is not approved, and is stigmatized as highly dangerous. The gastric walls in many of these cases are certainly very thin. Succussion and splashing, as interpreted by auscultation, have a minor value among the physical signs of dilatation.

The functional symptoms when present, which is generally but not always the case, are characteristic and of themselves indicate strongly the presence of the condition. Flatulence in an extreme degree supervenes immediately after meals and persists for several hours accompanied by swelling and a sense of weight at the epigastrium. Pains springing from the epigastrium and radiating out towards the thorax, the abdomen, and the left hypochondrium supervene by crises varied by periods of vague, dull discomfort; these crises of epigastric pain are not accompanied by vomiting as is the case with the gastric crises of locomotor ataxia and with hepatic colics. Pains may also be provoked by pressure or by the ingestion of very cold or acid fermented drinks. The point of greatest tenderness is then usually just under the upper border of the false ribs on the right. Vomiting is not very frequent in moderate cases of atonic dilatation, but belongs especially to the pronounced forms where the stomach has become an inert pouch passively distended with a semi-liquid fermenting mass, and to cases with a hysterical element; in both of which classes the vomiting is not seldom attended by convulsions and tetanic phenomena, due to the dehydration of the blood and anæmia of the nervous centres. Constipation, often obstinate and alternating at long intervals with attacks of profuse diarrhœa, is a common symptom. The dyspepsia which may be absent, or may precede but generally follows atonic dilatation, is marked by bitter regurgitaion and acid vomiting. In simple dilatation the digestion is often performed completely, a good appetite preserved, and scarcely any general depression is present. As for the constitutional effects, it is not always easy to estimate how far they result from the ectasy and how far from the causes which produced the ectasy itself. Frequently there is a vicious circle, but sometimes a simple washing out of the viscus shows that the frontal headache, the malaise, the inaptitude for mental work, the vertigo, the fainting turns were secondary to and dependent upon the dilatation.

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[1] September 10, 1884.

The treatment of these cases may be classed under two heads: the pathogenic and the symptomatic treatment. By the former one seeks to avoid or suppress the causes which provoke a dilatation, and to modify a general condition of health which give those causes a favorable opportunity to assert themselves; by the latter one palliates the annoyances of a state which there may be no hope of curing. The fact that simple dilatation is a tolerably common sequel to typhoid fever gives a clue to its mode of origin and mode of cure.

Excessive alimentation and substances causing gastric relaxation must be avoided. The motor functions of stomach and intestines must be regulated. Constipation it is of prime moment to overcome. The muscular coat of the stomach should be excited to action — by electricity if need be externally or internally. The attacks of pain should be controlled, and chloroform water does good service for this purpose except with some hysterical patients. For washing out it may be used in the proportion of one part to three of pure water — care being taken to leave very little of this mixture in the stomach, and to follow it by a second washing with plain water. Washing out with an alkaline water, such as Vichy, may also be employed to combat a dyspepsia accompanied by an excessive mucous or fermentative acid secretion.

Want of space has made it impossible to follow MM. Sée and Mathieu in all the details of their suggestive articles, which are not improved in form by a somewhat minute repetition of the points they desire to present, but we are glad to call attention to so praiseworthy an effort to elucidate a somewhat obscure and neglected pathological condition.

* * *

THE VITAL STATISTICS OF MASSACHUSETTS FOR THE YEAR 1883.[1]

WITH an estimated population of 1,985,335, in the year 1883, there were in Massachusetts 47,285 births, 18,194 marriages, and 37,748 deaths during the year, — 23.82 births, 9.16 marriages, and 19.01 deaths to each 1000 persons. For the twenty years from 1860, the birth-rate in this State is less than that of any prominent European country, and the excess of births over deaths is less than ours only in France and Hungary. The rate of natural increase of the population is less in Massachusetts in the native than in the foreign population.

There were 899 illegitimate births during the year, and 1489 still-born. Of those born alive the proportion of males to females was 106.6, the average for thirty years being 105.7. Of the still-born nearly three fifths were males. The proportion of illegitimate to legitimate births has doubled in twenty years, and 12.6 per cent. more are of native than of foreign mothers.

The marriage-rate was a trifle less than in 1882, but just above the rates for the previous years since 1874. Fourteen thousand five hundred and sixty-two bachelors married maids, and 795 married widows; 1795 widowers married maids, and 961 married widows. There were 2835 widowers married and 1835 widows. Thirty-six and eight tenths (36.8) per cent. of the males and 46.4 per cent. of the females were married between the ages of twenty and twenty-five; 32.3 per cent. of the males and 21.7 per cent. of the females between twenty-five and thirty; 12.6 per cent. of the males and 7.1 per cent. of the females between thirty and thirty-five; 1.7 per cent. of the males and 16.2 per cent. of the females under twenty. In sixteen marriages of males and twenty-five of females the age was not reported. Seven hundred and fifty-one men and 268 women were married over fifty years old; twenty men and two women over seventy-five, and six men over eighty.

There were 655 divorces granted during the year: 157 for adultery, 321 for desertion, 83 for intoxication, 29 for extreme cruelty, 50 for cruel and abusive treatment, 13 for neglect to provide. The number of marriages has increased from 12,513 in 1864 to 18,194 in 1883, the number of divorces from 270 to 655.

The death-rate per 1000 of the population (19.01) was .13 lower than that for 1882, .51 less than the rate in 1881, .21 lower than the average for the five years, and .25 lower than the mean for the thirty years previous to 1881. It has been exceeded but thirteen times since 1850.

In the third quarter of the year 28.38 per cent. of the deaths occurred; in the second, 24.65; in the first, 23.87; in the fourth, 23.10, the usual order being third, first, fourth, second.

The death-rate of males, like the birth-rate, was about six per cent. higher than for females. Under one year of age 835 more males died than females, or a percentage difference of 4.53; under the age of five this excess amounted to 4.85 per cent. Between twenty and thirty the deaths of females exceeded those of males 1.79 per cent., and of all other ages 3.05 per cent. Nineteen and nine tenths per cent. of the entire mortality occurred under one year of age, and 31.39 per cent. under five, — proportions which are very similar to those for a period of years. The ratios of infant mortality under one year and under five years were lower in 1883 than the average for twelve years; the proportions of deaths between twenty and thirty and for all other ages were higher.

The lowest average death-rate is for the ages from ten to fifteen, and is about four per 1000; next, about 6.50, from fifteen to twenty; and highest, nearly 200, under one. The average age of all persons dying has been rising in the last few years, owing to the decreased infant mortality.

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[1] Forty-second Report to the Legislature of Massachusetts relating to the Registry and Returns of Births, Marriages, and Deaths in the Commonwealth for the Year ending December 31, 1883; together with the Report relating to the Returns of Libels for Divorce for the Year 1883. Prepared under direction of the Secretary of the Commonwealth. With editorial remarks by Frank Wells, M.D. Boston: Wright & Potter Printing Co., State Printers. 1884.

From "zymotic" diseases the death-rate for 1883 was less than for any year since 1872, and 5.1 below the average for the past twelve years: —

MORTALITY FROM PROMINENT "ZYMOTIC" DISEASES.

Years	Dysentery.	Typhoid Fever.	Whooping-Cough.	Croup.	Diphtheria.	Measles.	Scarlatina.	Cholera Infantum.	Small-Pox.	Total.
1872	564	1703	363	480	273	428	1377	3254	1029	9471
1873	435	1406	264	435	310	180	1472	2553	668	7723
1874	366	1147	449	411	502	161	1382	2322	26	6766
1875	437	1059	242	680	1200	233	1684	2606	34	8175
1876	417	881	192	684	2610	47	1222	2087	31	8171
1877	580	814	369	544	2634	135	467	1927	26	7496
1878	602	679	400	583	1934	305	404	1573	2	6482
1879	372	637	302	559	1734	19	850	1349	8	5830
1880	345	882	230	625	1769	236	574	2118	38	6867
1881	360	1072	217	677	1706	230	397	1861	47	6567
1882	398	1079	265	491	1280	68	318	2159	45	6103
1883	336	860	137	530	1091	321	575	1941	5	5796

Pulmonary consumption caused 5931 deaths in 1883, as compared with 5865 in 1882, and 5886 in 1881. From cancer the deaths were 1026, or thirty-nine more than the previous year. For many years, the reported mortality from pulmonary consumption has been decreasing and from cancer increasing. There has also been a striking increase in the fatality from Bright's disease and from cerebral diseases.

In 1883 there were 3562 deaths from disorders of the brain, — 1845 males and 1717 females. Of this number, 495 males and 561 females died from paralysis; 596 males and 469 females from "cephalitis"; 412 males and 372 females from apoplexy; 87 males and 96 females from insanity; 74 males and 48 females from "softening of the brain"; 181 males and 171 females from unspecified diseases. From apoplexy and paralysis, taken together, there occurred 546 deaths between the ages of seventy and eighty; 436 between sixty and seventy; 395 over eighty; 253 between fifty and sixty; 142 between forty and fifty; 84 between thirty and forty; 74 under thirty; 18 under five. Comparing the statistics of 1883 with those for 1860, since which year there has been almost unbroken advance in the mortality from brain disorders, it will be found that there has been an increase of 156.9 per cent. in the number of such deaths, as against an estimated increase of 61.2 per cent. in the population. In the same period apoplexy has advanced 229.4 per cent. in its mortality, paralysis 162.6, and insanity 157.7 per cent. There has been an almost steady annual increase in the number of deaths from Bright's disease from 140 in 1870 to 582 in 1883, or 315.7 per cent.

The number of deaths from heart disease, bronchitis, pleurisy, peritonitis, and pneumonia remains quite high.

The various accidents of pregnancy and labor were less fatal by forty-six deaths than the twelve years average. Adding the number of deaths from puerperal fever (127) to the other fatal accidents of childbirth, the result gives, as a proportion, one death in every 145.4 labors, as compared with 140.5 in 1882, and 136.6 in 1881.

Of the violent deaths, 448 were from drowning and loss at sea, 185 from railroad accidents, 167 from suicide, 106 from burns and scalds, 76 from suffocation, 50 from heat, 39 from poison, 18 from exposure, 14 from strangulation, seven from homicide, four from freezing, four from lightning, one each from the administration of chloral and chloroform.

The report, with accompanying tables, from which we have made the above extracts, is to be had at the document room in the State House, and will well repay careful study.

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CHOLERA IN PARIS.

The presence of cholera in Paris is now known, acknowledged, and officially recognized. Sporadic cases have undoubtedly occurred through the summer, and it is probable that the reports of such which were in circulation late in June and early in July were correct. The French daily papers say that from June 20th to the first week of this month there had been 160 cases of cholera in the city with sixty deaths. There was quite a little epidemic in July at Aubervilliers, a town of 8000 inhabitants, four or five miles north of Paris, which is provided with a miracle-working picture of the Virgin, but not with good water and drainage. Now the disease seems to have established itself pretty firmly in the poor quarters of St. Antoine and Menilmoutant, and further concealment is impossible. The chief centre is said to be in a miserable little street running out of the Faubourg St. Antoine, about half-way between the Bastile Square and the Place de la Nation. In this short street there are fifty-eight rag houses and thirty-three saloons of the lowest kind.

All the daily newspapers contain telegraphic reports of the number of fresh cases and deaths since Wednesday, November 5th, but these reports are conflicting and unreliable. During the forty-eight hours from Friday morning to Saturday midnight there were reported 183 new cases and sixty-three deaths. Quite a number of cases are, probably, not reported at all to the authorities. Cases are also reported from several towns in the northern departments, from Nantes, Montreuil, St. Nazaire, and from places on the Channel near Calais.

The weather in France has been mild, foggy, and rainy. In Paris there is at present a great deal of poverty, owing to long-continued depression in business; the water supply from the Seine is hard, and predisposes to diarrhœa; the sewers are better adapted for exhibition to admiring strangers than for removing waste.

In the three first cholera epidemics, those of 1833, 1848, 1854, France and Paris were invaded from England, which in turn derived the disease from North Germany, the poison attacking Europe by land. In 1865–1866 it entered Europe at Constantinople, and France at Marseilles, being transported, as in the present epidemic, by water, and approaching Paris from the south.

MEDICAL NOTES.

— Dr. S. Weir Mitchell records in the July number of *The American Journal of the Medical Sciences* three cases of hysteria in which there was unilateral increase in bulk at or near the menstrual period, and also at other seasons after emotional excitement, and he has been unable to find elsewhere any narration of similar cases. The writer cannot explain the causes of this phenomenon further than to say that they are under the influence of the nervous system, and vary with the causes which also increase or lessen the analgesia or give rise to chronic spasm. Most probably, he thinks, in many unilateral hysteric palsies a like phenomenon exists, and has merely escaped attention because of being the least prominent in a group of symptoms. At all events it adds another to the large group of resemblances which so closely relate organic to hysteric hemipalsy.

— Among the indictments returned last week by the grand jury for Suffolk County was one for manslaughter against Dr. Helen Cumming, of South Boston, for causing the death of Isabella B. Hill on August 1st last. Mrs. Hill at the time was visiting her friends in South Boston, and suffering with a cold, called in the defendant to prescribe for her, and in leaving medicines Dr. Cumming carelessly gave a poisonous dose of fluid extract of St. Ignatius bean, and on taking it, according to directions, Mrs. Hill only survived the first dose about three hours. This case is similar to that of one Pierce, an irregular medical practitioner of Worcester, who was convicted of manslaughter in administering kerosene oil to a patient, and which is now pending before the full bench of the Supreme Court on exceptions, and a final decision in which will be of great interest to the public.

Correspondence.

CONSERVATIVE SURGERY.

Mr. Editor, — I wish to draw the attention of the profession to a work on surgery by Henry G. Davis, M. D., now of Newton, Mass., published by D. Appleton & Co. in 1867.

It has not received the wide recognition and credit due to it or to its distinguished author. Many of the important points brought out in this valuable work were original with Dr. Davis, and were by him first introduced to the medical profession of New York.

In this short note I purpose referring to a few of the most important and interesting points contained in the work with the hope that this volume will find its way more widely to the libraries of the general practitioner, especially those remote from the large cities, the country physician.

In the opening article on Fractures the doctor makes the broad assertion "that when adhesive plaster is applied over the bellies of muscles and extension made therefrom the effect in restraining the action of the muscle is the same as when extension is made from the bone into which the muscle is inserted." He then goes on to prove this principle, and illustrates in fracture of the patella, fracture of the processes about the elbow, and more at length in intercapsular fractures.

Then follows a discussion on "Old Dislocations," in which the old method of treatment is condemned, and a new one, the result of his own investigations, brought forward instead. This principle is contained in the three words, "continued elastic extension," and applies to all dislocations, which, Dr. Davis asserts, can be successfully reduced *without violence*. He maintains that the *continuous elastic extension* elongates the soft tissues, corrects deformities, and restores the parts to a normal condition. The same rule applies to the ligaments as well as all other tissues. Length of time that a dislocation has existed does not debar a successful issue by his method of treatment.

Dr. Davis applies his treatment upon the principle above set forth successfully in congenital dislocations as well as those following traumatic injury. In morbus coxarius and diseases of other joints he claims to be equally successful, and in all he illustrates by plates and diagrams as well as clearly worded descriptions of his methods and appliances.

The advantages of *continued elastic extension* the doctor considers to be twofold: first, the gradual overcoming of the contraction of muscular tissues, and second, the lengthening of all the shortened tissues. This is effected by the new material deposited, which, being in a plastic state, must necessarily be longer when organized than the old, whether that be muscle, tendon, or ligament, and thereby the tendency to contraction or shortening be remedied.

On this principle he has reduced dislocations of the hip at all periods up to fourteen years, and this was done without injury to the parts or suffering.

In his article on Congenital Dislocations he gives many interesting facts, and clearly describes the manner in which reduction can be effected and maintained.

The best effects of *continuous elastic extension* are most marked in diseases of the joints. In morbus coxarius it overcomes muscular contraction, thereby removing the pain and rendering the patient comfortable and free to exercise and enjoy the days while recovery is taking place. One writer has clearly described the beneficial effects and relief obtained in the words, "It robs the disease of all its terrors."

The principle, in Dr. Davis's treatment of disease of the joints, is to keep the diseased surfaces separated until the parts have healed, then trouble will not ensue when they are again brought in contact. He considers the pressure caused by the contraction of the muscles as the principal cause of the destruction of the joint, and if the treatment is commenced in the early stage the patient will recover with a good joint. The doctor has devised apparatus — some twenty-five different splints and appliances — for carrying out his ideas.

The doctor is very emphatic in his declaration that bony union, or anchylosis, never takes place between ulcerated bony surfaces any more than it will between ulcerated surfaces of the mucous membrane; that the fixture is from the shortening of all the tissues about a joint, and can be overcome by continuous extension; that he has restored full motion even after fourteen years of fixture, and that his plan of treatment gives greater hope of success than any other.

His interesting chapter on Pott's Disease describes how the form can be kept erect, with his appliances, and deformity prevented.

His chapter on Phthisis Pulmonalis is very interesting and instructive, and contains many ideas new and valuable.

Dr. Davis's Conservative Surgery takes up and discusses only a few of the many diseases the surgeon is called upon to treat. But these few are handled in a masterly manner, his descriptions being clear and concise, his methods and plans of treatment excellent, apparently founded on accurate scientific principles, and taken altogether this is really a valuable contribution to the profession. J. F. Frisbie, M. D., Harv., '61.

Newton, Mass.

"TUMORS OF THE BLADDER."

Mr. Editor, — In your report of a recent discussion upon "Tumors of the Bladder," the subject of suprapubic incision does not, I think, receive the notice it deserves, and I take the liberty of sending you a report of my remarks upon the present state of our knowledge in regard to the relative value and applicability of the suprapubic and perineal incisions in dealing with these neoplasms: —

I said that I thought the question of preference between the median perineal operation (French boutonnière) and the suprapubic incision for these cases ought to be considered still an open one.

The suprapubic operation fell into disrepute and disuse during the time before antiseptic methods were properly understood.

This operation has for some years been the subject of much study by Continental surgeons, and many improvements in method have been introduced which greatly simplify the procedure and obviate previous difficulties.

One of the most important of these is the use of the rectal balloon of Petersen. This is employed as follows: The bladder is filled with water, and a rubber bag attached to the nozzle of a syringe is then introduced into the rectum. As this is inflated, the bladder is pressed upwards and forwards against the abdominal wall, and fixed there. The anterior peritoneal fold, always the bugbear of the operation, is lifted up out of harm's way, so that with ordinary care it can be avoided.

Another recent improvement in this operation is the application of thorough drainage to the bladder wound. Formerly efforts were commonly made to close the wound in the vesical wall with sutures. But although this attempt sometimes succeeded it not infrequently led to a fatal infiltration of urine. It is now found to be safer to leave the bladder wound widely open, and to introduce one or more large tubes through it to supply necessary drainage until the loose cellular tissue about closes itself by granulation. Excellent results are claimed for this method.

Professor Guyon prefers the suprapubic incision for dealing with neoplasms of the bladder on the ground (1) that the high operation, by allowing free access to the viscus, gives opportunity for a much more thorough and certain removal of the new growth; (2) that the possibility of getting the finger in alongside of the instruments lessens the danger of nipping or otherwise injuring the bladder wall; (3) that no important parts are injured by the suprapubic incision, which also avoids the danger of hæmorrhage; and (4) that the wound can be made and dressed antiseptically, thereby reducing the chances of septic infection.

If this belief in the comparative safety of the high operation, which Professor Guyon shares with so many other Continental surgeons, is well grounded, it will certainly be conceded that in view of the much easier access it affords to the bladder it should be employed in cases where the growth is presumably benignant, and a thorough removal is necessary to prevent its recurrence.

When, however, the symptoms are those of a malignant growth, and the object of interference is mainly to establish drainage, the operation which enters the bladder at a dependent point is manifestly best.

Truly yours, A. T. Cabot, M. D.

3 Marlborough Street.

Miscellany.

PREVENTION OF OPHTHALMIA NEONATORUM.

Dr. Henry J. Garrigues writes on this subject, in the *American Journal of the Medical Sciences* for October, detailing his experience in the New York Maternity Hospital, where the character and social grade of the patients is such as to make the disease very common. The results of curious treatments are given, including carbolic ante-partum injections, but the percentage of cases remained high, and the prognosis as to sight bad. Credé's method, introduced in the year 1880, consists in *washing the outer surface of the eyelids with plain water, separating them slightly, and letting a single drop of a two per cent. solution of nitrate of silver fall from a glass rod on the cornea.* No after-treatment is used. Since Credé introduced this method in his clinic in 1880 until the end of March, 1883, he treated 1160 children in this way, and only four, that is, little more than one third per cent., were affected, and of these two or perhaps even three must be eliminated on account of particular circumstances, so that in reality the percentage becomes almost none.

This method was introduced by Dr. Garrigues on the 14th of October, 1882, in Maternity Hospital, and kept up till the end of March. After that time it was discontinued, but during his next term, from the 1st of October, 1883, till the 31st of March, 1884, he followed the same plan. Thus it was tried for almost twelve months, during which there were born 352 living children in the hospital. In one case which during the absence of the house surgeon was delivered by an assistant, the application was neglected, and this child had a purulent conjunctivitis with opacity of the cornea. Although it was transferred to the eye ward in order to be under the treatment of specialists for diseases of the eye the case ended in complete loss of sight in both eyes. As a counterpart to this, *of the 351 children who were treated as prescribed not a single one was affected.*

In a few cases was observed a slight serous discharge from the conjunctiva. In the first of this kind that occurred compresses dipped in ice-water were applied, and the eyes washed with a saturated solution of boracic acid. Later no treatment whatsoever was used, and the slight irritation, which evidently was due to the instillation, disappeared in the course of a couple of days. How little the eyes are affected by the silver solution is best shown by cases in which, through carelessness, so much of the solution was introduced that the eyes became surrounded by black rings. This happens easily in the hurry of a delivery room if the application is made with one of the common squirters which are used for counting drops. It is, therefore, better to use a small *solid* glass rod, which retains only a single drop when dipped into the bottle containing the solution. This application is made immediately after the cord has been severed, which is not done before the pulsation in it has ceased. During the following ablution great care is taken that no foreign substance enters the eyes.

As some might think the treatment unnecessarily harsh, it is stated that Hecker, in Munich, used a one per cent. solution of nitrate of silver, and had almost as many cases of ophthalmia neonatorum as before. Credé himself tried first a solution of borax (one to sixty) without satisfactory result. His treatment with the two per cent. silver solution having almost banished the disease from the lying-in wards, and no bad accidents having occurred in the thousands of cases in which it has been used, there seems to be good reason for adhering strictly to the method as practiced by its originator.

The writer does not recommend this treatment as yet as a routine in cases of private practice in view of the comparative rarity of the disease in such cases, and because until the treatment and its immense value have become more generally known in and outside of the profession the physician might be blamed if it should happen that the eyes became a little inflamed, as they do in some cases. The only exception he would make from this rule, for the time being, is when it is known that the mother or father of the child recently has had a gonorrhœa. Here the danger for the child is so great that we ought to protect it, which easily can be done under some plausible pretext. Even if the gonorrhœa in the father is of old date it might be advisable to have recourse to the preventive treatment, since Dr. Noeggerath has shown how persistent this disease may be even without giving rise to any symptom which would call attention to it.

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POISONING BY CANNED FOODS.

His attention being called to the subject by the occurrence in his practice of six cases of corrosive poisoning, according to his diagnosis, from eating canned tomatoes, Dr. John G. Johnson, of Brooklyn, New York, inquired into the general question of poisoning by canned goods, and presented a paper on it before the Medico-Legal Society of New York, April 9th of this year. We reproduce the general conclusions of this paper as an answer to some of the queries excited by our editorial comments of October 16th on the Safety of Canned Foods. —

(1.) The six cases were not cases of sickness from spoiled tomatoes. (2.) They were cases of corrosive poisoning from muriate of zinc and muriate of tin. (3.) This poisonous amalgam must be abandoned. (4.) Exemplary damages, "at the discretion of the jury," will be sustained by the courts for this reckless tampering with human life in using a dangerous means when a safe one could be used. (5.) The canners have only themselves to thank for the present panic in their business, for they have persisted in this dangerous plan, knowing it was dangerous. (6.) Every cap should be examined, and if two holes are found in it send the can at once to the Health Board, with the contents, and name of the grocer who sold it. (7.) Reject every article of canned food that does not show the line of rosin around the edge of the solder of the cap, the same as is seen on the seam at the side of the can. (8.) Reject every can that does not have the name of the manufacturer or firm upon it as well as the name of the company and the town where manufactured; "standards" have all this. When the wholesale dealer is ashamed to have his name on the goods fight shy of them. (9.) Press up the bottom of the can; if decomposition is commencing, the tin will rattle the same as the bottom of the oiler of your sewing machine does. If the goods are sound it will be solid. and there will be no rattle to the tin. (10.) Reject every can that shows any rust around the cap on the inside of the head of the can. If housewives are educated to these points then muriate of zinc amalgam will become a thing of the past, and dealers in "swells" have to seek some other occupation.

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THE CROW AND THE COUNTRY DOCTOR.

(A MEDICAL FABLE.)

A flock of Crows was much alarmed one day at the sight of a strange object in the midst of a field upon which they customarily fed. They at once called upon an Old Crow who practiced his profession in those parts, and who made a specialty of corns, to give his opinion about the matter. The Crow, having examined the object, shoŏk his head, and said that it was a serious case, and that it was lucky he had been summoned so soon, though he should have been called earlier, and he would like the advice of his friend, the Owl, who had had the benefit of travel abroad, and who was particularly skillful in cases which called for the Steady Use of the Eyes. He would also like to have the Frog, who was spending his summer vacation by a neighboring pool, and who had a wide reputation for his physiological knowledge, to see the case. The Crow, the Owl, and the Frog, met, and having studied the object at a suitable distance withdrew to the shade of a High Wall in order to deliberate. The Frog first opened his mouth, and observed that it was a nice Case, which reminded him of a very curious experience that he had had with a piece of Red Flannel two summers before, when he received a severe contusion upon the centre of Goltz. After telling all about this very apposite event, the Owl observed that such cases were extremely rare. He had, however, had two very much like them, the details of which he had forgotten. He then related some very humorous obstetrical stories, which much amused the Crow.

Having received these opinions, the Crow thanked his Colleagues for the valuable light they had furnished. He had himself been at first disposed to think the trouble a case of *Terror Corvorum*, or Scare-Crow;

but the advice given reminded him now that the appearance in the cornfield exactly resembled a country doctor whom he occasionally met, and who, after practicing medicine for forty years, was at present trying to live on What he had Saved.

This diagnosis was finally agreed upon, and reported to the anxious Crows outside, who were much relieved.

Moral. This story shows the profit that is got from consultation, and the lucrative nature of the practice of medicine.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 1, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	622	215	22.56	17.92	7.84	2.40	8.00
Philadelphia	927,995	320	112	19.45	10.99	1.88	2.83	12.87
Brooklyn	644,526	—	—	—	—	—	—	—
Chicago	632,100	—	—	—	—	—	—	—
Boston	423,800	188	56	17.49	23.32	2.65	3.18	5.32
Baltimore	408,520	—	—	—	—	—	—	—
St. Louis	400,000	166	61	29.40	10.20	9.60	3.60	10.20
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	84	29	22.61	19.04	2.38	4.76	7.14
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	52	15	13.44	15.36	3.84	3.84	—
New Haven	62,882	18	—	16.66	27.77	5.55	11.11	—
Nashville	54,400	20	5	25.00	15.00	5.00	10.00	10.00
Charleston	52,286	26	10	11.55	11.55	3.85	3.85	—
Lowell	71,447	31	10	22.61	9.69	9.69	—	9.69
Worcester	69,442	15	10	26.66	13.33	—	—	26.66
Fall River	62,674	31	18	41.94	—	19.38	—	9.69
Cambridge	60,995	14	3	42.84	21.42	21.42	7.14	14.28
Lawrence	45,516	11	8	—	—	—	—	—
Lynn	44,895	—	—	—	—	—	—	—
Springfield	38,090	—	—	—	—	—	—	—
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	11	6	63.63	9.09	9.09	18.18	18.18
New Bedford	30,144	9	5	33.33	11.11	11.11	—	22.22
Salem	29,503	10	3	30.00	30.00	10.00	—	10.00
Chelsea	24,347	5	3	60.00	20.00	60.00	—	—
Taunton	22,693	6	1	16.66	33.33	—	—	16.66
Gloucester	21,400	2	0	—	—	—	—	—
Haverhill	20,905	—	—	—	—	—	—	—
Newton	19,421	—	—	—	—	—	—	—
Brockton	18,323	—	—	—	—	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	1	25.00	—	—	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Eighty-one Massachusetts towns	—	61	7	21.32	14.76	6.56	6.56	3.28

Deaths reported 1706: under five years of age, 578; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 386, consumption 268, lung diseases 184, diphtheria and croup 149, diarrhœal diseases 105, typhoid fever 53, scarlet fever 22, malarial fevers 16, whooping-cough 14, measles 13, cerebro-spinal meningitis nine, erysipelas three, puerperal fever two. From *scarlet fever*, Philadelphia, Boston, and St. Louis four each, District of Columbia three, Woburn two, New York, Holyoke, Salem, Newburyport, and Bradford one each. From *malarial fevers*, New York nine, St. Louis six, Charleston one. From *whooping-cough*, New York six, Boston five, District of Columbia three. From *measles*, New York nine, Fall River three, Philadelphia, one. From *cerebro-spinal meningitis*, Fall River three, New York, Philadelphia, St. Louis, District of Columbia, Lowell, and Holyoke one each. From *erysipelas*, Boston two, Fall River one. From *puerperal fever*, New York and Boston one each.

Cases reported in Boston: typhoid fever 57, scarlet fever 55, diphtheria 36, and measles 18.

In 93 cities and towns of Massachusetts, with an estimated population of 1,167,683 (estimated population of the State 1,955,104), the total death-rate for the week was 17.72 against 17.70 and 17.62 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending October 25th, the death-rate was 20.9. Deaths reported 3517: infants under one year of age 869; acute diseases of the respiratory organs (London) 274, diarrhœa 105, scarlet fever 67, measles 55, fever 66, whooping-cough 46, diphtheria 62, small-pox (London 15, Liverpool, Hull, Birmingham, and Wolverhampton one each) 19. The death-rates ranged from 16.5 in Sunderland to 31.5 in Preston; Birmingham 20.9; Birkenhead 18.4; Bradford 20.4; Leeds 24.9; Leicester 20.4; Liverpool 26.4; London 19.0; Manchester 26.1; Nottingham 22.4; Sheffield 20.3. In Edinburgh 17.6; Glasgow 25.1; Dublin 26.8.

For the week ending October 18th, in the Swiss cities, there were 36 deaths from consumption, diarrhœal diseases 28, lung diseases 12, diphtheria and croup five, whooping-cough two, typhoid fever one, small-pox one. The death-rates were, at Geneva 8.2; Zurich 7.9; Basle 11.6; Berne 33.3.

The meteorological record for the week ending November 1st, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Oct.–Nov., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11 23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 26	30.552	39	48	31	63	48	59	57	W	NW	S	15	2	7	C	C	C	—	—
Mon., 27	30.340	52	58	38	73	67	80	73	S	SW	SW	8	15	20	O	O	O	—	—
Tues., 28	30.131	57	64	49	79	90	68	79	SW	SW	W	12	18	11	O	R	O	—	—
Wed., 29	30.352	45	50	40	65	65	91	74	NW	E	E	9	11	12	C	O	R	—	—
Thurs., 30	30.185	43	48	41	100	96	100	99	E	N	NE	19	17	20	R	R	R	—	—
Fri., 31	29.984	40	49	36	100	88	89	92	NE	NE	N	24	21	13	R	O	Snow	—	—
Sat., 1	29.825	45	50	32	91	82	79	84	N	SW	SW	3	6	14	O	O	O	—	—
Mean, the Week.	30.196	45	52.4	38.2				79.7										58.15	2.06

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM NOVEMBER 1, 1884, TO NOVEMBER 7, 1884.

SPENCER, W. C., major and surgeon. Ordered to Fort Trumbull, Conn., for duty as post surgeon, relieving assistant surgeon William J. Wilson, U. S. A., who will report at Department Headquarters, and await further orders. S. O. 227, Department of East, November 5, 1884.

TOWN, F. L., major and surgeon. Assigned to temporary duty as post surgeon, Fort Clark, Texas. S. O. 145, Department of Texas, October 27, 1884.

BENTLEY, EDWIN, major and surgeon. To be relieved from duty at Fort Clark, Texas. S. O. 145, Department of Texas, October 27, 1884.

CORBUSIER, W. H., captain and assistant surgeon. Ordered to Fort Grant, A. T., for duty as post surgeon. S. O. 102, Department of Arizona, October 30, 1884.

HOPKINS, WM. E., first lieutenant and assistant surgeon. Ordered to Fort Lowell, A. T., for duty as post surgeon. S. O. 102, Department of Arizona, October 30, 1884.

EGAN, PETER R., first lieutenant and assistant surgeon. Relieved from duty at Fort Lowell, A. T., and ordered to Fort Bowie, A. T., for duty as post surgeon. S. O. 102, Department of Arizona, October 30, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY DURING THE WEEK ENDING NOVEMBER 8, 1884.

CRAIG, THOMAS C., passed assistant surgeon. To the Alliance, for temporary duty. November 1, 1884.

SWAN, ROBERT, passed assistant surgeon. Detached from the Naval Hospital, Norfolk, Va., and placed on sick leave. November 3, 1884.

WIEBER, F. W. F. Appointed assistant surgeon. November 3, 1884.

SUFFOLK DISTRICT MEDICAL SOCIETY. *Obstetric and Gynæcological Section.* — There will be a meeting of this Section at the large Medical Library Room, 19 Boylston Place, on Wednesday evening, November 19th, at 7.45 o'clock. Communications: Dr. Stephen W. Driver, of Cambridge, will, by invitation, read a paper entitled An Analysis of One Thousand Successive Obstetrical Cases. Following which Dr. Royal Whitman will report A Case of Placenta Prævia; Delivery by Version. It is especially urged upon all members of the Suffolk District Medical Society, whether members of this particular Section or not, to attend these meetings, take part in the discussions, and help to make the section a Success. All members of the Massachusetts Medical Society will be welcome at any of the meetings of the Section, and are invited to take part in the discussions.

JAMES R. CHADWICK, M. D., *Chairman.*

ROBERT B. DIXON, M. D., *Secretary.*

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Mumps as a Cause of Sudden Deafness. By Leartus Connor. (Reprint.) 1884.

Original Articles.

THE NITRITE OF AMYL AS AN ANTIDOTE IN STRYCHNIA POISONING.

BY HOBART A. HARE, M. D., PHILADELPHIA, PA.

In 1871 Dr. St. Clair Gray, of England, made several experiments to determine whether the nitrite of amyl was practically as efficient an antidote to strychnia in toxic doses as its physiological action would indicate. In his experiments he used but two rabbits, and his results were very satisfactory. He gave to each rabbit ten drops of the nitrite of amyl and one half grain of strychnia. Both drugs were given simultaneously and by the hypodermic method, and no decided symptoms were manifested. He found, however, that one quarter grain of strychnia frequently caused death in one convulsion when given alone. The writer has used six rabbits, as may be seen further on, but has not been able to come to such satisfactory results as Dr. Gray.

To rabbit No. 1 he gave one eighth of a grain of strychnia, and in two minutes a severe convulsion came on during inspiration, and by using artificial respiration and inhalations of the nitrite the animal's life was saved. This occurred five times. The sixth convulsion came on during expiration, and therefore no ordinary artificial respiration could be induced, and the animal died. (It is proper to state here that none of the nitrite was given hypodermically.) M. Schiff has tried the effects of artificial respiration[1] in strychnia poisoning with very satisfactory results, but in his experiments he overcame the difficulty of carrying on artificial respiration when the convulsion came on in expiration by inserting a canula into the trachea and carrying on the renewal of air by forcing air into the lungs. That such a proceeding would be entirely impractical in the human being is so evident that it is hardly necessary to mention it in this paper.

It is very evident to any one if death is caused in strychnia poisoning by spasmodic locking of the chest walls, that artificial respiration, thereby causing air to enter the lungs, will prolong life. It is equally evident that such means could only be of service when the convulsion came on in inspiration, as pressure could then drive out the exhausted air and the lungs be filled by the natural expansion of the chest walls due to their innate elasticity. In expiration the chest would be locked when its walls were most nearly approximated, giving no room for air in the first place, and preventing any external force from doing good, while internal force could not be used. That the nitrite of amyl is capable of stopping a convulsion when inhaled is certain. In each convulsion in the rabbit just mentioned complete relaxation came on as soon as the rag wet with the nitrite was held to the nostrils of the animal, and the full effect of the nitrite was seen by the rapid breathing, injection of the conjunctiva, and the relaxation before mentioned. When the nitrite was removed, and as soon as its after effects were over, the convulsions returned, and so on through the five till the sixth caused death in the manner stated.

In the second rabbit, to which was given one twentieth of a grain of strychnia followed in four minutes by fifteen minims of the nitrite of amyl, a partial convulsion came on one minute after the nitrite was given. After this the animal hopped about the floor as if free from any poison whatsoever, with the exception that the slightest touch would cause a tonic spasm of the whole body of about one second's duration. Five minutes later slight convulsion, followed in thirty seconds by spasms which followed each other with great rapidity and regularity. This lasted for fifteen minutes. A period of complete relaxation now came on with the respirations at about 130 per minute; following this in three minutes came irregular spasms. These spasms became less and less frequent, and at last only came when the animal was disturbed. All along during these latter spasms there was constant tonic spasm of the hind legs, and it was clear that the effects of the more volatile nitrite were wearing off, and that the strychnia was beginning to reassert itself. This was the more clearly shown by the fact that the spasms increased both in frequency and force. Forty-five minutes after the injection of the strychnia a convulsion came on, from which the animal partially recovered, and this was succeeded by another and then another, in which last convulsion the animal died, it being fifty minutes after the injection of strychnia.

In rabbit No. 3 one twentieth grain of strychnia was given, which caused death in less than two minutes. As soon as the convulsion came on artificial respiration was used, nitrite of amyl held to the nose, and twenty drops of the nitrite given hypodermically; this animal died without being relaxed.

The difference in time between the dose of strychnia and the first convulsion, and also between the first convulsion and fatal effect in the last two rabbits, can, I think, be explained.

In the last rabbit (No. 3) the hypodermic of strychnia was given very near to the vertebræ, and was probably taken, in part at least, directly to the cord by the intervertebral vessels.

In the preceding rabbit (No. 2) the hypodermic of strychnia was given nearer the abdomen, and the nitrite was given near the cord, and so its effects were present when the excito-motor reached the cord in full force.

To rabbit No. 4 one twentieth grain of strychnia[2] and nineteen minims of nitrite of amyl were given simultaneously in this respect, being the counterpart of Dr. Gray's experiments. In three and one half minutes a severe convulsion came on, which was followed by eight lesser convulsions, occurring at irregular intervals, but following each other rapidly. The convulsions now became further apart, but individually more prolonged, the longest time between any two convulsions being thirteen minutes. This interval began forty-five minutes after the first convulsion. One hour after injection several spasms came on, succeeding each other with great rapidity. These lasted for the next thirty minutes. The respiration was noticed not to be as seriously retarded as formerly for a short time, but this change for the better was only transient; in a short time several convulsions came on, in the last one of which the animal died.

Rabbit No. 5 was given the same amount of strychnia as its predecessor, and the same amount of the nitrite, about one inch from the vertebræ, and both drugs were given simultaneously. A convulsion came on in two and one half minutes, which was followed by almost constant spasms and convulsions with no intervals of rest at all. This animal died twenty-eight minutes after injection, apparently from exhaustion, as there was no spasm or convulsion at the time of death, and no symptoms of the presence of the nitrite, at least in overdose.

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[1] Schmidt's Jahrbücher, Bd. cxli., p. 43.

[2] It is proper to state that the strychnia was given near the cord in this case also.

Rabbit No. 6. Strychnia, one twentieth of a grain, and nitrite of amyl, nineteen minims, were given as before. Convulsion came on in nine minutes, the delay being probably due to the fact that quite a large amount of blood escaped after the hypodermic needle was withdrawn, and with the blood escaped quite a quantity, probably, of the injected and as yet unabsorbed fluid. This animal lived about three hours, during which time it had numerous convulsions and spasms. This increase of time before death may be attributed to the hæmorrhage above stated.

It is evident from the foregoing accounts that —

First. Nitrite of amyl does prolong life in strychnia poisoning, although its action is so fleeting compared to that of its adversary that it can only be used to tide over the patient until more persistent remedies or antidotes, such as potassium bromide or chloral, can be administered.

Second. That it cannot be used by inhalation as an antidote with any chance of security from a fatal termination, owing to the facts regarding expiration before stated.

Third. That the longer the nitrite be given after the strychnia the less good it will do, *provided* the strychnia has already shown itself by convulsions or otherwise. This is true not because the nitrite is less powerful after the first convulsion, but because death is more apt to come before nitrite can fully act.

Fourth. That the nitrite has to be given in such quantities and at such times that its full physiological action be present constantly, otherwise in the instant which may supervene between the after effects of one dose and the beginning of the next the patient may die.

Fifth. That in cases of strychnia poisoning, the nitrite of amyl being used as an antidote, an injection of the nitrite should be given, and the patient kept moderately under its influence by inhalations until other remedies are obtainable.

The writer cannot account for the disparity existing between the results of Dr. St. Clair Gray and his own. It is certain that one twentieth grain of strychnia invariably causes death in the rabbit, as the foregoing experiments would prove. It is probable that some mistake must exist as to the amount of Dr. Gray's doses from errors of a typographical character or from impurity of the strychnia used. His doses, as before stated, were one half grain to ten drops of nitrite, and that he found one quarter grain often caused death, when given alone, in one convulsion. That one quarter grain of strychnia should cause death in a rabbit in one convulsion cannot be wondered at when we consider that a twentieth grain is a maximum dose for a man for continuous use. Many deaths are recorded from one quarter and one half grain doses in man. One man who took one half of a grain was dead in twenty minutes.

It may be well to state that the strychnia used by the writer was very carefully selected, as was also the nitrite of amyl.

LATENT ACUTE PERITONITIS OF IDIOPATHIC ORIGIN. LARGE AMOUNT OF PUS IN THE ABDOMINAL CAVITY. EVACUATION. RECOVERY.[1]

BY Z. B. ADAMS, M. D., FRAMINGHAM, MASS.

> "L'on peut dire avec vérité que le pus est la sécrétion normale du péritoine enflammé." — *Nouveau Dict. de Méd. et de Chirurgie*, Article "Péritonite Aiguë."

FRANCES L., four and a half years old. Parents and grandparents all living and healthy. The fourth of five children. No family history of disease of any kind.

Previous history. Two weeks before birth, for no obvious reason, the mother felt something break suddenly, and a large quantity of liquor amnii was discharged. At that time all feeling of motion ceased. The labor was at full term, easy and rapid. The child was very feeble, scarcely breathed, and was estimated to weigh not more than four pounds. She looked like a seven months' child. There was a firm knot in the cord. For the first week the child was kept alive by artificial heat, and was apparently too weak to nurse. At the end of that time she began to gain. Livid ecchymoses appeared upon the buttocks and bowels.

The child throve, and at the date of sickness was forty-one inches high and well nourished, but not fat. Her digestion was more liable to disturbance than that of the other children.

When about eight months old she was tipped out of her carriage and fell a few feet off a bank, was picked up insensible, but soon recovered. She became very pale and vomited from the shock.

On the 17th of May, 1884, after a somewhat hearty dinner, Frances complained of feeling ill, was nauseated, feverish, and languid. The night was restless, and she had several loose stools with pain in bowels. Seen by me the morning after, the face was flushed, temperature 104° F., pulse 120, nausea, diarrhœa, no tenderness of bowels, no pain, no tympanites. Complained only of feeling tired. The parents feared scarlatina or diphtheria. At night the temperature was 105° F., pulse 140; she was rather restless, but did not complain of pain. The symptoms were attributed by me to indigestion.

On the next day, May 19th, the youngest child was attacked with similar symptoms, which, however, soon disappeared.

Frances continued to have diarrhœa for about a week. The stools were slimy, containing mucus. The nausea gradually subsided, as did the fever, but she did not recover. She made no complaint of pain and there was no tenderness of the abdomen. She remained languid, did not care to get up, had a pulse of 120, and a temperature occasionally rising to 102° F. in the evening, but not above 100° F. in the day. There was no marked tympanites, but rather dullness of the abdomen. The appetite did not return. The skin was dry and the expression one of indifference. The symptoms were of a mild typhoid character. There was no hectic, no headache, nor sweating. Sleep not disturbed and mind perfectly clear, but not interested in anything. The stools became scanty and occasionally mucous in character. It was supposed by me that there was some bowel obstruction. The most careful examination revealed no tenderness anywhere and no tumor. The form of the belly was not unusual, but there was some general distention, and there was dullness on percussion in spots. The symptoms did not warrant the diagnosis of peritonitis, either tubercular or from other causes. There was no colic pain, no tenderness on pressure, no fluctuation, no enlarged glands. There was no complaint of tenesmus. The tongue was moist and coated.

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[1] Read before the Middlesex South District Medical Society. October, 1884.

This condition continued for about three weeks, during which time the abdomen very slowly enlarged.

At the beginning of the fourth week a nodulated tumor appeared in the epigastrium, occupying a right median position. It was somewhat tender to the touch, and could be plainly seen. The abdomen was now very much distended, showing enlarged veins. There was no pain, and no tenderness on pressure except over tumor. The renal region was resonant and the abdomen also in spots, but generally dull on percussion. The diaphragm and thoracic organs were pushed up, and the apex beat of the heart was an inch above the nipple line. There was emaciation, but no decided hectic nor sweating. Appetite was absent, and there was frequent complaint of nausea after taking food. The abdomen presented a uniform enlargement, which was not elastic nor œdematous. Fluctuation was not clear, nor was there a marked line of flatness anywhere.

She was now seen by Dr. H. O. Marcy, of Boston, in consultation, and it was decided to aspirate. The needle, introduced above the pubes, drew off more than a pint of pure, creamy, odorless pus. Dr. Marcy very kindly examined and reported upon this matter, which he found to contain multitudes of micrococci, pus corpuscles often disintegrated, fine granules, a little free fat, and fine oil globules. "The micrococci very active, which reproduced in pairs, not chains."

There was temporary relief to the general symptoms, and ten days afterwards, precisely six weeks from the onset of the disease, with the valuable aid of Dr. Marcy, and of Drs. Smith and Bigelow, of Framingham, I made a section two inches long and above the umbilicus as far as the tumor already described in the epigastrium. This tumor was then about as large as a silver dollar, nodulated, flattened, and fluctuating in the middle, slightly blushed, and sensitive to the touch. The condition of the child was as follows: Respiration of the costal type; thoracic viscera pushed upwards; apex beat of heart one inch above the nipple line; emaciation marked over the ribs; large veins prominent on each side of the abdomen; umbilicus prominent; face dusky and anæmic; no jaundice; thrilling in jugulars; countenance not expressive of pain; abdomen not tender; color of skin somewhat dusky; no œdema; urine normal. Pulse 140; temperature 101° F.

A careful section was made through the skin and subcutaneous layers, and the peritonæum was opened with the usual precautions. A quantity of odorless, creamy pus, estimated to amount to considerably more than a quart, flowed out, together with some blood-clots and masses of fibrinous material, as soon as the peritoneal cavity was opened. The peritonæum appeared thickened, deep red in color, and bled wherever touched. Firm bands of adhesion were found, especially on the right side. The nodulated tumor had no deep origin or connection, and proved to be only inflammatory thickening of the peritonæum itself and the subcutaneous cellular tissue; evidently an effort of nature to get rid of the pus. At my request Dr. Marcy gave me his valuable aid in exploring the cavity, and confirmed my observations. The peritoneal cavity was then thoroughly irrigated with hot water (1 — 200 carbolic), further examination or interference being prevented by the condition of the patient. Collapse from shock and the withdrawal of so large an amount of fluid pressure from the intestinal tract, obliged us to stop and resort to artificial respiration, and to close the wound as rapidly as possible. This was done with two deep sutures, taking in the peritonæum and fine superficial suture of the skin.

Immediately after the operation the temperature fell to normal, and the pulse to 104, and so remained for four days. There was no pain, she slept well, and had a good appetite; urine normal.

On the fourth day after operation the temperature dropped to 97° F., and there was appearance of exhaustion, with loss of appetite; pulse 120, and an evening rise of temperature to 102° F. The temper became restless and capricious, and the abdomen showed evident signs of reaccumulation of fluid. The wound was healthy. Some tympanites developed. The superficial sutures were removed on account of the stretching.

Fifth day. Abdomen very tense. Deep stitches were removed in hope of giving exit to pus, but union had taken place and only a few drops appeared at the points of suture. Morning temperature normal, evening 102° F. to 103° F. No chills, sweating, nor headache. The bowels moved with discharge of gas and some relief to distention. Urine normal.

Seventh day. Union of abdominal wound complete. Some tympanites. Considerable distention and uneasiness. On the eighth, ninth, and tenth the evening temperature rose to 103° F., and in the morning fell to subnormal, — 97.5° F.

Twelfth day. Abdomen tense, twenty-two inches. A spontaneous opening occurred over the tumor in epigastrium with free discharge of a thin purulent matter, and relief to all the symptoms. The temperature fell to 96.5° F. and remained subnormal for four days. On the fourteenth day the discharge ceased, and there was occasional vomiting. The abdomen was soft, and measured eighteen inches. Appetite fair. Pulse feeble (104) and intermittent. Urine scanty. Slight discharge of pus from epigastric opening in the evening.

Sixteenth day. Temperature rose to 102° F. between noon and three P. M., and remained high until eight P. M. After passing large quantities of flatus and some fæces by use of injections, the temperature slowly fell, and a slight discharge took place from the opening. The child was drowsy all day.

After this date all discharge ceased. The nodulated tumor in the epigastrium softened and disappeared. On the thirtieth day the heart had completely returned to its normal situation. The child regained appetite and color. During all this time the bowels were kept free by daily injections, usually of simple warm water, but occasionally turpentine or oil was added.

The pus seemed to gravitate towards the region of the spleen, and thence to the left iliac region, where there still remains some dullness. Two or three times at considerable intervals there have been sharp attacks of colic pain during this convalescence; once apparently caused by a blow upon the stomach, and once by some error in diet. During these colic attacks the abdomen balloons out over the site of the epigastric tumor and that of the incision made at the operation. Ordinarily there is nothing remarkable about the abdomen except, perhaps, that it is somewhat fuller than usual along the median line. There is no tenderness and no tympany or dullness anywhere. Color of skin normal. The bowels move without pain; are seldom constipated; urine normal; and the child has grown an inch and a half in height, and has gained nearly ten pounds in weight in about three months.

THE PATHOLOGY OF BRONCHO-PNEUMONIA.[1]

BY FRANCIS DELAFIELD, M. D.,

Professor of Pathology and Practical Medicine in the College of Physicians and Surgeons, New York.

I SHALL offer for your consideration, this evening, some observations on the subject of broncho-pneumonia. I venture to do this for the reason that I believe that this particular lesion suffers from the effects of tradition, from having been called catarrhal pneumonia, and from its relations to pulmonary phthisis. It is also doubtful whether the profession appreciate what a common lesion it is.

I do not mean that the real lesions and symptoms of the disease have not been described. They have been described by different observers; but their descriptions have been, for the most part, fragmentary, and have failed to give a picture of the disease.

The current notions concerning the disease have remained somewhat obscure and indefinite. The prevailing ideas concerning broncho-pneumonia may be stated as follows: —

That the terms broncho-pneumonia, lobular pneumonia, catarrhal pneumonia, and capillary bronchitis may all be used to designate the same lesion: although it is customary to use the words broncho-pneumonia and lobular pneumonia when the disease occurs in children; capillary bronchitis when it occurs in adults; and catarrhal pneumonia when it is believed to be a form of phthisis.

That the inflammation begins in the bronchi, extends to the small and capillary tubes, and then to the groups of air vesicles which belong to these bronchi, and that for this reason the hepatization assumes a lobular form.

That obstruction of the bronchi with inflammatory products frequently produces areas of atelectasis.

That the catarrh may become chronic, the products of inflammation in the air vesicles undergo cheesy degeneration, interstitial changes be developed in the frame-work of the lung and so a form of pulmonary phthisis be produced.

This, I think, is a fair enough example of the ordinary accounts of broncho-pneumonia — accounts which fail to bring out the essential features of the disease.

Let us, then, turn to the conditions themselves — to the clinical symptoms and the lesions of broncho-pneumonia as we all can see them for ourselves.

To approach the subject properly, we must consider the symptoms and lesions of acute bronchitis as well as those of broncho-pneumonia.

First, then, of *acute catarrhal bronchitis*. This is a disease of very common occurrence, especially in children, but one which seldom proves fatal. Our knowledge of its lesions is derived from exceptionally severe cases, from cases which are complicated by other diseases, and from the symptoms which we observe during life.

The inflammation involves regularly the trachea and the larger bronchi, less frequently the smaller bronchi also. As a rule the bronchi in both lungs are equally affected.

The first change seems to consist in a congestion and swelling of the mucous membrane of the bronchi with an arrest of the functions of their mucous glands. This is attended with pain over the chest, a feeling of oppression, rapid or asthmatic breathing, and a dry cough.

Fever and prostration are present in a degree corresponding to the extent and severity of the inflammation and to the age of the patient.

After this the mucous glands resume their functions with increased activity, the congestion and swelling diminish, there is a more rapid desquamation of the superficial epithelial cells, an increased growth of the deeper epithelial cells, and a moderate emigration of white blood cells. Sometimes the red blood cells also escape from the vessels.

The patient now has less pain and oppression, the cough is accompanied with an expectoration of mucus, mixed with epithelium, pus, and sometimes blood. After death the only lesions visible are the increased quantity of mucus, the growth of new epithelium, a few pus cells infiltrating the stroma of the mucous membrane, and sometimes a general congestion. If the smaller bronchi are involved they contain pus cells.

In a moderate number of cases, especially in very young children, certain accessory lesions are added. There may be a general congestion of the parenchyma of the lung, and even a filling of some of the air vesicles with inflammatory products. Still further, the filling of the small bronchi may lead to the collapse of the groups of air vesicles to which they lead, and thus are produced areas of atelectasis, which may be further changed by inflammatory processes.

In acute catarrhal bronchitis, then, the inflammation involves regularly only the mucous membrane of the bronchi; and in this mucous membrane the only changes are: congestion, swelling, changes in the epithelial cells, and in the functions of the mucous glands.

As complicating conditions, we may find atelectasis, congestion of the parenchyma, and areas of diffuse pneumonia.

Now let us consider the lesions and symptoms of broncho-pneumonia.

This disease is of common occurrence in children as an idiopathic inflammation, and as a complication of measles, whooping-cough, scarlet fever, and diphtheria. In adults it occurs less frequently, but in them also it may be idiopathic, may complicate the infectious diseases, and may follow injuries of the brain and spinal cord. Constitutional syphilis also may give rise to broncho-pneumonia, and in pulmonary phthisis this same inflammation constitutes an important part of the lesions.

In children, while the inflammation always presents the same essential characters, yet there is considerable diversity, both in the symptoms and in the lesions, in different cases. Thus, in infants a few weeks old, often the only symptoms are rapid breathing, a febrile movement, prostration, and death.

In older children there are well-marked constitutional disturbances — fever, prostration, and cerebral symptoms; in some cases the cerebral symptoms being excessively developed. The breathing is rapid. There may be cough. The physical signs are those of bronchitis alone, or of bronchitis with consolidation of the lung. If there is consolidation it is developed slowly, and disappears slowly. Not infrequently successive portions of the lung become consolidated. The disease terminates in the death of the patient, in recovery, or it assumes a chronic character. This disposition of the broncho-pneumonia to become chronic is one of its characteristic features, a feature in which it differs from acute bronchitis and lobar pneumonia. The cases vary, however, as to the degree in which the disposition is carried out.

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[1] Read before the Pathological Society of Philadelphia, October 23, 1884.

In some children the disease after running its regular course of one or two weeks subsides, the constitutional symptoms are less marked, the child seems better in every way. But yet the physical signs of consolidation continue, there is still a slight rise of temperature, and convalescence does not fairly begin. In this condition the child may remain for a number of weeks and then get entirely well, except that the percussion note and the breathing remain somewhat changed.

In many such cases as these the recovery is permanent and the child has no further trouble. But in other cases, after the lapse of several months, the child is attacked with acute general tuberculosis. Thus it is not uncommon in children's asylums for an epidemic of measles complicated with broncho-pneumonia to be followed after the lapse of a year by an epidemic of acute tuberculosis.

In other children the course of the disease is more protracted. The physical signs of consolidation continue, there is a febrile movement, the child has no appetite, it gradually emaciates, and dies at the end of several months. These cases resemble pulmonary phthisis in their symptoms, but they are really only examples of a broncho-pneumonia which has become chronic.

In still other children the physical signs and the constitutional disturbances continue, but the child does not succumb to the disease. It continues to live with the evidences of a chronic bronchitis which go on year after year. So the child may grow up to adult life, sometimes better, sometimes worse, never entirely well. Cough, expectoration, dyspnœa, occasional fever harass the patient at intervals. The lung becomes more and more solid, the bronchi more dilated, the pleura thicker, and the affected side of the chest more retracted.

In the cases of acute broncho-pneumonia which die within from two days to three weeks there is some variety in *the post-mortem appearances.*

The lungs may be large and well aerated, but on section the cut ends of the medium-sized and smaller bronchi are unusually prominent and thick, and around them are little zones of hepatization of red, or gray, or white color. This appearance of the lung may be further modified by a cylindrical dilatation of the thickened bronchi.

In other cases the lungs are denser and more congested, and a larger or smaller portion of them is consolidated. The consolidation portions are unaerated, dense, and smooth, of red color, or pinkish gray, or dark red. Or the color may be mottled, — small, rounded gray or whitish areas surrounded by red hepatization.

The distribution and extent of the consolidation also vary. The hepatized areas may be small, encircling the bronchi, and situated at some distance from each other. Or they may in some one lobe or part of a lobe be close together, and between them is a more diffuse hepatization so that this part of the lung may be completely solid.

The appearance of the consolidated lung may be further changed by a cylindrical dilatation of the bronchi.

In still other cases the consolidated portions of lung are of some size and of somewhat regular shape, as if they were portions of lung corresponding to bronchi. These portions are dense, unaerated, of dark-red color, and somewhat shrunken.

If the inflammation has become chronic, then over one lobe or part of a lobe the pleura is thickened, bands of fibrous tissue run into the substance of the lung, and the lung tissue is dense, hard, and unaerated.

When we examine these lungs more minutely we notice first some peculiarities which belong to them because they are the lungs of children and not of adults. The bronchi and the connective tissue framework of the lungs occupy a larger relative space than they do in the lungs of adults; and in any inflammation of the lungs they are apt to take a more prominent share. The air vesicles are small, and products of inflammation which have been formed within them are absorbed slowly and with difficulty. The walls of the vesicles are lined with a nearly continuous layer of epithelial cells. When the vesicles are inflamed there is a greater production of new epithelium and a less of fibrine than in adult lungs. The small size of the air vesicles render a simple congestion and dilatation of the capillary vessels within their walls a more serious condition than it is in adults. The bronchial glands are more regularly and intensely inflamed. These peculiarities of the child's lung seem to account for its liability to certain forms of inflammation.

The same exciting causes apparently produce in a child under five years of age broncho-pneumonia; in a person between the age of five and fifteen broncho-pneumonia or lobar pneumonia; in an adult lobar pneumonia.

Now let us consider more in detail the lesions of broncho-pneumonia in children.

The trachea and large bronchi are congested and coated with mucus, as in acute bronchitis; but in the smaller, and to a less extent in the capillary bronchi, the changes are of a different character. In these small bronchi the entire thickness of their walls is infiltrated with cells, — partly new connective tissue cells, partly pus cells. This change may affect the small bronchi equally in all parts of the lungs, or it may be confined to those situated in one lobe or part of a lobe.

Around every bronchus, of which the walls are infiltrated with cells in this way, is a zone, either of intense congestion or of pneumonia, the inflammation extending directly outwards from the bronchus to the surrounding vesicles.

In the zones of peribronchitic pneumonia the walls of the air vesicles are infiltrated with cells in the same way as are those of the bronchi. The cavities of the vesicles are filled with pus and epithelium, or with an organized tissue composed of a basement substance and cells.

These constitute the essential features of the lesion,

— a bronchitis which involves the *walls* of the bronchi, and a pneumonia which involves the vesicles *surrounding* the bronchi, and which produces changes in the *walls* of the vesicles as well as in their cavities, while the inflammatory products within the cavities of the vesicles are not only pus and fibrine, but also organized tissue.

To these essential lesions are often added other accessory changes. The bronchi, of which the walls are infiltrated with cells, may be dilated. Between the zones of peribronchitic pneumonia the lung is congested, and there may be areas of diffuse red hepatization, which do not, however, correspond to bronchi. There is often a layer of fibrine on the pulmonary pleura. There may be areas of atelectasis corresponding to obstructed bronchi.

The bronchial glands are swollen, and the seat either of simple or of tubercular inflammation.

When the broncho-pneumonia passes into the chronic condition the inflammation usually persists only in part of a lobe, or a single lobe, while the rest of the lungs return to a normal condition. In that portion of the lung in which the inflammation persists we find the small bronchi with their thickened walls and their zones of peribronchitic pneumonia. The number of bronchi involved may be moderate, and then a section of the lung will look as if it were studded with fibrous nodules. Or most of the bronchi may be involved, the zones of peribronchitic pneumonia are close together, and the entire lung tissue is dense and solid. In either case the bronchi may be dilated and the pulmonary pleura thickened. As the inflammation goes on its interstitial character becomes more and more marked, until the affected portion of lung becomes converted into a mass of fibrous tissue, in which the bronchi still remain, while the air vesicles are obliterated. The blood-vessels, however, are for the most part not obliterated, so that the lung does not become necrotic or degenerated. Still occasionally areas of cheesy degeneration exist.

These are the characteristic features, then, of the broncho-pneumonia of children.

In adults broncho-pneumonia occurs in one of four forms: As an idiopathic inflammation of acute and severe type. As a subacute inflammation. As a complication of the infectious diseases and of lesions of the brain and spinal cord. As one of the lesions of phthisis.

(1.) *The acute, idiopathic broncho-pneumonia of adults.*

The invasion of this disease is acute and severe.

The patients have rigors; pains in the head, back, and chest; vomiting and marked prostration. The temperature runs between 102° F. and 105° F.; the pulse is rapid; the breathing is rapid and unsatisfactory. There is cough, at first dry, later accompanied by profuse muco-purulent and bloody expectoration. There is venous congestion of the skin, albumen in the urine, and cerebral symptoms. When we examine the chest we find the percussion note normal, or exaggerated, or dull. There are crepitant, subcrepitant, and coarse râles with sibilant and sonorous breathing.

The case usually terminates fatally in about seven days. After death we find the lungs large, heavy, and congested. There is fibrine on the pulmonary pleura. The trachea and large bronchi are congested and coated with mucus. The smaller bronchi contain pus, their walls are thickened and infiltrated with cells, and around them are zones of air vesicles with their blood-vessels gorged with blood, and in their cavities epithelium pus and fibrin.

(2.) *The subacute broncho-pneumonia of adults.* This is a rare disease. It has a clinical history much resembling that of acute phthisis.

The patients are attacked with prostration, fever, cough, and muco-purulent expectoration, dyspnœa, pain in the chest, coarse râles all over the chest, with dullness over the consolidated portion of the lung. These symptoms continue, the patients lose flesh and strength, and die at the end of several weeks.

After death we find fibrine on the pulmonary pleura. The larger bronchi are congested and coated with mucus. There is an irregular, diffuse red hepatization mottled with small white nodules from the size of a pin's head to that of a pea. In the diffuse red hepatization the air vesicles are filled with pus, epithelium, and fibrine. The white nodules correspond to sections of bronchi with zones of peribronchitic pneumonia. These bronchi are of small size, they contain pus, their walls are thickened and infiltrated with cells, and they may be dilated.

In the peribronchitic zones of pneumonia the walls of the vesicles are thickened and infiltrated with cells, but the blood-vessels remain pervious and can be injected. The cavities of the vesicles are filled not with pus and fibrine alone, but also with a basement substance of homogeneous or finely fibrillated character, in which are imbedded polygonal, round, and fusiform cells.

(3.) *The complicating broncho-pneumonia of adults.* It is not uncommon for some of the infectious diseases, and some of the lesions of the brain and spinal cord to be accompanied by the development of this form of inflammation of the lung.

In typhoid fever we sometimes find a broncho-pneumonia exactly resembling the same lesion as it ordinarily occurs in children.

In pyæmia the inflammation is of the same kind, but is apt to be less extensive, involving only part of one or both lungs.

With lesions of the brain and spinal cord the changes are the same as with pyæmia.

(4.) *With phthisis*, both acute and chronic, broncho-pneumonia often forms an important part of the morbid changes in the lungs, but yet it is never the primary or the only lesion. It is only one of a number of pathological changes which go to make up the complex whole of pulmonary phthisis.

From what has been said, then, I would draw the following conclusions: —

There is a form of inflammation of the lung which may properly be called broncho-pneumonia.

In children it is the most frequent form of pneumonia, in adults it is less common.

It differs from bronchitis and from lobar pneumonia in that the inflammation effects changes in the *walls* of the bronchi and of the air vesicles, and this peculiar interstitial character of the process exists from the very outset.

The inflammation extends from the bronchi, not to the group of air vesicles into which they lead, but directly outwards to the vesicles which surround the inflamed bronchi, and in these vesicles the walls are changed.

The interstitial character of the inflammation is its most important feature. It accounts for the severity of the symptoms, the frequent long continuance of the consolidation, the dilatation of the bronchi, and for the tendency of the broncho-pneumonia to assume a chronic character.

The complicating tubercular inflammation of the bronchial glands may give rise later to general tuberculosis.

Broncho-pneumonia is not a form of phthisis; it is doubtful if it is ever directly followed by phthisis; but it constitutes a part, and often an important one, of the lesions which constitute phthisis.

I have endeavored to describe in a somewhat incomplete way the characteristic symptoms and lesions of an ordinary disease. I am well aware that I have described conditions which are familiar, and that nothing which I have said has not been said before.

But the very common occurrence of this form of inflammation of the lung renders it all the more important. The varying character of the lesions has confused their essential and their accidental characters, and I think it is worthy of consideration whether the views which I have advanced concerning the pathology of the disease are not the true ones, namely, that the inflammation is essentially and from the outset an interstitial one, more or less complicated by other conditions.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

ENKATARRHAPHIA OF EPITHELIUM.

THE artificial production of tumors in animals has often been attempted in the hope of discovering the laws governing their development in man. Thus far but little success has been obtained, especially in the production of a new and atypical growth of epithelium. The experiment has usually been based upon the transplantation of a portion of tissue directly from one spot to another. Kaufmann[1] has varied this by leaving the skin in connection with its own subcutaneous tissue, but at the same time surrounding it by connective tissue. This is easily accomplished as follows: A small oval cut (five to ten mm. long by two to four mm. wide) is made through the epidermis, and the adjacent edges loosened. These are then raised over the included bit and united by fine sutures. In very thick skin they must be undermined for a short distance, in order that they may be joined over the sunken portion without tearing. If the wound heals by first intention there is an epithelial layer nourished from its own base and touched on all sides by fibrous tissue.

In hairy animals this succeeded with difficulty, as although the wounds readily closed they rarely remained so for any length of time. It was then suggested to operate upon the combs and wattles of fowls, which are absolutely hairless and without glands of any sort. Several places could be used at the same time upon the same bird, and could be cut out for examination whenever wanted. In this way the process was followed to the two hundred and tenth day.

In the successful cases the result was constant. The epithelium never disappeared, but continued to grow.

In the earliest days it remained flat, and covered the underlying tissue, which was rich in engorged blood-vessels, and only sparsely infiltrated with cells. No strain was exerted upon the inclosed piece, as there was no tendency of the edge to bend up. In a few days more, however, the epithelial line began to assume a bowed shape, due to an increased width, as shown by careful measurements. It continued to grow in this direction until the upturned edges met, and there was thus formed a little cavity lined with epithelial cells. A peculiar fact was noticed, namely, that this new-formed layer exceeded the old in thickness, and that desquamation was more abundant from the upper (new) layer than from the lower (original) layer. In no case was there ever the faintest trace of growth downward into the corium, either in the form of tongue-shaped projections or nests of isolated cells. With this formation of a wen the end was reached. At the close of the seventh month the cavity was no larger than in the third week.

In the surrounding tissue the cellular infiltration and hyperæmia gradually subsided. The connective tissue became firmer, its fibres and vessels took the regular direction of the fixed corium, from which, finally, it could not be distinguished. If this was all that happened the matter should be left here, but there was an unexpected occurrence which is of importance, and not so easily explained.

In preparations made from specimens of the second or third week there were found groups of large cells scattered throughout the cicatricial tissue or in the immediate vicinity. These were composed of a delicate protoplasm, without marked differentiation of their contour, with large numbers of nuclei, which were in part regularly and in part irregularly arranged. In the elongated cells they lay parallel with the long axis, while in the rounder cells they were parallel among themselves. Such must evidently be giant cells. Here and there they were packed in alveoli, and closely resembled epithelium. Careful histological examination failed to reveal any normal glandular elements that could give rise to them. At first, therefore, the idea was entertained that they arose from epidermis cells which had been loosened and scattered by the operation, and having found a suitable place in the tissue had grown into giant cells. Still they were always found at some distance from the inclosed skin, and separated from it by connective tissue. Moreover, no intermediate stages were ever seen. Giant cells have been found in the vicinity of freshly-healed wounds, and it might be supposed that these were the results of the irritation of the operation. Their life history at once removed them from this class, as they persistently increased in size and number, while those which occur in the process of cicatrization disappeared with its completion.

In the case under observation tumors as large as a bean were formed, and this size was attained about the one hundred and thirtieth day. After that they ceased to grow, but there was no indication of retrograde metamorphosis. From the presence of a little cleft in the middle of one of these clumps, and from the arrangement and shape of the surrounding nuclei, it was probable that they were formed in preëxisting spaces, which were most likely to be lymph vessels, these having been obliterated by an organization of a thrombus.

The results of the experiments are formulated as follows: —

An atheromatous cyst was formed by the development of the skin which had been buried, — a true epithelial formation, but not to be considered as a proper tumor, and which attained no excessive size.

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[1] Virchow's Archiv, vol. xcvii, p. 236.

In the neighborhood of this were giant cell tumors, which presented for many weeks a progressive growth, and even at the end of months showed no signs of degeneration.

HÆMAGLOBINÆMIA.

Under the above title Ponfick[1] has published an article in which he strongly advocates the theory that in hæmoglobinuria the destruction of the red corpuscles within the circulation is the essential part of the process, whether the "cathæmolytic" agent is of a chemical or thermal nature. Therefore hæmoglobinæmia must be considered as a central point, in order rightly to understand the purely secondary symptoms, any one of which by itself is no absolutely essential and regular part of the process. Even the most striking, the presence of hæmoglobine in the urine, can be entirely absent, although the destruction of a large number of colored disks has taken place.

This is with difficulty studied in those cases where the condition has been brought about by the introduction of a poison into the system. As, for example, pyrogallic acid, chlorate of potash, arsenuretted hydrogen, etc. Or where a strong thermal irritation has brought about an intense general reaction of the whole organism.

On the other hand, the influence of hæmoglobinæmia, freed from all complications, can be studied by the injection of dissolved blood into the veins of an animal. This can be obtained by freezing. Or a watery solution of pure hæmoglobine can be used. By such an experiment the author was enabled to follow the fate of the destroyed cells through all their changes. From this it appeared that the remains of the colored elements were taken up by the spleen. And this was so quickly done that a marked swelling of the organ took place — a "spodogenous" splenic tumor (from σποδός, the sediment). It was not permanent, and disappeared in the course of a few weeks.

It was much more difficult to follow the blood coloring matter that was at once freely mixed with the plasma. This does not, as is generally supposed, seek the kidney, but is taken up by the liver, which consequently secretes bile extremely rich in coloring matters. All the hæmoglobine that does not exceed a sixth of the entire amount in the body can be eliminated in this way. But from the moment when this limit is exceeded the kidneys begin to come into play, and hæmoglobinuria is associated to the hypercholia.

These latter organs are extremely sensitive to its passage. If the accumulation in the blood is only slightly increased it is precipitated in the renal tubules in the form of granular masses, which may cause their closure, and thereby lead to a cessation of the entire secretory process. In this lies the chief danger.

The author distinguishes three degrees of hæmaglobinæmia: —

(1.) The spleen and liver dispose of the constituents of the red blood corpuscles, while the kidney takes no part in the work.

(2.) The kidneys also act in eliminating the hæmoglobine, and can complete the work.

(3.) The quantity is so great that it cannot be gotten rid of, even in this way, and death follows from uræmia and hæmoglobinæmia.

In regard to icterus, in such cases it is hæmatogenous in nature, and arises from the progressive metamorphosis of hæmoglobine into bilirubin within the circulation. This, of course, can only take place when so much coloring matter has been set free that it cannot be taken out of the circulation by any of the three ways of egress. This can only complicate cases of the second and third groups.

In connection with this work of Ponfick, the changes in the liver and kidneys after poisoning by glycerine, pyrogallic acid, and toluyltediamine were studied by Afanassiew.[2] The doses were regulated so as not to kill the different animals by a fatal hæmoglobinuria. From the experiments the following results were obtained, which show more clearly the relation between the icterus and the presence of blood-coloring matter in the urine: —

(1.) Glycerine acts chiefly by withdrawing the hæmoglobine from the corpuscles and distributing it through the plasma. In the blood no fragments of the cells were detected. The kidneys are the active organs in elimination, and icterus does not occur. This is parallel to the cases of paroxysmal hæmoglobinuria in man.

(2.) Toluylendiamine, on the other hand, causes minute fragments to be separated from the colored elements. These, as well as the distorted and decolorized corpuscles, are taken up by the spleen, liver, bone, marrow, and also by the kidneys, but to a less degree. There is no dissolved hæmoglobine in the serum, and consequently none appears in the urine, but jaundice, of the hæmohepatogenous kind, is a marked symptom.

(3.) Pyrogallic acid occupies a middle place in its action, causing both a disintegration of the cells and a solution of the coloring matter.

The changes in the liver and kidneys vary with the agent and the length of time that it is employed.

(1.) After the use of glycerine there was found a glomerulo-nephritis, with fatty degeneration and coagulation necrosis of the convoluted tubes. By frequent repetitions there occurred an infiltration of round cellular elements, especially about the point of entrance of the vessels into the capsule, and hæmorrhage into the tubules.

There was a moderate fatty degeneration of the cells of the liver.

(2.) After poisoning with pyrogallic acid the same effects were found in the kidneys. In the liver there was a fatty degeneration, with coagulation necrosis, and a slight cellular infiltration about the central vein and in the interlobular spaces.

(3.) When toluylendiamine was employed the liver suffered most, although the kidneys participated to such a degree that a contraction of the glomeruli took place.

That these changes were not brought about by the passage of the poisonous substances through the liver and kidneys, but entirely by the free hæmoglobine and bits of the destroyed disks, was proved by the infusion of defibrinated blood warmed to 53° or 57° C.

The author describes the affection of the kidney as glomerulo-nephritis hæmoglobinurica, and in its later stages as nephritis interstitialis hæmoglobinurica, while that of the liver as hepatitis interstitialis ex ictero-hæmo-hepatogeno.

Among horses hæmoglobinæmia has been observed to occur spontaneously, and Frohner[3] has made it the subject of an inaugural dissertation. In this animal the noxious material is not only taken up by the liver, spleen, and kidneys, but also in extreme cases by the marrow of the bones. At the autopsy the blood and muscles presented characteristic appearances. The first contained free coloring matter, as well as urea and extractive materials. The latter were of a clear, pale-red color, and swollen from infiltration and œdema. Under the microscope there was seen in places a granular degeneration, in others a breaking up into hyaline scales, with loss of striations. From the absence of fever and of characteristic post-mortem appearances the author denies the infectious nature of the disease, which has been maintained by others, and attributes it entirely to catching cold.

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[1] Berlin. klin. Wochen., 1883, No. 26.

[2] Fortschritte der Medicin, 1884, p. 284.

[3] Arch. f. Wissensch. u. prakt. Thierk., Bd. x., and Fortschritte der Medicine, 1884, p. 614.

THE WHITE INFARCTION OF THE PLACENTA.

This affection, to which Ackerman[1] calls attention, is of frequent occurrence, but he thinks that its true pathology has never been rightly understood.

The spots are sharply defined, but there is great variation in the form, size, color, and consistency of the portion involved. The usual shape is that of a wedge, and it is this, combined with the constant presence of fibrine, that has given rise to the term of "fibrine wedge." Often, however, it is more round or polyhedral, with a sinuous border. This last is often thrown out into true arms or projections, communicating with each other, at times so extensively as to completely mask their starting point. The color is generally a dirty white, at times a light yellow, in its earlier stages a red. In the central portion there are present illy-defined, pale yellow lines, or small rounded or elongated, glancing white elevations, usually marked by greater firmness. The volume varies as greatly as the form. The smallest scarcely reaching the size of a bean, the largest that of a walnut, or if extended more horizontally a dollar. In the last case they have their seat in the uterine surface of the placenta. In the more nodular form they generally go from one surface to the other, above which they may project, owing to their greater consistency. When very small they may lie buried completely in the placental tissue. When near the edge of the placenta they are more apt to assume the shape of a ring or narrow stripe.

From the constant presence of fibrine the older authors had looked upon them as the product of inflammation. Later the idea prevailed that they were due to hæmorrhage with organization of the fibrine, and finally some peculiar exudation was made to do duty as the cause. Ch. Robin was the only author who referred this, with other allied forms, to a fibrous degeneration of the placental tufts. This rendered the vessels impervious to the passage of blood, and was regarded as identical with the normal atrophy of the fringes of the chorion, which do not participate in the development of the placenta. Maier,[2] who has also carefully studied these changes, referred the entire process to the decidua serotina. He regarded the nodules as due to the effect produced by the growth of the projections which the serotina sends off between the cotyledons and separate villi, and which destroy the latter by the pressure exercised upon them. All the other authors regarded the connective tissue as resulting from the formation of the fibrine, while he refers it to grow from the granulation tissue accompanying these projections. Langhans referred the origin of the fibrine to the extremely thin layer which is normally present on the placental side of the chorion, even in maturity. It usually does not exceed a few hundredths of a millimetre, but in restricted places attains the thickness of a centimetre. He has called attention to the existence of numerous channels, and therefore regards it as of a peculiar nature, and calls it canalized fibrine.

These nodules are in many cases separated from this normal layer on the side of the chorion by normal placental tissue, and it is difficult to conceive how they can be derived from it. Minute examination shows that they are composed of three parts, namely, fibrine, placental tufts, and connective tissue. The first occurs either in continuous masses or surrounds the villi in broader or narrower bands, causing them to look as if imbedded in it. In either case the fibrine presents itself in two forms, either as a coarse or fine meshed network, or as a more compact homogeneous substance traversed by canals. The former differs in no material respect from the net-like arrangement of an ordinary fibrinous exudation. The formation of canalized fibrine has been the subject of much discussion.

In its general character it corresponds to the hyaline variety, about which so much has been said of late. It swells up in acetic acid. Is colored easily and intensely by ammoniacal carmine and eosine. Hæmatoxylon tinges it but slightly, and gentian violet not at all. Picro-carmine is especially adapted for its investigation as the hylanic fibrine, as well as the villi that show the same degeneration, assumes a yellowish-red color, while the true connective tissue remains clear and the nuclei of active cells are stained of a deep red.

Large cellular elements are met with entangled in the meshes. These are of a round or elongated form with a single nucleus in the centre. The circular ones have a diameter of from twenty to forty μ; the oval ones can reach eighty μ. They lie irregularly scattered or are accumulated into masses recalling the arrangement of epithelium. They correspond to the cells often described as being found in the pars caduca placentæ maternæ and its prolongations between the villi and cotyledons. In spite of their inclusion within the fibrinous mass they do not seem to have undergone its degeneration, as they present a clear, sharply-bounded protoplasm and an easily colored nucleus. On the other hand, they are at times entirely destroyed by fatty change. Finally it is to be noted that lime salts are frequently found in the coagulated material. These have an irregular, polyhedral form with jagged projections, often united with each other.

Besides the fibrine the villi form a considerable part of the infarction. They are immovable, and, as a rule, their vessels are impervious. The nuclei disappear after they have first become disintegrated and granular. Lastly the whole tuft is transformed into a translucent, homogeneous mass, which at times is permeated with fine granules or by delicate fibres running irregularly. Similar changes have also taken place in the epithelial covering. These cells lose their nuclei and are transformed into a glancing, homogeneous, or finely granular protoplasm.

The third constituent is found chiefly as new-formed connective tissue in the neighborhood of the large placental vessels. This is often extremely voluminous, appearing as broad rings on cross section, inclosing either the artery alone or it together with its vein, and is to be regarded as a periarteritis. At times this also undergoes the general hyaline degeneration. When such vessels lie within the infarction they are also found to be occluded. The method of closure varies. In places an intravascular coagulation of fibrine causes it; in others it is brought about by a proliferation of the intima.

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[1] Virchow's Archiv, Bd. xcvi., s. 439.

[2] Virchow's Archiv, Bd. xlv., s. 305.

The author regards the changes as above described as belonging to the category of those produced by coagulation necrosis. As the primary cause is to be considered the periarteritis fibrosa multiplex, the frequent occurrence of which in the placenta has still to be explained. The partial and finally entire stoppage of the arteries leads directly to anæmia, disappearance of the nuclei, coagulation necrosis of the cells, and finally hyaline degeneration of the villi and epithelium covering them.

He considers it more difficult to bring the fibrinous coagulation between the villi under this head. An exudation would be the most natural assumption, especially when it is remembered that in the white infarction of the kidney there is a thread-like coagulation which, according to Litten, owes its origin to a croupous exudation into the tubules. At the same time it is hard to conceive how this could have taken place through the obliterated vessels in the present case. It would be much easier to refer it to the necrosed epithelium and coagulation of the plasma of the blood circulating in the intervillous spaces. Then the process would be analogous to coagulation as it occurs in the blood-vessels and heart after necrosis of the endothelium, a ferment being produced by the destruction of the epithelial cells of the tufts, which could cause the fibrinogenous material present in the blood to coagulate. And in this way the entire process can be regarded, just as in the kidney, as the result of an ischæmic necrosis.

Hospital Practice and Clinical Memoranda.

CARNEY HOSPITAL.

CASE OF DIAPHRAGMATIC HERNIA. IN SERVICE OF M. F. GAVIN, M. D.

REPORTED BY W. J. GLEESON, M. D.,

House Surgeon.

John E. P., a laborer, aged thirty-four, was pushed from a horse-car while it was in motion, Tuesday evening, October 14th, and in falling caught and clung to the dasher, and was dragged along by the car. He was perfectly conscious all the time, but after the accident was unable to walk or stand, and was carried home.

He entered the hospital Thursday, the 16th, complaining of sharp pain in left side, slight pain in lumbar region, and general exhaustion. Respiration was 40 per minute. On the left side there was dullness up to angle of scapula, and crepitus could be felt in axillary line from fourth to ninth ribs. There were ecchymoses over the sternum, lumbar region, and both eyes. There was no paralysis or trouble with the bladder, but he complained of obstinate constipation existing since the accident, and not relieved by laxatives or enemata. No headache or vomiting. After the ribs had been strapped he went to sleep, feeling in excellent condition. About five P. M. on Friday he complained of severe colicky pains in abdomen, which persisted for some hours. About three A. M. Saturday he showed a desire to go to stool, but could not pass anything in the bed-pan. The nurse attempted to place him in a sitting posture, thinking this might facilitate matters, when he gasped and died.

Autopsy, fourteen hours after death, by the Medical Examiner, Dr. F. W. Draper, assisted by Drs. Hooker and Gleeson, the house officers.

The diaphragm was attached at fifth interspace on left side, and on the right it bulged so as to come down to costal border. In the left mammary line, and two inches behind edges of ribs, was an opening in anterior leaf of the muscle, large as a half dollar, into and through which passed a fold of large intestine. The edges of the rent were rounded, smooth, and easily stretched. The sternum was fractured at junction of manubrium and body. The heart was nearly vertical in position, and the apex an inch to right of median line. The lower three fourths of the left pleural cavity was entirely occupied by folds of intestine, comprising all the jejunum, part of the omentum, a loop of the colon and splenic curve, in all about nineteen feet. This immense mass was distended with gas. In this cavity were also thirty-six ounces of brownish-red serum, while the lung was compressed to the upper and posterior part of the chest and reduced to one fourth its normal volume. In the axillary line on this side the fourth to ninth ribs inclusive were fractured, the ends of the fragments protruding through the parietal pleura. The right cavity contained six ounces bloody serum, and the lung was engorged posteriorly. On this side also the fourth to ninth ribs were broken, but only at the junction of the cartilages, and not completely through. The heart was contracted on the left side, but not on the right, and in the right ventricle was a partly decolorized clot, quite dry. Heart otherwise normal.

From the point of constriction the intestines were injected throughout, and commencing peritonitis was seen in places. The stomach was normal, with the exception of a hæmorrhagic spot at the fundus. The kidneys were surrounded by extravasated blood, but otherwise normal. The subperitoneal tissue in the right iliac region was well filled with blood also. There was preternatural mobility at the first lumbar vertebra, and it was found that a piece of the size of the thumb-nail was chipped off from the right inferior border, though the spinal canal was apparently intact.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

At a stated meeting of the Academy, held Thursday evening, November 6th, Dr. R. W. Amidon read a paper on

THE PATHOLOGICAL ANATOMY OF SENSORY APHASIA,

in which he gave the details of eight cases in which he was able to present plates showing the location of the cerebral lesion. The first of these occurred under his own observation in a woman at the time of the menopause. There was incoherence of speech only when the patient answered questions. As a rule, she understood nothing that was said to her, unless it was accompanied with gestures; but gestures she comprehended perfectly. Death occurred fifteen months after the first attack. The brain, together with a photograph representing the location and appearance of the lesion, was exhibited. The other seven cases, reported by different writers, as well as sixteen additional ones to which he merely referred in passing, as they were accompanied by no plates, he had collected from various sources in order to make the bibliography of the subject as complete as possible.

Next was read a paper by **Dr. Frank H. Hamilton**, entitled

THE ASIATIC CHOLERA AT SUSPENSION BRIDGE IN 1854 AND ITS LESSONS — WHAT WE KNOW ABOUT CHOLERA.

The epidemic of cholera at Suspension Bridge, two miles from Niagara Falls, occurred in the month of July, 1854, and was of a very fatal character. It commenced among some emigrants who were temporarily detained in the vicinity, and by whom the cholera infection was undoubtedly introduced into the place; and from them extended to the laborers who were engaged in the construction of the suspension bridge across the Niagara River. Many cases ended fatally within six hours, and the panic was indescribable. Dr. Hamilton thought that the violent character of the outbreak was due to the elevated temperature and moist condition of the atmosphere prevailing at the time, to the low position of the dwellings of the victims and alluvial nature of the soil, and to the fact that the ground had recently been upturned. Although carried to several of the neighboring towns, the disease did not spread in any of them, as the same favorable conditions for its development were not present in them.

Passing on to speak of the present state of our knowledge of the disease in general, Dr. Hamilton remarked that, however probable it was that such was the case, we had as yet no positive knowledge that there was a specific cholera germ. He then gave a review of the researches of Koch and other observers up to the latest dates, and went on to say that even if it should be established that the comma bacillus or other microbe was always present in cholera, and never found except in cases of this disease, we could not say whether it was really the causative agent or simply one of the results of it. It seemed quite as likely, he thought, that the infection was conveyed by the fluid in which the microbes were found as by these organisms themselves. While he was very far from wishing to underrate the value of microscopic studies he thought it was certainly a fact that not a single advance in the treatment or prevention of cholera could be attributed to the result of such investigations. For all our practical knowledge of the disease we were indebted to experience.

Having spoken of the modes in which the infection of cholera might be carried to different places, he said that the hypothesis of Koch that it entered the human system solely through the alimentary tract was by no means proven, and that there was considerable evidence to show that it also entered by means of the respiratory organs and was diffused through the circulatory system. He next spoke of the conditions favorable to the development of the disease after the infection had been introduced into a locality, many of which were present at Suspension Bridge at the time of the outbreak there. Unless the germ found a suitable soil in which to grow, cholera could not become epidemic; so that when cases of the disease were brought to places where the conditions were unfavorable to it, they were simply like the brands from a conflagration falling in spots where there was no inflammable material to be ignited by them, and therefore harmless. In this connection Dr. Hamilton related a number of instances to show how favorable low and alluvial soils, and especially freshly upturned earth, were to the development of cholera.

As to the treatment of cholera no specific had as yet been discovered, and, considering the long time that had now elapsed since the disease had been known, it was scarcely probable that one ever would be. Experience, however, had taught us how to deal with it more successfully than with any other similar epidemic. The disease could always be aborted if taken in hand in time; and the great means at our disposal for arresting it were opium and absolute rest. Opium was better than morphia, as it was less liable to disagree with the stomach, and it was better, as a rule, to give it in a solid than in a liquid form. From half a grain to one grain of the drug might be given every three or four hours until the diarrhœa was checked or narcosis was induced. There was, however, no necessity for producing profound narcosis, and this was certainly to be avoided. In case the intestinal canal contained irritating matter, it would be advisable to precede the administration with a brisk purgative. If the parasitic theory of cholera were correct, he thought that the usefulness of opium in the disease might be explained on the hypothesis that it kept the secretions in a normal condition until the activity of the microbes had ceased; most observers agreeing that their period of activity was very brief.

Having recapitulated some of the lessons to be derived from the Suspension Bridge epidemic, he remarked that if cholera should reappear in the city of New York he did not believe that it would spread as it had recently done at Toulon, Marseilles, and Naples, because here the climate was more favorable, the sewerage was better, there was not so much low ground, the sanitary regulations were better, and there was not such a large proportion of the filthiest and lowest class of the population. In conclusion he spoke of the prompt and efficient action of the New York Board of Health in stamping out cholera in former years, and referred to the successful arrest of the disease under his own direction at the work-house on Blackwell's Island in the summer of 1866.

Dr. Leroy M. Yale, who was a house surgeon on the island at the time, and who made a full report of the outbreak to the Commissioners of Charities and Correction, at the request of the Chair, gave some account of the way in which the disease spread and the means that were employed for its suppression at the work-house. The epidemic commenced on the 1st of August, and during the summer up to that time there had been an unusually large number of cases of diarrhœa, as well as of severe cholera morbus, among the inmates of this and other institutions on the island. On August 1st there were sixteen cases, and August 2d thirty-two cases, with twenty-three deaths. On this day the mortality amounted to five and a half per cent. of the total population, and on the day following to five and six tenths per cent.; but within four days it was reduced to less than one per cent. Not a single patient died in whose case treatment was commenced while the initial diarrhœa continued, and Dr. Yale thought that this outbreak taught very strikingly the fact that if, with the enforcement of strict sanitary precautions, cases could be treated in the early stage of diarrhœa, every epidemic of cholera could be speedily suppressed.

Dr. Delafield thought that all would be willing to grant that cholera was an infectious disease. In regard to its having a specific germ, the latest theory of the latter was in accordance with the prevalent opinions of the times. To refer the origin of infectious diseases to certain minute organisms was the present fashion, and such fashions, whether good or bad, it generally took a long time to obliterate. The development of cholera, in accordance with this prevalent fashion, was thus referred to a particular microbe, and though Dr. Hamilton had, in his paper, stated very fairly the evidence for and against this hypothesis, he had omitted to state that out of a considerable number of investigators the testimony of an exceedingly small proportion of them could be accepted as thoroughly reliable. The technique of such microscopic researches was of so elaborate and difficult a character that the number of competent witnesses must necessarily be very small. The conditions to which Dr. Hamilton had referred as favorable for the development of cholera might be stated, he thought, to be those which were peculiarly favorable to diarrhœal disease in general. Whatever conditions would aid in the causation of diarrhœa would, therefore, render an epidemic of cholera likely to occur in case the special poison of that disease should be introduced into any locality where they existed; and, on the contrary, if this germ were introduced into a place where such conditions did not prevail there would be little danger of cholera spreading there. This evident fact seemed to indicate very clearly the rational means for the prevention of cholera, for while the importation of the disease could hardly be avoided without enforcing a quarantine so strict as to be entirely prohibitory of all commerce, the spread of cholera could certainly be successfully interfered with by the removal, as completely as possible, of all causes predisposing to diarrhœa.

Dr. Loomis made some remarks in which he said that the first thing to determine was in which of the three classes of infectious diseases Asiatic cholera was to be ranked: those in which the causative agent was developed within the body, rendering the disease directly transmissible from the infected to the non-infected, as was the case with typhus fever and the exanthemata; those in which the morbific agent was developed outside of the body in decomposing organic matter, and was introduced into the system through the agency of water, the atmosphere, etc.; or those in which the specific poison was developed within a living organism, but was in a passive state at the time of leaving it. It was in this third class, in which it was necessary that the agent should undergo certain changes in connection with decomposing organic matter after it had left the body before it was capable of giving rise to infection, that cholera, he thought, ought to be placed. In this respect it was analogous to typhoid fever and yellow fever. Having referred to the fact that cholera was indigenous only in Bengal, and was never of spontaneous origin in any other part of the world, he proceeded to examine some of the characteristics of its spread into different localities and nations. That there was a specific cholera germ he had no doubt, and he also believed that in a large proportion of cases this entered the system through the alimentary canal. He thought, however, that it had by no means been proved that this was the sole way in which this occurred. In all epidemics of the disease there were certain nervous phenomena which indicated that the germs sometimes got into the blood also, and he thought that all we could say at the present time was that the cholera poison undoubtedly entered the body through the mucous membrane. While this, no doubt, generally took place by way of the alimentary tract, it seemed true that it also sometimes occurred through the respiratory organs, whence it obtained access to the blood. Human excrement had long been recognized as the most fruitful source of cholera infection, and most authorities agreed that the agency by means of which the infection was spread was usually drinking water or other kind of water. Through drains and sewerage was a very common way, and he thought that the reason that Rome had recently escaped a visitation of cholera, while Naples suffered so severely from the disease, was because in the former city an improved system of both drainage and sewerage had just been completed. From facts recorded at the Bengal cholera hospitals there could be little doubt that the germs sometimes entered the system by means of the rectum and large intestine, the infection being received while the patient was at the privy. While foul water was rightly regarded as almost always a source of great danger, he had seen it stated that the foulest water in India was at a post where the health of the garrison was so good that the government refused to allow any changes to be made with a view to improving it. Though the water was bad in other respects it was evident that cholera germs had not been introduced into it.

He then went on to say that all previous researches in regard to the nature of the specific germ of cholera had been insignificant in comparison with those of Koch, but in order that he himself should be willing to positively accept Koch's conclusions it would be necessary to have established beyond question that the microbe described by him was always present in cases of cholera, that it was never found in any other disease than cholera, that it was never found in the healthy body, and, finally, that inoculation with it gave rise to cholera. As far as he had been able to ascertain these points had not as yet been completely demonstrated by Koch or other investigators of his school. That cholera was a thoroughly preventable disease he thought the history of past epidemics of it unquestionably established.

Dr. John C. Peters thought that the efficiency of a strict quarantine in preventing the introduction of cholera was well shown in the case of Denmark, which, while often exposed to the risk of receiving the disease from neighboring nations, always escaped until she removed the strict quarantine which she had always maintained before, when an epidemic occurred in the country, in which there were seven thousand cases with four thousand deaths. The quarantine was then reëstablished, and there had been no more cholera there up to the present time. The same thing was shown in the case of Greece, into which cholera was introduced by the French soldiers during the Crimean war, but which had always subsequently been free from the disease.

— Dr. Neumann, Professor of Psychiatry at Breslau, died October 10th, aged seventy-one.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., SECRETARY.

THURSDAY evening, September 11, 1884. The President, DR. JAMES TYSON, in the chair.

DR. J. M. BARTON presented a specimen of

CYSTIC-PAPILLARY ADENOMA OF THE NECK,

which he had removed from a patient at his clinic at Jefferson Medical College on September 6th. The patient was a married woman, thirty-one years of age, the mother of three children. The tumor was of slow growth, having existed for five years, and having increased but little in the last two years. It gave no pain and but little deformity. It was about the size of a walnut, and lay beneath the clavicular extremity of the left sterno-cleido-mastoid muscle, in close proximity to both the subclavian and carotid arteries, from which it received a decided pulsation. On strongly pressing the tumor upward and outward the pulsation ceased. The tumor was closely adherent to a number of large veins of new formation, which greatly increased the difficulties of its removal.

On section it presents a number of alveoli of variable diameter, communicating with each other, and lined with a thick membrane similar in appearance to the inner coats of the arteries. This membrane seems to have undergone calcareous degeneration in some portions. When the tumor was fresh these cysts, on incision, were filled with a dark-red fluid like disintegrated blood.

Report of the Committee on Morbid Growths.

"A section made from the tumor of the neck presented by Dr. J. M. Barton shows a stroma of fibrous tissue in which cavities are seen, varying in size, lined with an epithelium having a cuboidal shape. From the margins of many of these cavities papillary ingrowths were noted covered with cylindrical-shaped epithelium. Other cavities are filled with the remains of cells or a structureless colloid-like substance. The tumor may, therefore, be considered a cystic-papillary adenoma, in which a colloid degeneration has occurred, or, from its location, it is not improbable that it may be either an outgrowth from or a supernumerary thyroid gland."

SEMI-ANNUAL CONVERSATIONAL MEETING, OCTOBER 23, 1884.

THE President, E. O. SHAKESPEARE, M. D., in the chair.

DR. FRANCIS DELAFIELD, of New York, by invitation, read a paper on

THE PATHOLOGY OF BRONCHO-PNEUMONIA.[1]

DR. PEPPER said he had listened with very unusual interest to the paper of Dr. Delafield, in which he had so distinctly and concisely set forth his views on this very common disease.

He thought that all who had listened to Dr. Delafield would agree with him in congratulating the author upon the clearness and force with which he had described a condition which had hitherto often been confused by prolix description and by want of definiteness in separating different anatomical conditions. In regard to the term "broncho-pneumonia," which Dr. Delafield prefers, he has proved by his anatomical studies of the infiltration of the bronchial walls and of the surrounding parenchyma that this term is strictly applicable to the cases upon which this paper is based.

Dr. Pepper stated, however, that though chiefly from a clinical stand-point he was inclined to prefer the term catarrhal pneumonia, as probably including the form described by Dr. Delafield, as well as certain other forms which seem to him to be necessarily included in a complete picture of the disease.

For instance, there are many cases in adults which begin with rigor, followed by high fever, with temperature of 102.5° to 104° F., with cough hard and dry at first, and later with muco-purulent expectoration, with no very definite physical signs, careful examination will show local impairment of resonance, coarse crackling râles on deep inspiration, and weak vesicular murmur. This condition may be limited to the apex or to the neighborhood of the root of one lung, or may occur elsewhere. The cases have a duration of from eight to twelve days, and terminate by lysis with resolution, though not rarely some cough remains, and the lung is sensitive and prone to recurring attacks, which in subjects predisposed to phthisis may induce that disease.

It seems to me difficult to regard these cases as anything else than mild catarrhal pneumonia; for this type of pneumonia agrees with other catarrhal affections in the wide range of severity presented by different cases. On the other hand, there are cases much more common in children in which disease extends from the bronchial tubes into the lobules to which they lead.

The commonly accepted opinion that the lining of the alveoli and air vesicles are susceptible to catarrhal inflammation appears to me well established. In such cases the disease may extend outwards to the peribronchial tissue, as emphasized by Dr. Delafield, and lead to secondary interstitial changes, and also in consequence of obstruction of the bronchiatelectasis occurs; the aspiration of irritating bronchial products fills some of the alveoli, or finally they become impacted with the results of catarrhal inflammation of their walls. Subsequently caseation, with softening, may give rise to small abscesses, with breaking down of the walls of the air vesicles, or with perforation of the pleura, or inspissation may occur, with reabsorption of infectious material with the development of general tuberculosis.

It did not seem necessary to dwell upon the cases in which atelectasis occurred as a primary condition with the subsequent development of pneumonic centres.

It seems to him impossible to consider catarrhal pneumonia without taking the comprehensive view which would include all the varieties above indicated; though the term of "broncho-pneumonia," as used by Dr. Delafield, might be most appropriate to the special conditions described by him.

Allusion was made to the very interesting physical signs attending the course of atelectasis in the course of catarrhal pneumonia of children or of adults where considerable areas of the lung, or even an entire lung, might pass into this state, to be followed before long by the reëstablishment of respiration and the disappearance of the physical signs. Difficult questions of differential diagnosis may present themselves, requiring critical examination. From an allusion made by Dr. Delafield it appeared that he regarded lobar pneumonia as being like broncho-pneumonia, induced by the ordinary causes of idiopathic inflammation. The argument does not favor all lobar pneumonia being a specific constitutional disease, or as dependent upon a special microbe, did not appear to Dr. Pepper to be conclusive, and he was glad to know, from the remarks of Dr. Delafield, that he holds the same view.

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[1] See page 484 of this number of the JOURNAL.

Dr. Bruen said he rose to call attention to the observations of Hamilton, of Aberdeen, in reference to the peculiar basement membrane of the bronchial tubes, which determines the chronicity of bronchitis, and probably the interstitial changes in chronic broncho-pneumonia. Hamilton, in speaking of the denseness of this basement membrane, gives it the importance of a fascia, which determines the direction in which the inflammatory products of bronchitis shall be absorbed, namely, by the lymphatics, rather than by free exudation into the bronchial lumen. The interlobular connective tissues are permeated with fibrous bands, which radiate from the fibrous coat of the bronchi toward the pleural surface. Dr. Bruen thought that if careful study of the lymphatics were made the absorbed products of an acute or subacute inflammation could be traced throughout the lung, finally leading to enlargement of the bronchial glands.

The importance of the basement membrane is further illustrated by the phenomena of pneumonikoniosis and anthracosis. Immediate absorption from the bronchial tubes does not occur, although the tubes are always exposed to carbonaceous matter as evinced by the blackened sputa, yet the tubes are unpigmented, the carbonaceous or organic dust being carried down into the alveoli, whence it is absorbed, and the whole parenchyma of the lungs and the bronchial glands are blackened, but always strictly in the course of the lymphatics.

In children of a strumous habit forms of bronchitis of an obscure nature often occur. Congested areas near the root of the lung are recognizable — abundant mucous râles and frequently laryngeal spasm at intervals is an important symptom. These symptoms are often referable to enlargement of the bronchial glands — and the nervous symptoms are due to irritation of the pneumogastric nerves.

Dr. J. C. Wilson asked whether Dr. Delafield designed to describe one variety of a group of affections to which the terms broncho-pneumonia, catarrhal pneumonia, desquamative pneumonia, etc., are somewhat vaguely and interchangeably applied, or to include the whole group in his account, and under the designation of broncho-pneumonia. If Dr. Wilson had understood the paper aright, he thought it certainly had referred to an especial variety of the affection in question, for there are encountered cases which differ both clinically and anatomically from the disease described by Dr. Delafield, and in which the lesions spread not only in a direction internal from the affected bronchial tubes to the peribronchial structures, but also in the direction of the long axis of the tubes to involve the terminal (subpleural) vesicles, and this, according to widely accepted views, often without antecedent atelectasis.

Dr. Carpenter said that he had very little, indeed, to give of value in a pathological discussion, but would say at the same time that after thirty years' experience he had arrived at certain conclusions, not perhaps new, but which had been gathered in one set of cases, namely, anthracosis. They are a very striking set of cases. They all originate in a bronchitis, which differs from the ordinary form of that disorder in one very striking symptom, namely, great oppression of breathing. This oppression is far greater than can be accounted for by ordinary bronchial inflammation. It depends on interstitial disease or peribronchitis. A true broncho-pneumonia is set up, the cause being a special one, namely, inhalation of coal dust. In these cases so great obstruction to the circulation is caused by the interstitial exudation that the circulation is very seriously embarrassed. The heart suffers — dilatation, or hypertrophy with dilatation, is produced, and a form of dyspnœa, known as miners' asthma, occurs. These cases are essentially chronic ones. He had only the day before seen a patient die with this disease who had been under his care for several years, and in whom no lesions but those of peribronchitis could be detected.

Many of these cases, however, in a chronic progress, do develop all the symptoms of phthisis. Slow alterations of structure occur, cavities form, and all the pathological conditions of the so-called fibroid phthisis are found on post-mortem examination. He, therefore, claimed that these cases are entitled to constitute a special form of broncho-pneumonia. He agreed with Dr. Pepper that acute or subacute broncho-pneumonia left sensitive areas, leading often to subsequent phthisis. In his observation, fibroid phthisis was not a true tuberculosis, but a chronic degeneration of lung tissue, due to a preëxisting broncho-pneumonia, such as he had observed in anthracosis.

Dr. Osler said that his experience in many points tallied with that of Professor Delafield. In the broncho-pneumonia of adults the pneumonic process, he believed, most usually spreads from the bronchi. He referred also to those cases of broncho-pneumonia which followed brain injury, or disease affecting the pneumogastric centres. In such cases the disease was deeply seated, and we find that the morbid process often surrounds the bronchi, but does not involve the terminal alveoli. The reverse is true in the case of children, in whom the disease is more peripheral, is nearer, and may be just beneath, the pleura. He was glad that Dr. Carpenter had raised the point as to anthracosis. Dr. Osler had been able to examine several cases of this affection in its very early stages, and could testify that it begins in the bronchi and thence extends to the peribronchial tissues. It is primarily, then, a broncho-pneumonia, and in every case he had found small disseminated black lumps resulting from localized broncho-pneumonia, which, by their fusion and extension, produce a form of fibroid phthisis.

Dr. Tyson had little to add to what had already been said. He had, however, first expressed his gratification at the simple clearness with which Dr. Delafield had presented the question. Dr. Tyson had been very much impressed with the diversity of nomenclature of the disease under consideration, and it would be useful if we could agree upon some common term. For a long time desquamative pneumonia had seemed to him to be the best term, but from a study of the pathological histology he thought the term peribronchial pneumonia more suitable. If now the adjective desquamative be added we have a term which will be still more comprehensive and exact.

Dr. Tyson thought that our understanding of the enormous peribronchial cellular infiltration would be much simplified if we lose sight altogether of the idea that there is essentially any form of inflammation except interstitial inflammation. He had come to the conclusion that there is no such thing as catarrhal or parenchymatous inflammation, the phenomena usually considered characteristic of these being secondary. The wandering out and massing of leucocytes is the one essential factor of the inflammatory process. He would like to ask Dr. Delafield where he would draw the line between this process and tubercular phthisis. He presumed that Dr. Delafield agreed with all other observers in admitting that broncho-pneumonia does sometimes terminate in tubercular phthisis, and when this occurs it is often difficult to say where the broncho-pneumonia ends and where the phthisis begins, although the extremes may be easy of recognition.

DR. FORMAD would like to ask the lecturer's instruction how to distinguish broncho-pneumonia in its *chronic* form from *tubercular* broncho-pneumonia. Like Dr. Tyson he felt that he was unable to draw a line of distinction between the two affections. Indeed, Dr. Formad was unaware of a non-tubercular form of broncho-pneumonia in man until he saw Dr. Delafield's excellent records and representations of this lesion, this being explained by the fact that Dr. Formad dealt almost entirely with the dead, while most of the speakers had shown that although broncho-pneumonia in its *acute* form was a common disease it did not prove fatal in the vast majority of cases, the patients either getting well or the disease assuming a chronic course.

Dr. Formad fully recognized *acute* broncho-pneumonia as an independent affection, although he believed he had observed this lesion *post mortem* only in dogs, such as induced artificially by means of forced inhalations of a spray containing irritating particles. Dogs with such artificial broncho-pneumonia (even if tuberculous sputum was resorted to to induce it) Dr. Formad had observed always to recover within a couple of months, but if the dogs were killed before the end of the first month after the operation the post mortem showed invariably an acute broncho-pneumonia not distinguishable from that described by Dr. Delafield as occurring in man. Throughout the lung substance are seen small nodes of irregular outlines, in size resembling tubercles.

Under the microscope these nodules are seen to consist of mere unorganized collections of cells, often in a state of retrograde change and mixed with mucus and débris, this exudate being limited to the lumina of the bronchials and their pertaining groups of air vesicles (the acini) which they fill. On section these artificial boundaries give rise to the appearance of nodes. Very often epithelial cells and mucus from the bronchi have been seen intermingled with the purulent contents within the air vesicles. This suggests that the exudate contained in the latter may have been partly aspired from the bronchi (during forced breathing) and was lodged in the air vesicles as foreign material.

These lesions have been mistaken by stupid observers for true tubercles. *Acute* broncho-pneumonia in man appears to be a lesion perfectly analogous to the one described above in dogs. The human disease once becoming chronic, its distinction from tuberculous broncho-pneumonia ceases.

DR. DELAFIELD, in closing the debate, said that all the speakers had brought out what was one of the most difficult points concerning broncho-pneumonia, namely, its limitations. Strictly speaking every pneumonia is a broncho-pneumonia, and the application of the term to a certain group of cases is, of course, arbitrary. He believed, however, that the name is most properly employed to designate the group of cases which he had described.

In anthracosis there is a chronic bronchitis and also a chronic pneumonia, but yet the lesion is not, properly speaking, a broncho-pneumonia.

He did not believe that the inflammation traveled directly from the bronchi to the air vesicles into which they entered, but that the appearances which simulated this were due to atelectasis.

He thought that the term catarrhal pneumonia was a very bad one, and that the air vesicles were structures entirely different from mucous membranes.

He did not believe that broncho-pneumonia was a form of phthisis or lead to phthisis, but that phthisis had its own special anatomy from the very beginning.

Recent Literature.

Diseases of the Throat and Nose, including the Pharynx, Larynx, Trachea, Œsophagus, Nose, and Naso-Pharynx. By MORELL MACKENZIE, M. D. London. Vol. II. Illustrated. Philadelphia: P. Blakiston, Son & Co. 1884. Octavo, Cloth. $3.00.

This volume completes Dr. Mackenzie's work on the Throat and Nose. The first volume, published four years ago, treated of the affections of the pharynx, larynx, and trachea, and was justly considered as nearly perfect as possible. The volume now before us, which consists of three sections, (1) Œsophagus, (2) Nose, and (3) Naso-Pharynx, is fully up to the first. The general arrangement of the two volumes is the same. Nearly every chapter is preceded by a concise, interesting, and oftentimes instructive historical sketch of the disease to be described, which gives the author ample opportunity to acquaint us with many literary and pathological curiosities which his extensive research has brought to light, and for which he has an evident relish. At the end of the chapters illustrative clinical cases are added, taken, in most instances, from the author's own unrivaled experience. Foot-note references to the writings of others are frequent throughout the book. Dr. Mackenzie appears to us to have been especially liberal towards his American confrères — perhaps in some cases too much so — in mentioning their instruments, methods, and writings. We fail to understand, for example, what benefit his readers can derive from perusing the long foot-note on page 313, copied from a work on Catarrh by an American author. This writer details a number of complications of nasal catarrh which could never have had any existence except in his own imagination. These Dr. Mackenzie reproduces at length, and then adds ironically that such symptoms are fortunately not met with in Great Britain. Neither are they met with in the United States, as Dr. Mackenzie well knows, and we regret that such statements having an American origin should be found in a work which is to enjoy such a wide circulation as the one before us.

The illustrations of morbid appearances are mostly originals; they are well executed, and very instructive. Too much space, however, is given to the drawings of the various insufflators, nasal douches, nasal spray producers, and pneumatic spray producers. These have long been familiar to all; they are constantly being modified and improved, and some of those pictured in this volume are even now antiquated, at least in this country. The chapter on Nasal Instruments, in fact, resembles a chapter from an instrument maker's catalogue, for it contains the good and the bad. The volume closes with an appendix containing special formulæ for topical remedies, and an excellent index of subjects and authors. The first two hundred and thirty-four pages of this volume are devoted to the gullet: its anatomy, how to examine it, its diseases, and a description of œsophageal instruments. The author gives the results of his experiments to determine the calibre of the gullet, which show that its transverse diameter is very considerably greater than the antero-posterior measurement. In sounding the gullet, therefore, he recommends bougies somewhat flattened antero-posteriorly, as they adapt themselves more easily to the lumen of the tube through which they are meant to pass. In the chapter on Œsophagitis in Infants it is stated that the reason why English writers subsequent to Ryan (1835) have altogether passed over the disease is because that even in children's hospitals patients under two years of age are not admitted. In this connection we find a word of praise for Dr. Haven's hospital in this city, which is exclusively devoted to infants under this age.

Dilatations, malignant tumors, and cicatricial stricture of the gullet are treated in a thorough and brilliant manner. The various operative methods for stricture are fully considered. As regards internal œsophagotomy, the author thinks increased experience will show that though its immediate results are not so frequently fatal, its ultimate effects, even when successful, are less beneficial to the patient than either gastrostomy or œsophagostomy. Dr. Mackenzie gives the preference to gastrostomy, as it is both safer and easier to perform, and *always* meets the difficulty to be overcome, namely, the obstruction to the passage of food into the stomach, except in those comparatively rare cases in which the stomach itself is also diseased. Judging from statistics alone, he says, operative interference would seem to be attended with less satisfactory results than the milder palliative measures generally adopted. The average duration of life in his own series of one hundred cases of malignant stricture of the gullet in which no operation was attempted was *eight* months, while the average extent of life after the first manifestation of distinct symptoms till death in fifty-three cases in which gastrostomy was performed was *seven* months. Recent records, however, show much better results, and the author claims that as the increasing resources of science render earlier recognition of œsophageal disease possible the results of the operation will be still more satisfactory in the future.

From a literary point of view the chapter on Rupture of the Gullet is one of the best in the book, and is a model of the complete and painstaking manner with which Dr. Mackenzie works up a subject.

Succeeding chapters are devoted to Wounds, Foreign Bodies, Neuroses, Spasm, and Malformations of the Gullet. This section on the œsophagus is the most important part of the book, although in the remaining half of the volume the diseases of the nose and naso-pharynx are discussed with great ability, and the extraordinary amount of labor which has been expended on the work is evident on almost every page.

In the chapter on Hypertrophy of the Nasal Mucous Membrane treatment with the electric cautery is recommended as the most simple and efficacious method. Not a word of caution, however, do we find in regard to applying the cautery, or any mention of the accidents which sometimes follow its use in the nose. The treatment of nasal polypi by evulsion, abscission, and electric cautery is considered in detail, and here, again, the preference is given to the cautery. Abscission with cutting forceps is held to be preferable to evulsion, and the author states that there are some polypi which, from their anatomical situation, cannot be extirpated unless a portion of the turbinated bone is also taken away.

Although the chapter on Hay Fever contains nothing new it is compiled in a manner which can only be described as Mackenzie's, and will be read with enthusiasm.

Taking this work on the Throat and Nose altogether there can be but one opinion in regard to it. It is a credit to medical literature, and will always occupy a place among the standard works. As a text-book it is exhaustive and reliable, in short, *the best*, in our judgment, which at present exists in any language.

F. H. H.

The Formation of Poisons by Micro-Organisms. A Biological Study of the Germ Theory of Disease. By G. V. BLACK, M. D., D. D. S. Philadelphia: P. Blakiston, Son & Co. 1884.

This is a series of lectures delivered at the Chicago College of Dental Surgery. From the title we had hoped to find some original investigation, but in this we were disappointed. The first part is a historical résumé of the work of Koch, Pasteur, and others. The second part is devoted to a consideration of the action of cells upon foreign substances, and the method in which they are gotten rid of. The process the author considers is due to the production of a ferment, and similar to digestion. He, however, is not able to show that the substance has been isolated in all cases. He then goes on to show that the action of micro-organisms is dependent upon a poison of a nature similar to the alkaloids. This, however, has been separated in so few cases that a generalization is hardly warranted as yet. The point made is summed up in the sentence, "The cells attacked either digest the invading germs or the invading germs digest them." We cannot quite agree with the author, and think that the word destroy for digest would be of rather wider application and nearer the mark. The last part of the book gives a description of the different forms of caries found in teeth, and the part in their production which is played by the bacteria, as shown by the works of Dr. Miller.

The Elements of Pathology. By EDWARD RINDFLEISH, M. D. Translated by N. H. MERCER, M. D., and revised by JAMES TYSON, M. D. Philadelphia: P. Blakiston, Son & Co. 1884.

As the author says in his preface, this book is intended for those who have already a knowledge of the subject rather than as a systematic treatise for beginners. Considered in this light it certainly may fill a niche as the translator hopes. The subject has been treated from the stand point of ætiology in the association of processes rather than from purely anatomical grounds. From the great experience of the author there are many valuable suggestions. For example, the concise and simple way in which the changes in the heart produced by disease of its valves is stated. At times, however, he seems inclined to speculation, and to draw conclusions from evidence which is certainly weak if not wanting in some of its points, and it is especially on this account that it is hardly to be recommended to younger students. The style of the original is undoubtedly involved, and it is not the fault of the translator if some passages are a little obscure. The rather inferior quality of paper and type is, probably, necessitated by a desire to keep the price within reasonable limits.

Medical and Surgical Journal.

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CHOLERA NOTES.

BOSTON BOARD OF HEALTH.

By reason of the outbreak of the cholera in Paris the Boston Board of Health has issued more stringent orders to the Port Physician in regard to the examination of passengers and baggage which may arrive here from foreign ports, especially on the French coast. The orders sent out by the Board at the time the cholera recently appeared in Italy are still in force also, but to guard against any possibility of this disease gaining a foothold here particular care will be taken to examine persons and merchandise coming to this port from localities in France. The work of looking after places in the city, as courts, alleys, cellars, etc., especially in the tenement house districts, which have been allowed to remain in a filthy condition by the owners and inmates, is being prosecuted with vigor.

THE EMBARGO ON RAGS.

Secretary of the Treasury McCulloch issued, November 15th, the following circular to customs officers: The unloading in the United States of old rags shipped on and after the 20th inst. from foreign ports or countries now or hereafter known to be infected with contagious or epidemic diseases is hereby prohibited. France and Italy, and all Mediterranean and French ports, are declared to be infected within the meaning of this order. Old rags gathered or baled in infected ports or countries, or shipped from other ports or countries, are also prohibited from being unladen. No old rags shall be landed at any port of the United States except on a certificate of the United States Consular officer at the port of departure that such rags were not gathered or baled at, or shipped from, any infected place or any region contiguous thereto. This circular supersedes No. 145 of August 30, 1884, and No. 162 of October 23, 1884, on the same general subject as to shipments made after the date specified, and will remain in force until further notice. This order will not be construed to allow the unloading of any old rags except upon the general permit of the local quarantine or health officer.

The Marine Hospital Bureau is informed that the cost of disinfecting rags abroad by the boiling process is $3 a ton.

NEW YORK STATE BOARD OF HEALTH.

The following notice has just been issued by the State Board of Health at Albany through its secretary, Dr. Alfred L. Carroll: —

"Local health officers and Boards of Health are hereby apprised that the rapid advance of cholera in Europe threatens the invasion of this country, which may occur at any moment, and are notified that the State Board of Health expects a strict performance of the duties imposed upon them by law. Among these duties are the determination of the period of quarantine of vessels, vehicles, or persons arriving from an infected locality; the regulation of intercourse with infected places; the suppression and removal of nuisances; the examination of places where the conditions are dangerous to public health, whether known or believed to exist, and to report promptly to the State Board of Health all facts relating to epidemic disease, and require such isolation and quarantining of persons, vessels, and sources of infection as shall be necessary; — in brief, to use all possible means to avert the introduction or prevent the spread of an epidemic as disastrous as cholera has everywhere been. These duties are not discretionary with local Boards of Health. The law is mandatory, and evasion or neglect will not be tolerated in the face of danger which menaces a community. Experience has shown that cholera poison does not extend where no filth favors its multiplication, and that the only way to obstruct its march is to remove all sources of pollution of soil, air, or water. In excremental contaminations especially lies the greatest risk, and all such conditions must be at once removed."

Sanitary Superintendent Day states that New York City has never been in a better condition to resist the ravages of cholera than at present, while the officials of the Health Department are energetic, competent, and constantly on the alert.

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POLITICS AND PUBLIC HEALTH.

Some months ago the Journal commented editorially upon the reflex nervous and psychical effects of those occupations in which events largely outside the control of the operators made success or failure, particularly stock-speculation and dealing in "futures" generally. A new phase of this subject is suggested by the political campaign through which we have just passed. To her devotees Fame is perhaps even more alluring than wealth. Men seek the bubble Reputation even where they will hardly follow for lucre.

What form of excitement can cause a more tremendous strain upon the nervous energies of its victim than the life of the professional politician! The contest which begins with (or even before) the "primaries," which thickens as the time approaches for the nominating convention, with its skirmishes, its attacks, its plots and counterplots, culminating in success or failure in carrying the nomination; which without a breathing space plunges into the thick of the battle for votes; the bargains for securing influential supporters; the physical exhaustion of taking the stump, the addressing of three or four audiences each day, and the traveling at night; the widespread publication before a gaping world not only of one's public record but of the most personal and secret matters of the private life; the shafts of vituperation and falsehood which cannot but leave their mark upon the most callous heart; the still more degrading effect of setting in motion this same vile enginery against an opposing candidate; and last, but not least, the strain of alternate hope and despair after the vote is taken and while the result is yet in doubt, — all this is an experience than which nothing could put a greater strain upon the whole mental and physical being. Those who have played for the highest stake in our political life and have lost, as has been the fate of not a few of our leading statesmen, may not have always owed their death directly to the mental strain and disappointment, but evidence is not wanting in several instances of a breaking up of health and courage after the great ordeal which never was recovered from. To go no further back than the memory of the present generation, we may mention Clay, Webster, Stephen A. Douglas, and Horace Greeley as melancholy instances of this. And what else could be expected? The attainment of the prizes of speculation is often a relative thing. All is not staked on one venture, and if the success is not all that was desired it may yet be considerable. But a public man who has been smitten with the presidential fever must either win his goal or fail utterly. For years he has kept his eye on the White House, and every public act has been viewed in its possible relation to that objective point. As his plans succeed and the goal comes nearer, his efforts and his excitement increase. And finally, when the prize is almost within his grasp, what must be the tension of every mental and physical fibre as he summons them to the aid of his supreme effort.

But this subject has bearings of more practical interest to the community than those relating to the presidential contests alone. The unnecessary frequency of the elections in many parts of this country is productive of evil results not only to the small army of candidates but to the general public, who waste a large amount of time, energy, and money over every election. In this city, for instance, the smoke of the last battle has not cleared away before we are involved in a municipal contest. One day in the year, or better still, one day in two years, should suffice to devote to the exercise of the elective franchise, and there seems no good reason why all State and municipal officials should not be voted for at one balloting.

One other and still more important point in which politics may be said to touch upon public health is suggested by the nervous strain which, under our present Civil Service system, is put upon the great body of Federal office holders at each national election. Every four years their means of livelihood are threatened. In the uncertainty of their tenure of office there is at all times, indeed, a degree of anxiety, but once in four years their risk becomes so imminent that they are virtually put into the position of playing for a stake, that stake being nothing less than their bread and butter. While the gambler's play affects only himself, the politician is able to put into the wager not only his own political ambition but the hopes, the anxieties, the mental health and happiness, and even the physical subsistence of a hundred thousand of his fellow citizens.

CHOLERA AND RAGS.

The Treasury Department at Washington has issued another order relative to the importation of old rags under date of November 15th, the substance of which will be found in another column. This order supersedes those issued August 30th and October 23d, and prohibits the unloading in the United States of old rags shipped on or after the 20th instant from foreign ports or countries now or hereafter known to be infected with contagious or epidemic diseases. The order will remain in force until further notice.

We deprecated the issue of the first order as arbitrary and exaggerated. Such steps at first give a false feeling of security, and ultimately tend to diminish the respect and confidence which may be entertained towards the departments from which they emanate. As far as any facts exist on the subject, they do not show that old rags in the bale, as used by papermakers, are especially dangerous conveyancers of contagion, but they do show that immigrants and their effects are. If there is any necessity for, or possibility of, regulating the one, in a still greater degree should it be true of the other.

It is to be hoped that central and local authorities will coöperate harmoniously in the enforcement of such regulations as may be deemed desirable under existing conditions; but it is no less to be hoped that such regulations will only be proclaimed after due reflection and under sufficient advice. Mere energy and activity, if fitful or ill-directed, will do more material and moral harm than good.

SIR JOSEPH LISTER ON CORROSIVE SUBLIMATE.

A most interesting address was delivered by Sir Joseph Lister at the opening meeting of the Medical Society of London, which was reported in the *Lancet* and *British Medical Journal* of October 25th. It contained an account of the author's experience in the use of corrosive sublimate as a surgical dressing, and of his experiments with a combination of sublimate and blood serum. Professor Lister did not consider the subject by any means exhausted nor its practical application fully established, but he "ventured to hope" that the interest of some of the points might justify him in bringing it to public notice.

It is a very generally received view in the profession, not to say among professed chemists, that albumen forms, with corrosive sublimate, an insoluble, or very sparingly soluble, albuminate; and that this albuminate is inert; whence the efficacy of white of egg as an antidote in corrosive sublimate poisoning. If it were really true that the albumen, acting in a certain proportion on the corrosive sublimate, would form with it an absolutely inactive compound, this would be a very serious consideration for the use of corrosive sublimate in surgical practice. The albuminous (proteid) constituents of the blood are enormously abundant; while the quantity of corrosive sublimate which can be used in surgical dressings cannot be very great. According to the most recent views regarding albumen, its chemical equivalent is about six times that of corrosive sublimate; but the quantity of albuminous material in the serum of the blood is very much more than this in proportion to any amount of sublimate that we could have in our dressings.

Experiments made directly with blood serum and corrosive sublimate showed that if serum is mixed in small proportion with corrosive sublimate in a mortar the result is the production of a thick, opaque, slimy material, but if more serum is gradually added this material is redissolved in the serum until, if as much as 150 parts of serum to one of sublimate is used, a clear solution results.

Such a combination of sublimate and albumen is very mild and unirritating in its action, and gauze made with solutions of one part of sublimate to fifty of serum proves unirritating to most skins. In very few cases the one to fifty gauze has caused some irritation, which has, however, disappeared when gauze prepared with one part of sublimate to one hundred of serum was substituted.

The serum used for such dressings is obtained from horse's blood, which separates most completely in coagulating from the blood corpuscles, and is, therefore, to be preferred to beef blood, the serum of which contains a large number of corpuscles.

How far Professor Lister's experiments may be successful in furnishing a surgical dressing for general use is certainly very uncertain.

If the serum is treated with a certain proportion of sublimate, not sufficient to make it solid, it may be kept for any length of time. Professor Lister thinks it possible that this sublimated serum may come to be an article of commerce, which may be used in hospitals or even in private practice. A material of this kind, dried and reduced to powder, may come to be used for the purpose of mixing with vaseline for an antiseptic ointment or even for dusting in, under certain circumstances, among the dressings.

The interest in the subject which the distinguished surgeon feels will, probably, be shared by his readers, but any one who follows carefully the work the address details can hardly fail to take an equal interest in the exposition of the methods of study and the careful observation which preceded and led up to the use of blood serum.

CHOLERA IN PARIS.

The situation at Paris has not materially changed since last week. The number of daily deaths has varied from eighty to twenty, and probably less than a third of the cases have proved fatal. The mortality is calculated as not exceeding one in 36,000 of the population, a ratio very commonly exceeded by that due to typhoid fever. There has been a favorable change in the weather from the warm, moist, foggy atmosphere of last week to a cooler and clearer air, and this change is accompanied by a diminution in the tendency of the disease to spread.

Such victims as the disease has made so far have been entirely from the poorer quarters of the town, from the garrison, and from one of the homes for the aged. The richer quarters have not been attacked, and it is highly probable that cholera may linger on through the winter in its present state of semi-activity until given fresh vigor by the spring months.

The mere official recognition of the presence of cholera in the city was sufficient to clear the place of strangers, unless detained by business, and to nearly empty the hotels. Many of those who have fled, we have no doubt, have exposed themselves to more real danger than if they had stayed quietly where they were and lived with circumspection. Cheap shopping and lodging will prevail in Paris this winter, and for those who do not feel nervous as to their being accompanied by illness and death it might not prove an undesirable time to go to that capital. As far as lies in the power of the government, general and municipal, sanitary precautions will, probably, be energetically practiced. On the side of the people themselves it is quite as likely that familiarity will breed contempt, and as the winter advances individual carelessness will increase rather than diminish.

Very different accounts come from different sources as to the condition of the Paris water supply. The supply is drawn from four or five different sources, which are used for different purposes and in different quarters of the city.

MEDICAL NOTES.

— Dr. Roche states (*Lancet*, April, 1884) that five drops of tincture of cantharides, three times a day, is a good remedy for children suffering from incontinence of urine. It renders the neck of the bladder sensitive, and the stimulus of the urine keeps the sphincter tonically closed till voluntarily overcome at the micturition time. In children, want of tonic contraction in the sphincter, and not excessive sensitiveness and spasmodic effort in the body of the bladder, is the most frequent cause of nocturnal enuresis.

— A rather unusual case has lately been submitted to Judge Hagner in the Circuit Court at Washington, D. C., says the *Evening Star.* This was a suit to recover from Dr. W. H. Hale one hundred dollars paid him by a colored man named Meredith under a guaranty of Hale that for that sum he would cure Meredith's son of pulmonary consumption, and in case he failed he would refund the money. The boy died, and Meredith sued Hale before a justice of the peace and obtained judgment. The case was reopened, and judgment was given against Hale a second time, and he appealed. After the testimony of the parties was given, Judge Hagner affirmed the judgment below. He declined to consider the defendant's bill in bar for attending Meredith's wife, and decided the case solely as to the original claim. Judge Hagner read the heading of Dr. Hale's circular — "Hearth and Home, sworn circulation 63,000 copies monthly" — and the signed guaranty to cure the son, and said, "This guaranty was to perform an impossibility, to reverse a decree of the Almighty, and was akin to gypsying and voudooism, which says: 'I don't want your money, but as I must touch silver I must have it before I can succeed.' The justice was right in his decision that the money should be paid back, and this court affirms that decision."

— William H. Dempsey, of Washington, D. C., is under indictment in the United States Circuit Court in this district for forgery and uttering in defrauding the United States in connection with certain clerks in the Medical Bureau Department in Washington out of some $75,000 by means of false vouchers. Dempsey is under $5000 bail.

NEW YORK.

— The graduating exercises of the Training School for Nurses of Charity Hospital, Blackwell's Island, took place at that institution on Wednesday, November 12th. The class numbered twenty-one; the largest that has yet been graduated from the School. The principal address was delivered by the Hon. Abram S. Hewitt, who in the course of his remarks expressed the belief that the development of the trained nurse and the training school was fully as great a blessing to suffering humanity as the discovery of anæsthesia. Remarks were also made by the Rev. Dr. W. M. Taylor, Dr. Fessenden N. Otis, and Dr. Seaman, chief of staff at Charity Hospital. In his address Dr. Taylor said that whatever dispute there might be about other spheres of woman's work, there was no question about her qualifications and fitness for ministering to the sick. This is the eighth class that has left the hospital with the diplomas of this School.

— The Rhinelander case was the subject of discussion at the last meeting of the Society of Medical Jurisprudence, held November 13th. The paper of the evening was read by Dr. William L. Hardy, city physician, who said that from the examination which he made of Rhinelander while in prison, and the evidence in regard to his former life, he had become convinced that he was really insane. Because the prisoner, however, had shown a retentive memory and a certain shrewdness and cunning during the investigation in regard to his sanity, many had thought that he must be sane. Some of the legal gentlemen present thought that while Rhinelander was weak in certain respects and eccentric, that did not constitute him an insane person, or release him from the responsibility for committing a crime, and that his wit and excellent memory also argued against his being insane. Dr. E. C. Spitzka said that the different experts who were called in in the case had attributed to the prisoner so many kinds of insanity that he agreed with Recorder Smith's opinion that it was impossible that he should be affected in so many ways at the same time. Mild lunatics, however, were often noted for keenness of retort and a certain amount of shrewdness and cunning; while imbeciles sometimes had unusually good memories. Judging from the symptoms enumerated in the paper he would himself have no hesitation in pronouncing Rhinelander an undoubted lunatic.

— As a means of supplementing the deficient Croton water supply, the Bronx River was tapped last summer, and for about two months now the houses above Harlem bridge, on the east side, have had water from this source alone. The water was found from the first to be offensive in taste and odor, and as this continues to be the case up to the present, the Board of Health, at the instance of a number of physicians and other residents of the district, is making an investigation in regard to the wholesomeness of this water from the Bronx.

— The corner stone of the crematory of the United States Cremation Company, limited, which is being built at Mount Olivet, near Fresh Pond station, on the Long Island Railroad, was laid November 19th, when addresses were made by Prof. Felix Adler and the Rev. Dr. Howard Henderson.

Correspondence.

LETTER FROM MR. LAWSON TAIT.

Birmingham, *November* 5th, 1884.

Mr. Editor, — I have had very much pleasure in perusing a large number of notices, in the American medical press, of the address which I was privileged to deliver to the Canada Medical Association in August last. The compliments paid to me in these notices have been far greater than I deserved, but the pleasure derived from all of them is more than counterbalanced by the pain I have felt at an editorial comment in the *Boston Medical and Surgical Journal* (October 2, 1884). Therein you express your opinion that my address was intended more for the castigation of Sir Spencer Wells than for the purpose of laying before the profession the results of my own experience and observation.

I am truly grieved that it should be possible in any way to put such an interpretation upon anything that I have said, for certainly nothing was further from my purpose. That I detailed my differences from Sir Spencer Wells in words which were strongly expressed is true, for when I feel strongly I am in the habit of fully expressing my meaning. That I strongly condemned language which was used rashly and indiscriminately by Sir Spencer Wells is equally true, but that I had any intention of castigating that gentleman is an impression which I desire to remove, and if any word or phrase throughout my address can be legitimately understood in that direction I hereby freely and unreservedly withdraw it, and express my regret for it.

But let it be clearly understood that mere strength of language in the expression of my opinions is neither to be retracted nor to be regretted. I do, therefore, trust that you will allow me, in order that I may not appear in an unfair position in the eyes of the numerous readers of your influential journal, briefly to narrate the relation which Sir Spencer Wells has adopted towards me during the past few years. Until the month of August, 1881, I was on terms of intimate, almost close friendship with him, and I have discussed with him in private freely and without the slightest difficulty all the points upon which we have since been publicly at variance. I could never discover that by reason of difference of opinion there was anything likely to destroy our friendship. But at a meeting of the Obstetrical Section of the International Medical Congress in London, in a public discussion of the question of the removal of diseased uterine appendages, Mr. Spencer Wells uttered this sentence: "That he had only seen one case which justified an operation, and it was a very remarkable thing that so many were reported, he supposed that they must all go to Birmingham." My reply to him was that there was probably more truth in his suggestion, that the cases went to Birmingham, than he had any idea of, and from that time, and apparently from that reply of mine, all association between us has ended. It has been repeated frequently to me that insinuations have been made in London concerning my practice of an extremely objectionable kind, and these I have traced in several instances to the lips of Mr. Spencer Wells.

During the past three years, as in many instances before that time, it has been considered advisable by patients and their friends that they should have the opinion of Sir Spencer Wells as well as mine, or that they should have my opinion in addition to his, and in all such cases I have acted upon the rule of my profession, and have communicated by letter or by telegram with him. On his part he has persistently subjected me to the most humiliating treatment which one practitioner can apply to another, that of entirely ignoring my communications, and in public he has deliberately turned his back upon me.

Under such circumstances as these it will not be a difficult matter for your readers to understand that I am not much inclined to modify language which in any case would be strong, nor to pick and choose my expressions in order to couch them with greater delicacy. I have received at the hands of Sir Spencer Wells treatment which I think any one would resent, but in spite of that I had no intention of saying one word which could be regarded as being intended for purposes of castigation. I would further point out that what I have said has been chiefly in defense of another whose positions have been assailed, whose accuracy and honesty have been called in question, — I mean Mr. Keith, — and I have said very little indeed on my own behalf. I also think I am justified in saying that what little I have said for myself was in reply to repeated attempts at castigation which have been made upon me by Sir Spencer Wells.

In conclusion I can only say concerning Sir Spencer's conduct towards myself, that it is not what we expect from an English gentleman, still less is it in harmony with the position to which, by the grace of his sovereign, he has been recently raised.

I am sir, your obedient servant,

Lawson Tait.

[We publish with much pleasure the above letter from Mr. Lawson Tait. If our editorial comment on his address at Montreal contained any element of injustice to Mr. Tait we regret it. — Editor.]

HYDROCHLORATE OF COCAINE.

Portland, Maine, *November* 15, 1884.

Mr. Editor, — Hydrochlorate of cocaine, the recently brought forward local anæsthetic, is upon trial, particularly in ophthalmic and aural practice, and therefore it should be not only a duty but a pleasure for those who are using the drug, which promises so much, to give clinical experience with the same. The writer has found that a one per cent. solution, frequently repeated, is quite efficacious, producing rapid anæsthesia of the parts, and that an operation can be performed much sooner than one would be led to suppose by a perusal of the reports of most of those who have thus far recorded their clinical experience.

Case I. G. S. D., aged seventy, senile cataract. This patient was rather timid, and preferred to take ether, but being dressed for the bed and lying in a recumbent position one drop of a one per cent. solution of the hydrochlorate of cocaine was instilled thirteen times in the course of twenty minutes, when immediately after the last application the cataract was removed by Graefe's method modified. The eye was particularly unsound, since when the counter puncture was made vitreous was seen to present, but by careful manipulation no vitreous was lost, and it is believed that the use of the drug assisted materially in preventing such a disaster. There was a noticeable absence of congestion of the conjunctiva, and scarcely a drop of blood was lost in the section of the cornea, and none in doing the iridectomy. The perfect control of all the movements of the eyeball with the absence of spasmodic action of the muscles, as occurs when the operation is done without any anæsthesic, was observed, and assisted in the manipulation necessary to the expulsion of the lens.

Case II. C. J. B. got a piece of emery in his left eye twenty-four hours since. Did not stop work. Eye pained him last night. There was marked pericorneal injection, photophobia, lachrymation, and spasms of the lids. The emery was imbedded near the centre of the pupil in the corneal substance proper. A drop of a one per cent. solution of hydrochlorate of cocaine was instilled ten times at an interval of about one minute, when the foreign body was removed without pain and so easily that he hardly believed the emery had been removed. Atropia was applied, and he was ordered a collyrium containing atropia to be applied, eye to be protected, and to stop work. The eye felt so much better at once and continued to do so that he went to work, and on the second day I was called and found swelling of the lids, chemosis of the conjunctiva, and quite a collection of pus in the cornea at the point where the emery had been removed. Under appropriate treatment these unfavorable symptoms were readily changed, but the case is cited to show how the use of cocaine may lead the patients to disregard the instructions given them and lead them to be much more careless than though there had been some pain experienced in the operation.

The drug has been used in various other operations upon the eye and has quite fully come up to all that has been claimed for it. In the removal of polypoid growths from the ear, nose, and naso-pharynx, it has been found of great assistance, since by its use manipulations in these parts are much more readily borne, and therefore much more easily accomplished.

E. E. Holt, M. D.

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PROFESSOR PETTENKOFER ON THE CHOLERA BACILLUS.

Berlin, *October* 18, 1884.

Mr. Editor, — I take the liberty to inclose to you an extract from an address delivered October 15th, in Munich, by the eminent Professor Pettenkofer, before the Medical "Verein" of that city. The address was made in reply to an article by Dr. Frobenius upon the subject of cholera viewed in the light of recent studies and clinical observations, in which the bacillar nature of the infection was maintained.

Professor Pettenkofer said: "I think that we all have ample cause for renouncing the 'contagionist' theory in relation to the spread of cholera. We have been led to squander millions of money without apparent benefit by following these delusive theories. (Italy already regrets her sanitary regulations, etc.) I openly announce that I am forced to sustain and defend my former opinions in regard to the 'localization' of this disease, and I do this with the more confidence and the greater positiveness from the fact that the investigations of Koch have not succeeded in establishing any evidence against their correctness.

"The time is now fully come when the experiment should be made to determine whether the comma bacillus of Koch is capable of producing true cholera. The attempts which have been made upon animals have not been successful. *I freely offer myself for this purpose, and am ready to swallow bacilli which have been cultivated by Koch himself*, provided that no local or temporary conditions exist at the time of the experiment, such as the presence of cholera in the city, etc., by which the results of the trial might be rendered valueless. War has been waged and human lives sacrificed for a less worthy cause than this. *Here the noble object to be attained is so evident that the life of one individual* appears of little importance. My example, which, as I repeat, I freely and willingly make, will find followers. It will not be difficult to find twenty physicians who will offer themselves to confirm my view. Hundreds will follow these, until from the mass of accumulated evidence a correct judgment may be reached. (Professor Pettenkofer also declared his willingness to prepare for the experiment by first inducing a gastric and intestinal catarrh before introducing the bacilli.) I estimate Koch very high as a bacteriologue, and fully recognize his ability in the highest degree, but I must combat the conclusions to which he has arrived."

Very truly yours,

Albert N. Blodgett, M. D

Miscellany.

AN UNUSUAL CASE OF RABIES IN THE HUMAN SUBJECT.

The London *Medical Record* condenses from the *Revue de Medicine* for August the details of a case recorded by M. de Beurmann of a woman who died in twenty-four hours from hydrophobia under extraordinary circumstances. The patient was forty-three years of age, and sixteen and a half months before she was attacked had lost by undoubted hydrophobia her favorite spaniel, which, as soon as the disease was confirmed, was kept in durance until its death by M. Bourel, a veterinary surgeon, who vouches for the fact that the animal was unmistakably rabid. The case as reported by M. de Beurmann presents interesting peculiarities upon three points. Firstly, the extremely long period of incubation — upwards of sixteen and a half months since the inoculation — was proved by the fact that the animal died fully that period before the development of the confirmed disease in the patient; and that, though after a lapse of time she ceased to think anything further of the inoculation or its consequences, she was careful in future to altogether avoid contact with dogs. The second noticeable point is the fact that, although the incubation was so long, the conditions were those which have hitherto been supposed to shorten the quiescent period; namely, mature age on the part of the patient, and a seat of inoculation near the nervous centre. In the case in question this was a sore on the upper lip which had been licked by the spaniel while suffering from early symptoms of the disease, the nature of which was then unknown. In this latter connection the author also refers to a case of M. Landouzy, where, although the patient was bitten in the cheek close to the eye, the symptoms were sixty-eight days in declaring themselves, whereas in three cases recorded by the same author, when the patient was bitten in the hand, symptoms appeared in sixty, forty, and thirty-nine days respectively. The third point is one which leads the author to a hypothesis having undoubtedly strong support from analogy. He points out that, though distinctly hydrophobic symptoms did not appear for sixteen and a half months after inoculation, the patient's history shows psychic disturbance and alteration in character for upwards of five months previously. She had become restless, irritable, emotional, anxious, had lost her appetite and power of sleep, and given herself up to exaggerated religious observances. She quarreled with her workpeople, was anxious out of all proportion to her responsibilities, and was a prey to extreme fatigue and agitation for some time prior to the pharyngeal spasm which marked the onset of the disease. The author points out that M. Roux, in his thesis upon hydrophobia, calls attention to the singular manifestations at times afforded by rabid patients, more particularly when the inoculation is intravenous. They may be limited to local or general paralyses, to convulsions, to incessant itchings without presenting any of the ordinary symptoms of hydrophobia of either the furious or the morose type. On this point M. de Beurmann adds: "It would be interesting to note with care the very numerous cases in which the bite of rabid animals is not followed, at least apparently, by any effect. Possibly attention directed to the victims might disclose in their manner some unwonted symptoms referable to rabies, and the existence of such abortive symptoms might lead to a belief in the existence of slight or spontaneously curable cases." Further, he says: "From this point of view it is of equal importance to ascertain if, in cases of very prolonged incubation, such as the one which forms the subject of this paper, the onset of confirmed symptoms be not preceded by a series of prodromata more or less premature. These premonitory accidents would so far shorten the apparent period of dormancy of the virus, and would greatly facilitate the true understanding of these extraordinary cases." The reporter, while admitting the ingenuity and probability of the author's hypothesis respecting the shortening of abnormally long periods of incubation by the supposition of at present ill-understood prodromata, points out that in this case the patient's lip, at first inflamed, after cauterization with nitrate of silver cicatrized regularly, and remarks that cauterization, insufficiently extensive and powerful to entirely destroy the virus, should not be completely ignored as a *possible* factor in the lengthening of the dormant stage.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 8, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	628	234	23.04	16.64	5.44	3.52	9.12
Philadelphia	927,995	341	114	19.14	16.53	—	2.61	13.34
Brooklyn	644,526	—	—	—	—	—	—	—
Chicago	632,100	210	105	34.08	5.76	3.84	4.32	19.20
Boston	423,800	196	61	16.32	6.12	3.06	4.08	9.69
Baltimore	408,520	148	38	16.32	19.72	6.12	3.40	6.12
St. Louis	400,000	168	64	30.36	15.18	4.20	3.00	14.40
Cincinnati	272,400	110	40	28.21	17.29	6.37	2.73	5.46
New Orleans	234,000	151	20	19.20	15.36	6.40	.60	3.00
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	90	28	15.26	13.08	6.54	3.27	2.18
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	35	—	29.30	29.30	—	5.72	8.58
New Haven	62,882	24	7	16.64	8.32	—	8.32	4.16
Nashville	54,400	21	8	28.56	14.28	9.52	—	14.28
Charleston	52,286	42	16	14.28	11.90	2.38	2.38	7.14
Lowell	71,447	24	11	12.48	24.96	—	—	12.48
Worcester	69,442	29	15	37.95	10.35	6.90	—	27.60
Fall River	62,674	33	16	30.30	3.03	6 06	9.09	3.03
Cambridge	60,995	20	6	25.00	10.00	5.00	10 00	—
Lawrence	45,516	8	3	12.50	—	—	12.50	—
Lynn	44,895	20	5	10.00	10.00	5.00	—	5.00
Springfield	38,090	10	1	20.00	30.00	—	—	20.00
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	16	8	12.50	18.75	6.25	—	6.25
New Bedford	30,144	9	1	11.11	22.22	—	11.11	—
Salem	29,503	4	1	—	—	—	—	—
Chelsea	24,347	11	4	9 09	27.27	9.09	—	—
Taunton	22,693	8	2	25.00	25.00	—	—	25.00
Gloucester	21,400	3	3	—	—	—	—	—
Haverhill	20,905	8	4	25.00	—	25.00	—	—
Newton	19,421	9	—	22.22	11.11	—	11.11	—
Brockton	18,323	5	2	40.00	20.00	20.00	—	20.00
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	2	0	50.00	—	—	—	—
Fitchburg	13,433	5	0	20.00	40.00	—	20.00	—
Seventy-six Massachusetts towns	—	55	10	7.28	18.18	1.82	—	5.46

Deaths reported 2443: under five years of age, 825; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 544, consumption 366, lung diseases 268, diphtheria and croup 240, diarrhœal diseases 102, typhoid fever 78, scarlet fever 36, malarial fevers 35, measles 23, whooping-cough 13, cerebro-spinal meningitis nine, erysipelas eight. From *malarial fevers*, New Orleans 13, New York seven, St. Louis six, Baltimore five, Philadelphia two, Chicago and Charleston one each. From *scarlet fever*, Chicago nine, New York seven, Boston five, Philadelphia four, District of Columbia three, Fall River and Cambridge two each, Cincinnati, New Orleans, Newton, and Newburyport one each. From *measles*, Cincinnati 14, New York eight, Fall River one. From *whooping-cough*, New York seven, Philadelphia and Chicago two each, St. Louis and Cambridge one each. From *cerebro-spinal meningitis*, New York and Boston two each, Philadelphia, Chicago, New Haven, Worcester, and Fall River one each. From *erysipelas*, Philadelphia and Boston two each, Chicago, Baltimore, and St. Louis one each.

One case of small-pox was reported in St. Louis; scarlatina 48, diphtheria 35, typhoid fever 30, and measles six in Boston.

In 94 cities and towns of Massachusetts, with an estimated population of 1,087,616 (estimated population of the State 1,955,104), the total death-rate for the week was 17.80 against 17.70 and 17.62 for the previous two weeks.

For the week ending October 25th, in the Swiss cities, there were 24 deaths from consumption, lung diseases 14, diarrhœal diseases 14, diphtheria and croup three, typhoid fever three, small-pox two, puerperal fever two. The death-rates were, at Geneva 16.3; Zurich 5.9; Basle 16.3; Berne 15.6.

The meteorological record for the week ending November 8th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Nov., 1884.	Daily Mean.	Daily Mean	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 2	30.109	47	56	42	60	48	64	57	NW	W	W	14	9	8	O	O	O	—	—
Mon., 3	30.204	43	52	35	75	45	67	62	W	W	SW	9	6	9	C	C	C	—	—
Tues., 4	30.137	48	52	41	80	90	100	90	SW	E	SE	1	16	6	O	R	R	—	—
Wed., 5	29.595	47	58	37	92	36	46	58	W	W	W	10	21	30	O	F	C	—	—
Thurs., 6	30.007	32	40	27	68	53	90	70	W	W	W	25	24	16	C	C	C	—	—
Fri., 7	29.992	41	50	25	83	30	41	52	W	SW	SW	16	22	19	F	F	C	—	—
Sat., 8	30.107	37	47	30	62	39	77	59	W	N	NW	10	21	11	O	C	C	—	—
Mean, the Week.	30.050	42.3	50.5	33.9				64.1										14.00	0.37

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM NOVEMBER 8, 1884, TO NOVEMBER 14, 1884.

Byrne, C. C., major and surgeon. Granted four months' leave of absence from November 16, 1884. S. O. 265, A. G. O., November 11, 1884.

Tremaine, W. S., major and surgeon. Granted leave of absence for one month on surgeon's certificate of disability. S. O. 233, Department of the East, November 12, 1884.

Wilson, Wm. J., captain and assistant surgeon. Granted leave of absence for four months, with permission to go beyond sea, to take effect when his services can be spared by his department commander. S. O. 262, A. G. O., November 7, 1884.

Shufeldt, R. W., captain and assistant surgeon. Assigned to duty as post surgeon at Fort Wingate, N. M. S. O. 217, Department of the Missouri, November 4, 1884.

Owen, Wm. O., Jr., first lieutenant and assistant surgeon. Relieved from duty at Fort Canby Washington Ter., and ordered to Fort Spokane, Wash. Ter., for duty. S. O. 169, Department of the Columbia, November 4, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY DURING THE WEEK ENDING NOVEMBER 15, 1884.

Beardsley, Grover S. Promoted to the grade of Medical Inspector, April 24, 1884. November 14, 1884.

Heffenger, A. C., passed assistant surgeon. Duty at Portsmouth, N. H., continued till December 12, 1885. November 11, 1884.

Wieber, F. W. F., assistant surgeon. To the Receiving Ship Vermont, at New York. November 12, 1884.

MEDICAL GRADUATES.

The following gentlemen received the degree of M. D. at Dartmouth College, November 11, 1884: —

Charles Abbott Blake, Massachusetts; Willis Elmer Bowie, New Hampshire; Edward Clark Russell, Vermont; Walter Corliss, Maine; Oliver Austin Everett, Massachusetts; Onslow Allen Gordon, Massachusetts; Henry Carroll Holbrook, Vermont; Almon H. Keach, New York; Charles Edward Lovell, Massachusetts; Frank Constant Manchester, New Hampshire; Frank Eugene Mayberry, Maine; Angus Oster Patten, Canada; Charles John Pierce, New Hampshire; Frank Fletcher Pope, Massachusetts; Ellsworth Elbridge Shaw, Maine; Horace John Soule, Massachusetts; Frank A. Verrill, Maine; Charles Stuart Wines, New York; Andrew Reginald Wentworth, Maine.

Special Meeting of the Boston Medical Library Association. — A special meeting of the Boston Medical Library Association will be held at the Library, Tuesday, November 25th, at 8.30 P. M., for the presentation of a bust of the late Dr. J. Marion Sims. Dr. O. W. Holmes will receive the bust on behalf of the Association. After adjournment there will be a social gathering in the Reading Room.

O. F. Wadsworth, *Clerk*.

APPOINTMENTS.

Boston City Hospital. — Physician in the Out-Patient Department, Edward M. Buckingham.

Physician to the Department for Diseases of Women, Charles M. Green.

Died, — In Northampton, Mass., November 16, 1884, Samuel Augustus Fisk, M. D., M. M. S. S., and Ex-President of the Society, aged sixty-three years.

Books and Pamphlets Received. — A Manual of Dermatology. By A. R. Robinson, M. B., L. R. C. P. & S. Edin., Professor of Dermatology at the New York Polyclinic, etc. New York: Bermingham & Co. 1884.

Micro-Organisms and Disease. An Introduction into the Study of Specific Micro-Organisms. By E. Klein, M. D., F. R. S. With 108 Engravings. London: Macmillan & Co. 1884.

Transactions of the Colorado State Medical Society at its Fourteenth Annual Convention, held in Denver, June, 1884. Denver.

Asiatic Cholera in North America. National Conference of State Boards of Health. Held at St. Louis, October 13–15, 1884.

Practical Recommendations for the Exclusion and Prevention of Asiatic Cholera in North America. An Address delivered at the Opening of the National Conference of State Boards of Health. St. Louis, October 13, 1884.

Comparative Physiology and Psychology. A Discussion of the Evolution and Relations of the Mind and Body of Man and Animals. By J. V. Clevenger, M. D. Chicago: Jansen, McClurg & Co. 1885.

Jequirity: Its Uses in Diseases of the Skin. By John V. Shoemaker, A. M., M. D. Extracted from the Transactions of the Medical Society of the State of Pennsylvania for 1884. Philadelphia. 1884.

Jewish Hygiene and Diet. The Talmud and various other Jewish Writings heretofore Untranslated. By Carl H. von Klein, A. M., M. D. Delivered before the Annual Meeting of the American Medical Association at Washington, D. C., May, 1884.

Notes on the Treatment of Trachoma by Jequirity. By Leartus Connor, A. M., M. D. (Reprint.) 1884.

A Clinical Study of Syphilis of the Eye and its Appendages. By Leartus Connor, A. M., M. D., of Detroit, Michigan. (Reprint.)

The Principles and Practice of Midwifery, with some of the Diseases of Women. By Alexander Milne, M. D., Ex-Vice-President Edinburgh Obstetrical Society, etc. Illustrated. Second Edition. New York and London: Bermingham & Co. 1884.

Lectures.

SUNSTROKE. CHRONIC MENINGITIS.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.[1]

BY H. C. WOOD, M. D., LL. D.,
Professor of Nervous Diseases in the University of Pennsylvania.

Gentlemen, — The first case that I show you to-day is one of sunstroke. The following is the history: "J. W., age twenty-five, born in Ireland, has been in this country about two years. He has always been healthy, with the exception of bronchitis, which he has every fall. He denies having had venereal disease. He has always been a heavy drinker, and often gets drunk. For two weeks previous to admission he had been drinking very hard. On the 6th of September he was working on the University grounds. With the exception of the effects of his spree he felt as well as usual. About ten A. M. he began to feel weak and dizzy, but continued at work. These symptoms increased, and at half-past eleven he fell unconscious, and was brought to the hospital."

This case presented the symptoms usually seen in sunstroke. This condition is to be differentiated from heat exhaustion. In the latter the symptoms as a rule develop more gradually. The loss of consciousness is usually not so complete, and if the skin is examined it will be found cold and clammy, whereas if, in a case of true sunstroke, the hand be placed on the surface, or the thermometer be introduced into the rectum, it will be found that the patient is burning hot. The sudden onset, the complete loss of consciousness, and the high temperature distinguish this as a case of true sunstroke.

It is, of course, possible to have these symptoms occur in a case of apoplexy. There may be sudden loss of consciousness with high temperature in apoplexy, but very rarely does the temperature go up as rapidly as it does in sunstroke. In apoplexy the temperature may ascend two, three, or four, or more degrees, according to the seat of the clot, but the rise occurs in a few hours instead of a few moments. The completeness of the recovery, so far as the general symptoms are concerned, shows that this was a case of sunstroke and not one of apoplexy. In any case you should at once look for symptoms of a local lesion. You see whether or not the face is drawn to one side, or a leg has lost its power. If in a case of supposed sunstroke it is found that there is a *gradual* rise of temperature, with a distinct and decided loss of power in one part, there is good reason for making a diagnosis not of sunstroke but of apoplexy. This matter is of some importance, for I have seen sunstroke diagnosticated as apoplexy with fatal consequences. The distinctive symptoms of sunstroke are, the suddenness of the onset, the completeness of the loss of consciousness, and the high temperature without local palsy.

The next point in the history of this man to which I shall call attention is that there were some prodromes before the appearance of the unconsciousness. It is commonly thought that sunstroke comes on a man like a lightning flash out of a clear sky, and that under its influence a man drops at once; but I believe that in the majority of cases there is some indication of the coming danger — that there is a little cloud, although it may be no bigger than a man's hand, showing the approach of the coming storm. The prodromes which may precede the sudden onset and fully formed stage of sunstroke may consist, as they did in this case, simply of dizziness and a general feeling of wretchedness, or they may take a more specific type, and there may be headache, flashes of light, especially changes in coloration in the landscape, or there may be a flash of color blindness, or rather a flash of color-seeing. Clouds of yellow, and especially of red, float before the eyes. These are very characteristic of the approach of sunstroke. In the present case the prodromes seem to have been limited to dizziness and weakness, and as he now tells me, to an absence of perspiration. Here is a practical point in regard to prevention, which I shall allude to at this point. When a man, who is working in the hot sun, or in a hot boiler room, or in the evaporating room of a sugar refinery, or in any place where he is exposed to heat, does not sweat and begins to have some symptoms of cerebral difficulty, he is in danger of sunstroke. Under such circumstances it will generally be found that if a thermometer is placed under the tongue the temperature is two or three degrees above the normal, and the man is in the first stage of a disorder which may well be called thermic fever. At this time a cold bath, or simply going into the cool air, may relieve the condition. Every one who is exposed to heat should know that when there is lack of sweating, associated with general distress or disturbance about the head, he is in danger of sunstroke, and should at once give up his work.

There is another practical point to be drawn from the history of this case, and that is that the man whose system is weakened by the habitual use of alcohol, or by the recent excessive use of alcohol, is in a bad condition to resist the action of heat; this condition depresses the nervous system, and is a very strong predisposing cause to the occurrence of sunstroke.

This patient after suffering from the prodromes mentioned suddenly became unconscious. What was the cause of the sudden unconsciousness? The explanation is, I think, not difficult to understand. I cannot to-day give an elaborate discourse on the pathology of fever, but remember that the essential cause of elevation of the temperature of the body is the paralysis of certain cerebral nerve centres, which centres have for their function the inhibition of the production of animal heat. If these centres are paralyzed there is a rapid and enormous development of heat. What happens in cases of the character of the one before us is that the temperature of the body rises continually until finally a point is reached when this nerve centre is paralyzed, and there is nothing to restrain the development of animal heat, and suddenly every part of the body begins to develop heat. If the temperature curve could be registered in such a case, it would be found that a temperature which had been 103° F., 104° F., or 105° F., suddenly goes up to from 109° F. to 112° F.

Remember, gentlemen, that sunstroke may be developed under almost any circumstances, provided there is external heat, especially heat of a moist kind. It may develop at night under the heat of the tropics. It may develop in a patient with typhoid fever, rheumatism, or other disease in the hospital ward. Then there is a complicated condition.

The notes of this case go on to say that when brought to the hospital the temperature in the rectum was 110° F. The man was completely unconscious and vomiting incessantly. The evacuations were voided involuntarily. There was slight twitching of the general muscles which later increased to decided, although not severe, convulsions. One of the most striking features of the case was the blueness of the surface of the skin and the almost complete arrest of the capillary circulation. I was not in the city at the time this man was brought to the hospital, but I have no doubt that if I had entered the room where he was I should have diagnosticated sunstroke at once from the odor. The odor of sunstroke is as distinct and as unmistakable as is the odor of typhus fever, small-pox, or any other disease. It is especially marked where there has been involuntary evacutions. Not only does the body give out this peculiar odor, but the stools lose their true fæcal smell in this peculiar, characteristic odor. The cause of this odor I do not know. It is, of course, dependent on the production in the secretions of some peculiar principle, the result of disturbed innervation. You must remember, gentlemen, that there is a close connection between nutrition and innervation. I have had under my care for years a patient in whom at one time, when out of health, a long walk would produce excessive fetor of the body which, while perceptible in all parts, was especially marked in the breath. The odor was evidently due to the production of a sulphur compound, for any article of jewelry that she wore at the time would be blackened by the formation of a sulphide. There was, in a word, the production of a fetid odor containing a peculiar sulphur compound of some kind, whose formation was dependent on lack of nerve power, or nervous exhaustion. In the same way there is developed in sunstroke, as a result of failure of nerve power and altered nutrition, a peculiar, unknown principle, which may be recognized by its odor.

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[1] Reported by William H. Morrison, M. D.

In sunstroke, especially if the case has persisted for any length of time, other symptoms besides those I have mentioned appear. The first manifestations are due to over-heating of the brain, but afterwards symptoms due to disordered state of the blood develop. If the blood of a patient dead from sunstroke is examined it will be found to be liquid, and will not present the natural hue. It does not coagulate on exposure to the air, or perhaps there form in the blood little soft jelly-like masses, which are imperfect attempts at coagulation. The secretions are affected in sunstroke. At first there is dryness of the skin, but later the patient may become bathed with a fetid perspiration. The urinary secretion is lessened and finally arrested, and if the development of the case has not been prevented by proper treatment uræmic symptoms often appear. I mention these facts because they have an important bearing on the treatment. Although the early treatment of sunstroke is a very simple matter, the management of the case after the condition has lasted for some time may be one of considerable perplexity, for then you do not have simply the original trouble to treat, but also the damage which has been done by the original attack.

The marked blueness of the surface and the lack of circulation, which is referred to in the notes of this case, is a common symptom, indicating failure of heart power. The excessive heat, which weakens and finally paralyzes the nerve centres, also lessens the functional activity, and at last destroys the life of the heart, and weakens and eventually palsies the muscular fibres in the capillaries. The gland cell, the nerve cell, the muscular fibre, and all other forms of tissue were meant to run on a certain plane of constant temperature. If the temperature is elevated or depressed there is depression and finally paralysis of the function of the part. The blood stagnates in the capillaries partly on account of the failure of heart power, partly because the muscles of the capillary walls are unable to contract and expel the blood, and partly because the altered crasis of the blood unfits it for moving through the small vessels. The pulse in this condition, although it may be large, is soft and feeble, and often is very rapid.

In sunstroke one of the most important elements in the prognosis is the length of time that the symptoms have lasted. This man, fortunately for himself, was working on the University grounds at the time that he was attacked, and was brought to the hospital a few minutes after he had fallen unconscious. If he had dropped at some distance from the hospital, and had not been brought in for an hour or two, I do not believe that his life would have been saved. The symptoms which he presented were excessively severe for the first stage of sunstroke. If you can get hold of a case of sunstroke at once, and have command of the proper appliances, you can almost always save the patient, let the symptoms be as severe as they may. The presence of the capillary stasis mentioned in this case is always an important element in judging of the severity of the case. If such stasis has lasted for some time recovery is not probable.

The peccant thing, the *materies morbi*, in sunstroke is the heat. If this heat can be gotten out of the body the patient will recover, provided the high temperature has not produced organic changes. At first the condition is functional, but after a time the constitution of the blood is altered, the muscular fibre degenerates, and other organic changes are produced. Then, although the heat be withdrawn, the man may not recover consciousness, or if he does may have paralysis of some part or some injury to the glandular organs. Therefore, although you should usually give a favorable prognosis if the case is seen at once, yet if the symptoms be severe, and have lasted many minutes or hours, the prognosis becomes doubtful.

The indication for treatment is plain. It is to withdraw the heat. That method of treatment is the most effective by which the heat is most rapidly withdrawn. This man was very properly rubbed with ice. Although I say that this was perfectly proper, yet I do not consider it the best treatment for sunstroke. If the patient be covered in a bath tub with lumps of ice and a little water I believe the heat will be removed more rapidly than by rubbing with ice. In this case, under the application of ice, the temperature was in an hour and a half reduced to 102° F. With the ice-water bath I should have expected the temperature to be at 102° F. in a few minutes. It is important to bring the temperature down as rapidly as possible. After the temperature was lowered and the application of ice stopped reaction occurred, and the temperature again arose to 104° F. The man was placed in an ice-water bath, and the temperature fell to 101° F. A case to which I have referred on other occasions, but to which I again call attention in order to impress these things upon your minds, was that of a man who suffered from sunstroke at the Centennial Exhibition. I saw him immediately after the occurrence, and packed him away in an ice-water bath, with large lumps of ice all around. He soon recovered consciousness, and thought that he was stored away as a corpse in an ice-chest. It was rather a novel experience, but it saved him from the ice-chest.

The cold applications should not be continued until the temperature reaches normal. If the temperature at the start has been 110° F., the man should be removed from the bath as soon as the temperature falls to 103° F. The best place to take the temperature is, of course, in the rectum, the next best place being the mouth. The axilla cannot be used because the peripheral temperature falls much more rapidly than does the internal temperature. The reason for stopping the application of cold as soon as the temperature comes within two or three degrees of normal is that very often it continues to fall after the external cold has been taken away, and the danger is that if the temperature be reduced too much it may fall below the normal. There is sometimes in sunstroke a tendency for the temperature to rise after it has been artificially reduced. Under such circumstances the hypodermic injection of quinine is of service, or if the local results be feared, the quinine may be administered by the rectum.

Another very important remedy to be used in these cases, especially where there is convulsive seizures, is morphia by hypodermic injection. One fourth of a grain of the sulphate should be given. In this case the notes state that after the reduction of the temperature digitalis was given on account of the failure of heart power, and with it was associated the deodorized tincture of opium. Bromide of potassium was given to control nervousness, although the man was constantly vomiting. Bromide of potassium should never be put in a stomach which is already irritated. If the stomach is engaged in rejecting everything which is put in it it will simply be encouraged in its evil way by the use of bromide of potassium. It was a proper remedy for the condition of the patient, but it was a very improper remedy for the condition of the stomach, and it was at once rejected by the stomach. It either should have been given by the rectum or substituted by something else. In this case the rectum would probably not have tolerated its introduction.

Soon after the temperature was reduced to normal the man regained consciousness, but the headache remained, and an ice-cap was very judiciously applied to his head. For a day or so there was an evening rise of temperature, but since then the temperature has been normal. There has been occasional slight headache. He is weak, and feels giddy on rising. Remember that this man is suffering not simply from the results of a sunstroke, but from the results of sunstroke superadded to those of a debauch. The symptoms are therefore a little different from those of an ordinary attack of sunstroke. Usually in the affection occurring in a person who does not use alcohol the local symptoms are more marked than the general. The local symptoms which are usually presented are headache, cerebral confusion or distress, and perhaps dizziness. This man had these symptoms only to a slight extent. He has had slight headache and dizziness on getting out of bed, but to these are superadded a condition of general weakness, which is partly the result of the disorder of the nervous system and of the blood wrought by the sunstroke, and partly the result of the exhaustion due to the excessive use of alcohol.

It is a matter of importance that the late symptoms of sunstroke should be properly treated. The most important sequela of sunstroke is chronic meningitis, which is often associated with chronic cerebritis, that is, chronic inflammation of the brain membranes affecting to some extent the gray matter of the brain. Hence the after-treatment consists in trying to prevent the occurrence of this inflammation. This man had slight symptoms of meningitis, in that for a day or two there were present throbbing headaches, and he was very properly put on the use of a mercurial.

There may be some cases of sunstroke in which it may be right to bleed a patient during the active stage of the attack. I have, however, never seen such a case. There are on record undoubted cases in which a man has fallen from sunstroke, has been freely bled, and at once recovered consciousness. In most of such cases the free bleeding has restored consciousness probably not so much by its direct as by its indirect influence. The running off of the hot blood rapidly lowers the temperature, and the man is relieved not because the unconsciousness was due to cerebral congestion, but because the removal of the blood has rapidly cooled the body. At the same time, if I had a case of sunstroke in a man with powerful, bounding pulse, throbbing temporal arteries, suffused face, and plenty of circulatory force, I might bleed, but I repeat I have never seen such a case.

After the patient recovers consciousness, if there be violent headache, bleeding, either local or general, is the thing to be done. Many years ago a prominent physician of this town had sunstroke. His first remembrance after recovering consciousness is of his father, who was also a physician, standing over him with a medical friend. He awoke with a splitting headache. He said to them, "Bleed me." They refused. He said, "Bleed me, or I shall die." They then bled him, and at once the headache was relieved, and all danger of future trouble was averted. That man was suffering from secondary cerebral congestion. If he had not been bled he would probably have been either immediately or secondarily disabled by cerebral inflammation.

During the past week I saw a young physician of Philadelphia who had sunstroke a week or ten days ago. He was in the city at the time, but on recovering consciousness went to the sea-shore. He then had excessively violent headaches. He went to several physicians and asked them to bleed him locally. They refused, and the headaches continued until he was attacked with severe bleeding from the nose, which was so profuse as to cause some alarm. The epistaxis occurred a second time, and since then there has been no headache. I believe that the epistaxis saved that man's life, or at least his mental organization. He was in the forming stage of a subacute meningitis. He ought to have been bled, and the physicians failing to do their duty, the mucous membrane of the nose fortunately being tender the man was bled by nature, and thereby his brain was relieved. The man has now perfectly recovered.

In the present case the symptoms of meningitis have not been such as to require active treatment. The man requires simply quiet, rest, and tonic treatment. In these cases tonic treatment should not be resorted to too early. The danger is not from weakness, for this will be recovered from in time, but it is from cerebral inflammation. It is better to let the man remain weak for two or three months than by trying to rapidly raise him up start a fire in his brain.

After an attack of sunstroke it is imperative that the patient should avoid excessive heat for many months. In the early weeks following the attack he should avoid the glare of the sun, mental exertion, cerebral excitement, and everything that would tend to increase the danger of meningeal inflammation.

CHRONIC CEREBRAL MENINGITIS.

This man states that for the past three months he has suffered from a steady pain in the head, which occupies the vertex and is fixed. Its severity is at times increased. Previous to four months ago he considered himself to be in his ordinary health. Since the appearance of headaches he has had vertigo and some numbness along the inner sides of the legs. There has also been some alteration in his disposition and some loss of memory.

Without going further into the history you can see at once that there are present symptoms of meningitis. There is a persistent severe pain in the head, a certain amount of alteration of disposition, loss of memory, and giddiness; there is also a diffused irregular numbness in certain parts of the body. In this instance we have the symptoms of cerebral meningitis. These symptoms also occur in brain tumors, but tumors are very often associated with cerebral meningitis, and it is sometimes impossible to diagnosticate tumor from meningitis if there be no symptoms of localized trouble. If with the symptoms of meningitis we found some local paralysis, a facial monoplegia for instance, or certain localized convulsions in one part of the body, or if there were persistent clearly localized numbness, we should have more reason for believing that the man was suffering from tumor. There may be a tumor associated with this meningitis, but the symptoms are clearly explainable on the supposition that the man has meningitis. The peripheral gray matter is supplied with blood from the brain membrane, and therefore when there is disturbance of the circulation of the membranes there is disturbance of the gray matter. I believe that you never have pain in the head as the result of pure disease of the gray matter unless the disease be of such nature as to alter the pressure in the brain. This man has evidently meningitis or a tumor, but the probabilities are in favor of the former condition.

Having arrived at this conclusion so far as the disease is concerned, the next thing is to search for the existence of a cause. The three most common causes of chronic meningitis in the non-tubercular adult are injury, sunstroke, and specific disease. A case of non-tubercular subacute or chronic meningitis not the result of one of these three causes is excessively rare.

The notes of this case state that the man met with an accident some months ago in which he had three ribs broken, but he is not certain that he was struck on the head. He was unconscious for a few minutes after the injury. He was in the hospital under treatment for some time. On leaving the institution he noticed severe headache accompanied with great vertigo. He also gives a history of two sunstrokes, one occurring in 1856 and the other in 1862. Since the last attack he has had headache off and on, but not so constantly as since the accident. He also acknowledges having had venereal disease thirty-five years ago. We have, then, all three causes of meningitis present in this case.

Is there any way by which we can determine the rôle which sunstroke plays in the production of these symptoms? I think there is. We must investigate as to the rapidity with which the headache followed the sunstroke. The headaches which he has had since shortly after the last sunstroke have not been very decided nor very steady, and I think that it is perfectly plain that the sunstroke could not have set up a genuine meningitis. This man has not been incapacitated from following his trade as a carpenter. Has been able to work out-doors during the hottest summer weather. This would not have been possible had he had a meningitis lasting for twenty-two years. The sunstroke may have produced a condition of impaired nutrition of the brain and a weakening of the vessels, which would render them less resistant to any cause which would produce inflammation.

When we come to the question of the rôle played by the venereal sore and the accident, we come to a question which cannot be positively settled. I think that it may be considered well established that when a man has a venereal taint the local manifestation of that taint may be decided by an accident. Such a person receives a blow on his shin, and he has a periostitis excited by the blow, but the inflammation is of the specific type. If the same person had received the blow on his skull he would have had an inflammation of a specific type set up in that locality. There are one or two reported cases in which cerebral syphilis has in the same way followed sunstroke. The sunstroke has been the exciting cause, — the match which has fired the gunpowder which was there all ready to be exploded.

Again, the injury was of itself possibly sufficient to account for the meningitis without the existence of a venereal taint. The man evidently received a severe blow on the head. Ordinarily, however, a blow which produces only a few minutes' loss of consciousness, as happened in this case, does not result in inflammation. While we cannot say positively, then, that the syphilis has had anything to do with the occurrence of the disease, it is very probable that it has, and that there is a specific meningitis started by the local injury, although it is possible that the injury may have been the sole cause of the attack.

The treatment in this case will consist in the administration of iodide of potassium in amounts sufficient to produce iodism. Even in cases where there is no reason to suspect specific taint the use of iodide of potassium, associated with counter-irritation, is the best plan of treatment of chronic meningitis.

— The people of British Columbia are becoming alarmed at the negligence shown by the government in not providing suitable isolated quarters for the Chinese lepers at present confined in the jail at Victoria. At the last meeting of the city council it was moved and carried that the provincial government be requested to communicate with the dominion government with a view to have the necessary steps taken for the erection of a leper hospital. The mover knew of several cases, two of which were in the city jail. The Chinese doctors of the city believe the disease to be so contagious that the people are liable to catch it by inhaling the breath of a leper, and the mover believed that many young men had caught the disease by smoking cigars made by Chinese lepers.

Original Articles.

SUMMARY OF SIX HUNDRED CONSECUTIVE CASES OF MIDWIFERY.[1]

BY W. W. WELLINGTON, M. D., CAMBRIDGEPORT.

Natural Labor. Four hundred and fifty-six cases; about seventy-five per cent. Under this title are included all cases in which the head presented, and in which there was no occasion for instrumental or manual interference in the delivery either of the child or of the placenta, and no serious post-partum hæmorrhage. A few of the cases were protracted beyond twenty-four hours.

Face to Pubes. Seventeen cases. Twelve of the cases of natural labor presented this peculiarity, and are included under that head; four were in cases of instrumental labor, and one was in a case of twins.

Rupture of Perinæum. Thirty-eight cases. Thirteen occurred in instrumental labors. All were sutured, and in all but five the edges united.

Breech Presentations. Nineteen cases.

Footling Cases. Two.

Knee Presentation. One.

Instrumental Cases. Eighteen. All by forceps. Perforation of head not required in any case.

Turning. Six cases. In one of these cases the head was at brim of pelvis with face to the front; child still-born.

Convulsions. Eight cases. Seven mothers recovered. The eighth recovered from the convulsions, which occurred at the end of the seventh month, but nine days afterward she had hæmorrhage from partial placenta prævia, and was delivered by turning. She died five days after from septicæmia. Three of the babies were still-born.

Twins. Nine cases.

(1.) A boy weighing ten pounds, and a girl six pounds. Both breech presentations. Second child was born enveloped in its membranes, and immediately following it both placentæ.

(2.) In one head presented; in the other the feet. Placentæ were separate. Considerable hæmorrhage.

(3.) Both still-born. Both head presentations, the last being face to pubes. Placentæ united.

(4.) A boy weighing eight pounds, and a girl weighing six pounds. Both born before my arrival. Both were reported as having been head presentations. Placentæ were united.

(5.) First child, breech presentation; second, head. Placentæ united. One of the umbilical cords had in it a loose knot.

(6.) Both head presentations.

(7.) One born before my arrival; the other lay crosswise, and was delivered by turning. Placentæ separate.

(8.) Seven months' children. Both head presentations. Placentæ separate.

(9.) First baby (breech presentation), pains dying away, was delivered by pulling down feet. Second baby (breech presentation also) was delivered in the same way. Placentæ not following in a reasonable time they were peeled off (they were united) and extracted. Severe after-pains followed, succeeded by fainting. Found uterus full of clots, and removed them. In doing this an irregular contraction was discovered in upper part of uterus, the upper chamber containing a piece of placenta; removed it. Uterus then contracted, and there was no more flowing. Ergot was given during these transactions, also rum, this being the only liquor at hand. Mother and children did well.

There were seventeen cases of retention of the placenta; nine cases of excessive hæmorrhage after delivery of placenta; and two cases of what seemed to be partial separation of the placenta before the delivery of the child.

In the cases of retention the placentæ were removed manually. The majority of them resulted from irregular contraction of the uterus. In a few there were morbid adhesions.

The cases of hæmorrhage after the birth of the placenta were treated mainly by emptying the uterus of coagula, pressure on uterus to secure its contraction, and giving ergot and stimulants.

The two cases of probable separation of placenta before the birth of the child may be worth particularizing.

(1.) The woman flowed several times during the last six weeks of pregnancy, sometimes passing large coagula. Placenta prævia was feared. No portion of placenta, however, was over os. The birth of the child was easy, but a large discharge of blood followed immediately, and the woman became faint. The placenta came away naturally.

(2.) Labor at full term. Pains began at five A. M. At nine A. M. I visited the patient, and learned that for an hour or more she had had fainting turns. Pains were good, the os was dilated, and membranes were protruding. Fainting turns continued. Pulse became slow and feeble. I ruptured the membranes, and the baby was soon born. The exit of the child was followed by a large gush of blood. The child was dead. Introduced hand into uterus, found placenta detached, and delivered it at once. Uterus contracted and hæmorrhage ceased. Severe after-pains followed.

One other case of interest may be mentioned. The labor was natural; four hours in duration. On the seventh day after delivery, in consequence, apparently, of undergoing considerable excitement, uterine hæmorrhage came on. This subsided the next day. On the ninth day it came on worse than before, making it necessary to empty the womb and give ergot. The bleeding again ceased. The next day the hæmorrhage returned, but soon subsided, and uterus could be felt well contracted. On the thirteenth day after delivery the bleeding recommenced and continued till the next day, when a solution of ferric alum was injected into the uterus. This stopped the trouble.

Prolapse of Bladder. Two cases. Both appeared as smooth, fluctuating swellings before the advancing head. In each case the catheter introduced into the urethra could be traced into the swelling. The urine having been drawn off the bladders were pressed up, and as the heads advanced they disappeared.

Placenta Prævia. Three cases; all partial.

(1.) Patient seven months pregnant. Slight flowing at intervals for a fortnight; rather severe for six hours. Edge of placenta was separated from its attachment, the head of child descended, and the hæmorrhage ceased. Child still-born.

(2.) Labor three weeks premature. Flowing came on followed by pains. Os partially dilated, and edge of placenta could be felt. Head could also be felt, which slowly descended, and hæmorrhage gradually ceased.

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[1] Read before the Obstetrical Society of Boston, October 11, 1884.

(3.) When seven months pregnant had three convulsions, the urine being albuminous. Nine days afterward flowing came on, followed by labor pains, and partial placental presentation was discovered. Child was delivered by turning. Woman died three days after of septicæmia.

Prolapse of Umbilical Cord. Two cases. In each case cord was found prolapsed on arrival and with no pulsation. Both babies still-born.

Spina Bifida. Two cases.

Thrombus of Labium. One case. The labor was normal. A thrombus of left labium was discovered the next day, severe pain having been felt in external organs since the previous afternoon. Labium was everted; color was livid; the parts were very tender; discoloration extended through perinæum and upon the nates. Distention was chiefly internal, nearly closing vagina. The effusion of blood was large. On the third day the thrombus ruptured, and a large amount of coagula was discharged. These coagula continued to be discharged for several days. The woman suffered but little pain. On the ninth and tenth days there were headache and febrile disturbance. On the nineteenth day the cavity was contracting with slight purulent discharge. On the thirtieth day the patient reported herself as well.

Phlegmasia Dolens. Six cases.

Cystitis after Delivery. Four cases. One of these cases was a severe one, lasting three months. The woman was delivered by forceps. The perinæum was lacerated to sphincter, and there was also a serious laceration of the cervix. The cervix had been much elongated and thinned during labor, having been pushed along before the vertex, and with difficulty kept back as the vertex advanced. The laceration was discovered while wiring the perinæum. Both perinæum and cervix healed well.

Ophthalmia Neonatorum (purulent) occurred in two cases. Both cases recovered.

Two acephalous monsters.

The Umbilical Cord was wound round the neck of the child twice in two cases, and three times in one case, so tightly that it had to be cut before delivery could be effected. In neither case could the cord be carried over the head or the shoulders.

Septicæmia. Three cases. One died, and two recovered. In neither case were antiseptic injections made into the womb.

Vesico-Vaginal Fistula. One case. The labor was natural, lasting about sixteen hours. A fistula manifested itself on the third day after labor, much to my surprise. There seemed no sufficient cause for its existence. An operation was performed for its cure with partial success. The woman would not consent to a second operation, and I afterwards lost sight of her.

Deaths. Five in number.

(1.) Metritis followed by puerperal mania. Died at end of second week.

(2.) Convulsions at seven months. Urine scanty and albuminous. There were only two. Nine days after there was uterine hæmorrhage, caused by partial placenta prævia. Child was lying crosswise. Os was dilated, membranes were ruptured, and delivery was effected by turning. Five days afterward the woman died of septicæmia.

(3.) Died of puerperal peritonitis.

(4.) Died eight days after labor, and after two days of terrible dyspnœa from valvular disease of heart, which had afflicted her for a considerable time before her labor.

(5.) In the midst of a severe attack of pneumonia, patient being at full term of pregnancy, labor pains began. At the end of twelve hours, the pains slackening, and the head lying low in the pelvis, the forceps was applied, and delivery was effected. No bad puerperal symptoms followed, but death resulted from pneumonia six days after labor.

If the last two cases be deducted, in one of which death resulted from valvular disease of the heart, and in the other from pneumonia, the number of deaths will be three, or one in two hundred.

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CASE OF EXTRA-UTERINE PREGNANCY. RUPTURE; PERITONITIS; RECOVERY.[1]

BY E. E. MONTGOMERY, M. D.,
Obstetrician to the Philadelphia Hospital.

MARCH 19, 1884. Mrs. M. has had four children and two miscarriages, the last miscarriage occurring some four months since. She has for several years suffered from chronic phthisis. Menstruation was absent for two periods, but two weeks ago she had a bloody discharge for several days. Although she had been suffering from the phenomena usual to her in early pregnancy she then concluded that she was not pregnant.

On the 18th, after a fright, she was taken with severe pain in the right side, which, continuing to grow worse, was attended by frequent micturition, a sensation in the pelvis of weight or bearing down, intermittent vomiting, and a serous vaginal discharge. Her husband called at three A. M. to-day (March 19th), informed me she had cramps, and asked for a prescription for her relief. I gave a prescription containing morph. sulph., one eighth grain to each dose, to be given every two hours until relief.

I saw her at eight A. M., when she was quite pale, complaining still of pain in the right inguinal region. As I had a clinic at nine A. M. I made a hurried visit, injected morph. one fourth grain, hypodermically, and ordered ℞ quin. sulph., two grains, ext. opii, one half grain, in pill, every three hours.

Five P. M. Pain somewhat relieved; stomach very irritable, would retain nothing; pain greatly increased by vomiting; face pinched, pale, and anxious looking; lips bloodless; pulse 90. Bimanual examination disclosed the uterus slightly enlarged and retroverted. Douglas's cul-de-sac presented a mushy or doughy sensation. On the right side could be felt a small, irregular-sized mass, which was diagnosticated to be an escaped fœtus from a tubal pregnancy. The pills were discontinued, and ext. op., one grain, in suppository, substituted, to be given every six hours, and an alkaline mixture and one half fluid ounce each of milk and lime-water were given every three hours by the stomach.

March 20th. She slept poorly, but does not suffer so much from pain. There is marked tenderness over the lower part of the abdomen, more marked upon the left side. Examination per vaginam. The mass is felt posterior to the uterus, and is quite hard and tender upon pressure. The uterus is fixed. Pulse 90. Vomited once. She has been kept perfectly quiet. The bladder relieved by the catheter. ℞ quin. sulph., five grains, ext. op., one and one half grains, in suppository, every six hours.

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[1] Read at a meeting of the Philadelphia Clinical Society, October 24, 1884.

March 21st. General condition better, though she slept but little. The introduction of the suppositories was attended with so much pain that they were discontinued, and morph. sulph., one sixth grain, with quin. sulph., two grains, given every three hours by the mouth.

March 22d. Some sickness of the stomach. Pulse 88. Temperature normal. Very nervous; easily disturbed. Abdomen still tender to pressure. Returned to the use of the suppositories. Slept well last night after tr. op. deod., twenty-five drops, were given.

March 24th. Temperature normal. Pulse 80. Abdomen still tender, especially over the lower portion and left side. Movement attended with pain. The suppositories induced so much pain that they were discontinued, and tr. op. deod., thirty drops, given by the mouth every three hours.

Subsequent to this date the convalescence was gradual. She regained her strength very slowly. She left the city the latter part of July, returning about the middle of September again pregnant.

Upon examination a few days ago the uterus was found enlarged to the usual size at two months, and posterior to it could be felt a smaller mass, in which the remains of the former gestation were evidently encapsulated.

In such cases it becomes an important question to decide when we should proceed to surgical measures.

Notwithstanding the successful termination of this case I would not uphold the treatment as the one most likely to yield a favorable result.

Had the symptoms of shock and internal hæmorrhage persisted during the third day as upon the second it was intended to make an abdominal incision, remove the fœtus and effused blood, and ligate the bleeding vessels. Such a course, pursued with the advent of the characteristic symptoms, would, without doubt, decrease the mortality of the accident.

A CASE OF EXTRA-UTERINE PREGNANCY TREATED SUCCESSFULLY BY ELECTRICITY.[1]

BY JAMES SIBBALD, M. D.

Mrs. R., aged thirty-four years, a woman weighing 107 pounds, of spare build and exceedingly nervobilious temperament, was married when twenty-one years of age, and had a miscarriage about five months subsequently, since which time (for thirteen years) she was never pregnant. although very desirous of becoming so.

Her menstrual periods were always regular and natural up to June 16, 1884, at which time there was no sign of menstruation. One week later she commenced feeling sick in the morning, and also complained of soreness, with decided tenderness on pressure, over the right inguinal region, which gradually increased in severity. At the same time bloody discharges would appear, with no regularity, every week or two, lasting from a few hours to several days.

On July 3d, while standing in the street dealing with her butcher, she was suddenly seized with a violent pain in the abdomen, which caused her to fall in the street. She was picked up and carried to her bed. Morphia was administered hypodermically and poultices applied for six days before the tenderness subsided. For the next three weeks there was more or less tenderness over the right inguinal region.

On August 4th (just one month after the first attack) she had a second attack of local peritonitis, which lasted five days. At this time she was sweeping the floor, when she suddenly fell, overcome by the severe abdominal pain.

After the acute symptoms of the first attack had subsided a vaginal examination revealed a soft mass on the right side of the uterus, very sensitive to pressure, and displacing that organ to the left. The sound was passed cautiously into the uterus a distance of over four inches without obstruction. These facts, in connection with the cessation of menses, morning sickness, some enlargement and soreness of breasts, with occasional bloody discharges from the uterus, warranted a diagnosis of extra-uterine pregnancy.

On August 18th Dr. Montgomery saw the case in consultation, and coincided in the diagnosis. He advised the destruction of the fœtus, which was now in about the eleventh week of gestation, by means of electricity. Eight applications of the battery were made, which had the desired result. The mass is slightly perceptible on examination at the present time, the womb being still displaced to the left side. Menstruation has returned twice since, being perfectly normal, and no inconvenience is now experienced.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

ON CHANGES IN THE NERVOUS APPARATUS OF THE INTESTINAL WALL IN PERNICIOUS ANÆMIA AND IN GENERAL ATROPHY.

Sasaki[2] has carefully studied the intestines coming from fifty autopsies, and in two, cases of pernicious anæmia, marked changes were found in the nervous plexuses. One of these cases corresponds closely with those already reported by Jürgens[3] and Blasko,[4] while the other presents different and further advanced lesions.

The method employed was as follows: Pieces of the intestine were preserved, part in alcohol, and part in Muller's fluid.

The examination of Meissner's plexus was comparatively easy. Bits of the mucous membrane were torn off with the forceps, and then the submucosa was carefully separated from the muscular coat. The pieces were placed for twenty-four hours in very dilute acetic acid (1 to 400) in order to clear up the connective tissue, washed for a few hours in water, stained with picro-carmine, and examined in glycerine.

Auerbach's plexus, on the other hand, presented more difficulties. Portions of the intestine were left for a day or two in a weak solution of bichromate of potash (0.5 of the salt to 200 c. c. of water). The muscular coat was laid bare as above. Then with the aid of fine forceps and a hand lens the bundles of the circular layer were separated from those of the longitudinal, which latter, in the case of adults, can never be torn off in sheets. In this way specimens could be obtained entirely deprived of the inner coat, and consisting only of the longitudinal fibres with the peritonæum and subperitoneal tissue. The net-work of nerves was found spread out upon this surface. They were then treated with acid, as the others, and colored. In the staining care was exercised to have the muscular coat come in contact with the fluid. This usually took from twenty to thirty minutes.

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[1] Read by Dr. E. E. Montgomery at a meeting of the Philadelphia Clinical Society, October 24, 1884.

[2] Virchow's Archiv, Bd. 96, S. 287.

[3] Berl. klin. Wochen., No. 28, 1882.

[4] Virch. Arch., Bd. 94 S. 136.

The Microscopic Appearance. In the normal intestine of the adult Auerbach's plexus presents itself as a net-work of large bundles of nerve fibres, with here and there accumulations of ganglion cells. The size of such ganglionic nodes varies greatly; it may reach 0.18 mm. The nerve cells are placed closely together, and have a length of from 0.014 to 0.032 mm. Their shape is either polyhedral or elongated, and they are composed of a finely granular protoplasm, in which is imbedded a distinct nucleus and nucleolus. Besides these are found at the points of intersection numerous small spindle cells which belong to the sheath of the ganglion. From these nodal points broad projections are thrust out, which consist of rows of nervous elements or branches of pale nerve fibres. The same small elongated bodies are also to be seen in these branches. The nerve fibres appear almost homogeneous.

The examination of the first case of progressive anæmia revealed an extensive change in all the nervous elements throughout the entire intestine. On the first inspection it appeared that the ganglionic cells of the plexus myentericus were separated by a considerable interval from each other, and were extremely small and deformed. The greater number reduced to one third of their normal size. The protoplasm was very granular, contained yellow pigment, and the greater number were without nuclei. Many cells had a glancing, homogeneous appearance, and resembled those which have been described as "sclerosed," and which have been found after lead poisoning. Between such lay a pale, finely granular mass, which the author believes was produced by their entire destruction. The small spindle cells were diminished rather than increased in number, and no thickening of the connective tissue sheath of the enlargements could be detected. The nerve fibres were narrower, were finely granular, and had lost their capability of taking coloring material. Many could only be recognized by their longitudinally striated look and scattered nuclei. Besides the "sclerosed" cells there were found numerous glancing, homogeneous particles of different size (0.003 to 0.03 in diameter). These lay partly in the plexus, in the nerve bundles or near them, and partly isolated, between the muscular fibres. Some were round or oval, others resembled a ring surrounding a ball, but with no concentric arrangement; and in many still smaller granules were found. They stained but slightly with picro-carmine, resisted the action of acetic, sulphuric, or nitric acid; neither did they dissolve in ether or take on a peculiar color with iodine. From this they correspond with the substance which von Recklinghausen has called hyaline. These bodies were often present in the intestines of old people, but never so abundantly as in the cases under consideration. They seem to have a relation with the corpora amylacea, and like them are normally found in small numbers. Their presence in large numbers is associated with a chronic atrophic process. The question as to their origin is not easy to answer. The fact of the presence of granules of a similar substance in the spindle-shaped cells of the neurilemma points to them as a probable source.

In Meissner's plexus similar changes were found. Small, wrinkled ganglionic cells, with granular protoplasm, and without nuclei, separated from each other by abnormally large intervals composed of a fine granular mass. The nerve fibres were granular, and stained poorly.

In regard to the muscular coats it may be said that they appeared narrower, and the fibres were thin, and opaque from the presence of minute drops. Elongated nuclei were rare.

In the vessels there was no marked change beyond the diminution in the number of nuclei. The papillæ were small, short, and cloudy, the glands shrunken, and their cells disintegrated.

In the second case the intestinal wall was not especially thinned, yet there was found a marked fatty degeneration of Auerbach's plexus throughout the entire canal. The muscular fibres were also affected in the same way, but to a less extent. Osmic acid was especially useful in demonstrating this. The ganglionic cells were mostly destroyed, but here and there perfect ones were to be met with. In the nodal points the fat drops were irregularly distributed, and not always in association with cells. The nerve fibres were filled with oil globules. Meissner's plexus was less markedly implicated. Its cells had in many places lost their sharp contour, and even looked like mulberries. Very little fat was noticed. The villi were of normal size, but showed a parenchymatous degeneration. The vessels showed nothing abnormal.

If the literature of pernicious anæmia is compared in its ætiological, clinical, and anatomical relation it is found that the course is irregular, extending over periods varying from six or eight weeks to several years. From this it is easy to believe that the disease may arise from different causes and represents no single process. Lépine has distinguished three forms in regard to origin: —

(1.) Lienal (splenic) and medullary form.

(2.) Gastro-intestinal.

(3.) That occurring during pregnancy.

The author regarded his two cases as belonging to the second class, which includes about one fourth of all cases.

The question still remains to be answered, what relation do the anatomical changes in the ganglionic apparatus and the atrophy of the intestines have with the general anæmia? Are they to be considered as primary, or as a partial expression of the general affection? In order to obtain information on these points eighteen intestines, which were atrophied in consequence of cancer, phthisis, or old age, were examined. In these cases were also brown atrophy of the heart and liver, and a small spleen. In the intestines there was found a thinning of the muscular coat, with a granular clouding and pigmentation of the ganglion cells of both plexuses. Fat drops were only found in the cases of cancer, and were usually distributed in the periphery around the nucleus. The form of the cells was never altered. This, then, is considered to be a fatty infiltration rather than a degeneration. From this it would appear that a simple atrophy does not produce a degeneration of the nervous apparatus of the intestine; therefore the changes in these cases are regarded as those of origin. In both cases, also, there were symptoms referable to the intestinal tract, such as pain, vomiting, and diarrhœa, which could have had a marked influence on the formation of blood.

Was the atrophy of a chronic catarrhal or neurotic nature? For the first, which according to Nothnagel is the most common, would appear the slaty discoloration in the ileum, the regular injection of the mucosa of the jejunum, and the small cicatricial depressions in the cæcum. But all these are often found unassociated with atrophy, and without producing any symptoms during life.

The conclusions which are drawn are as follows: —

(1.) It is highly probable that the gastro-intestinal form of pernicious anæmia may be produced by recognizable anatomical lesions in the intestine.

(2.) Pernicious anæmia can be caused by an atrophy of the intestines. The correlated change in the nervous apparatus coming under the class of parenchymatous degeneration.

(3.) In the affection of the intestine which is not diffuse, and does not extend over a large area, the changes in the plexuses are restricted in a corresponding manner.

ON TONSILS AND LYMPHATIC FOLLICLES.

This article is the first of a series by Stöhr[1] on the conglobate bodies called the "peripheral lymph glands." They differ from the lymph glands proper, which are interposed in the lymph current, on account of their situation and the relation which they bear to an epithelial covering.

The mucous membrane of the mouth and pharynx is marked in some places by the presence of closely aggregated leucocytes. These appear either in the form of more or less sharply bounded uniform infiltrations, or as the so-called follicles (adenoid tissue of His, cytogenous tissue of Kölliker, or conglobate gland substance of Henle). This tissue, in parts, assumes the shape of prominences, partly projecting into the pharyngeal cavity and partly sunk in the depth of the mucosa. These are often complicated by numerous infoldings, and thus are formed the follicles and tonsils (palate, tubal and pharyngeal tonsils). Stratified pavement epithelium covers the surface and follows it through all the furrows to their deepest parts.

If sections of the human tonsil, perpendicular to its surface, are studied it is often very difficult to follow this epithelium to the bottom of the clefts. At times extremely narrow prolongations can be detected. At others even this is impossible, and the typical cells seem to be replaced by elements which are identical with the round cells of the adenoid tissue. This, however, is not the case. The flat epithelium is always present in the same thickness (in places even thicker), but is so permeated by leucocytes that it is only by aid of very fine sections and successful coloring that its existence can be demonstrated. This infiltration may extend over the entire covering of a furrow and suggest the possibility of a pathological change. Usually it is much more restricted in its extent.

The appearances thus briefly depicted are the results of an extended migration of indifferent cells through the epithelium into the buccal and pharyngeal cavities. And far from being of a pathological nature, this is to be regarded as a normal process. And wherever accumulations of round cells lie directly beneath the epithelium great numbers of them find their way out and appear on the surface as mucous and salivary corpuscles.

Careful examination shows that the path which they follow lies in the cement between the epithelial cells, and that their nuclei are curiously shaped, often lobed or curved like a horse-shoe. In some the nucleus is represented by several small fragments, the sum total of which would not exceed a normal one. These are never found in the proper adenoid tissue of the gland. Whenever there is fibrous tissue between the covering and the gland the former has very few leucocytes.

The epithelium covering the follicular glands in the adult is permeated throughout in the same way.

From the examination at different ages and from different animals it appears that the wandering of the cells commences at the time of birth and continues during life if not interrupted by disease, and that it is a constant appearance, which can be verified on every mammal that has tonsils.

The possibility of these paths of egress serving as those of ingress for micro-organisms is suggested, but there is no proof given.

ON THE EXTENT AND CONNECTION OF THE LYMPHATIC TISSUE IN THE PHARYNX.

Bickel[2] has undertaken an investigation of the above subject in view of the relation in which the pathological processes known as angina and diphtheria stand to the tonsils; the points being to determine exactly how far adenoid tissue extends, and what structures are to be considered as tonsils. These are determined by a comparison of the literature of the subject, and by the examination of the pharyngeal region in twenty-four cases.

The first step is to find out in what form the lymphatic tissue presents itself in the pharynx. Of the chief importance is the tonsillar form. As characteristic of this is the tonsilla faucium, or palatina, of which the following are the structural peculiarities: —

(*a.*) Circumscribed form.

(*b.*) A thickly diffused infiltration of connective tissue with leucocytes within which lie small follicles.

(*c.*) Crypts, that is, blind pockets covered with epithelium dipping down into the lymphatic structure.

(*d.*) The direct contact of the gland cells with the epithelium, and increase of the surface from the furrows and clefts.

To these four points can be added: the presence of a large number of mucous glands, the ducts of which open at the bottom of the furrows. This is not absolutely necessary, but should not be left unnoticed.

According to this description only the tonsils of the pharynx deserve the name in addition to those of the fauces. On the other hand, those of the Eustachian tube as well as the follicular glands of the tongue are to be regarded as more superficially extended formations, having no marked aggregation of mucous glands. In other words, as transitional forms from a simple infiltration of adenoid tissue. Of this last three degrees are distinguished as occurring in the throat: —

(1.) One so marked that the lymph cells entirely hide the presence of the connective tissue.

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[1] Virchow's Archiv, Bd. 97, S. 211.

[2] Virchow's Archiv, Bd. 97, S. 340.

(2.) Where the cells and tissue have about the same proportions.

(3.) Where the fibrous tissue exceeds the round cells.

From a comparison of the published descriptions of the pharyngeal region it can be stated that there is a perpendicular ring of lymphatically infiltrated mucous membrane, marked by scattered follicles. This begins above with the accumulation at the vault (pharynx tonsil); passes then to the opening of the Eustachian tube, where there is another marked aggregation of follicles; from there it turns downward along the posterior edge of the velum palatinum, around the posterior pillars of the fauces, to the tonsilla faucium, then obliquely across the back of the tongue, to return in a similar manner to its starting point. Professor Waldeyer has given to this the name of the "lymphatic ring of the pharynx."

As the result of the anatomical examination the following is apparent: —

The palate tonsils are present in the fœtal condition as well as during the first year simply as an infolding of the mucosa. A slight elevation appears first at the bottom of the depression thus formed, and gradually projects beyond the line of its opening. The edge of this lies as a sharply-defined narrow line on the base of the newly-formed tonsil. This line can often be made out in later life, but only as an incomplete circle. The others present an entirely different method of development.

On the base of the tongue strongly marked folds of the membrane are found in the fœtus. These disappear after birth, and in reverse relation to their retrogression are formed the follicular glands of the tongue.

A similar process is seen in the pharynx; here it looks as if the entire membrane of the throat would become a huge tonsil; fine longitudinal folds directed towards the base of the skull deepen, often almost imperceptibly, into the pharyngeal tonsil. Folds of a like nature mark the boundary of the tubal opening and the anterior and posterior surface of the soft palate.

In the course of the first twelve months of life these folds become obliterated, and there only remains the tonsils of the pharynx and tube. Microscopically those raised portions present a diffuse round cell infiltration, with numerous rounded aggregations.

From the above mentioned ring the adenoid tissue extends out into the floor of the mouth with varying strength and frequency. It reaches from the posterior surface of the soft palate into the nasal cavity in an amount varying with the individual, but can generally be recognized as far as the anterior ends of the inferior turbinated bones.

Also it reaches over the epiglottis down into the larynx as far as the glottis spuria.

The tendency to a greater or less susceptibility to acute infectious processes seems to be connected with the greater or less abundance of lymphatic tissue. The richer and more extended this is, the greater will be the possibility that the epithelial covering will be loosened by the continual passage of cells through it, and it is easy to imagine that by this means the deeper seated layers would be more exposed to injuries coming from without.

TUBERCULOSIS OF THE TONSILS.

Strassman[1] has examined twenty-one cases of tuberculosis in reference to the frequency of implication of these glands. It has seldom been observed according to the literature on the subject, although the position at the entrance of the respiratory and digestive apparatus would be extremely favorable for infection, and the structure is essentially the same as that of other parts of the lymphatic system which are notably affected. The author, however, found it in thirteen of his cases, but it was present almost exclusively in the form of minute tubercles. At times there were large numbers in a single section, at others only a few in many cuts. These bodies were rich in giant cells, while the bacilli were scattered. The adjacent tissue was scarcely affected.

With the eye alone it was only with difficulty that their presence could be detected, and they were found under the most varying condition of the gland, some normal, some atrophied, some hypertrophied, with or without concretions.

The question naturally arises, are these to be regarded as of primary origin, or are they secondary, due to infection with sputa, etc. From the results of experiment of inoculation by feeding, Baumgarten was inclined to the view contained in the first half of the question. The author, on the other hand, from an analysis of his cases, thinks that it must be an accompaniment of tuberculosis of the lungs, and that there is no evidence in support of a primary affection of the tonsils and a subsequent absorption of poison from them. Clinical importance is hardly to be ascribed to it.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

November 10, 1884. The President, Dr. Charles D. Homans in the chair.

PERIOSTEAL SARCOMA OF THE FEMUR.

Dr. E. H. Bradford showed the specimen and gave the history. The first symptom was a small swelling of the upper thigh in August last. This gradually increased until within the last two weeks, when the tumor has grown rapidly. Last week aspiration removed blood, in consequence of which he amputated at the hip-joint. In amputating Dr. Bradford first excised the head of the femur, then amputated the femur at the junction of the middle and upper thirds, using the Esmarch rubber tube to control the hæmorrhage. After all vessels were tied and bleeding stopped the rest of the femur and the remainder of the tumor were dissected out. Hardly any blood was lost, and to-day, the fourth after the operation, the patient is in good condition.

PREVALENCE OF SCABIES.

Dr. F. B. Greenough asked if members of the Society had seen any great increase in scabies. The disease has not been common here for some time until of late, but recently he had seen a great many cases. There were six new ones at the Boston Dispensary to-day. He had traced one nest of thirteen or fourteen comparatively well-to-do people to others bringing the disease from Gloucester, where it is said to prevail among Portuguese fishermen. Other men engaged in dispensary work had seen an increase.

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[1] Virchow's Archiv, Bd 96, S. 319.

Dr. J. C. White stated that he had observed the same increase in the prevalence of scabies in Boston and vicinity during the last year, and was unable to account for it inasmuch as immigration, upon which we depend for our supply of the disease, had not been especially active during this period. He had seen several marked fluctuations in its occurrence in the last twenty-five years. Before the War of the Rebellion it was so little seen as not to be recognized by practitioners, and during the war it was regarded, in the armies, as an unusual form of the affection, and extended from them over the whole country. Later it was imported to a large extent by European immigrants during prosperous times, but with business depression subsided, and was seldom seen outside of returned cattle drovers from England until this recent revival.

UNUSUAL CASE.

Dr. W. C. B. Fifield reported the case. A gentleman left his office well in the afternoon, in the middle of June. Was attacked suddenly in the street with profuse perspiration, and became so sick that a lady gave him her seat in a horse car. He was, however, able to walk a quarter of a mile to his home in the suburbs, and to eat supper, feeling generally improved. The next day he apparently had acute dysentery, losing an unusual amount of blood. He had at that time grave mitral disease. Pulse rapid, and temperature 103° F. to 104° F. Treatment consisted of Epsom salts and opiates. In ten days dysentery disappeared, and the pulse and temperature fell. This gain was quickly succeeded by rheumatic iritis, first of the left and then of the right eye, to be followed in its turn by acute rheumatism of most of the joints and tenderness of the liver, with vomiting, which vomiting was relieved by a blister over the liver. Rheumatic remedies had no effect, nor had opiates unless given subcutaneously. As the joints recovered and the temperature fell, a profuse diarrhœa set in, the dejections resembling the rice water of cholera, and as this diarrhœa ended articular rheumatism returned. There was a dejection of pure pus, after which, as the articular symptoms abated, the eyes were again attacked in succession by iritis; then followed another articular rheumatism, and the last symptom was a third iritis of the left eye.

Aside from opiates the treatment which was of service was peptonized milk, and for the eyes atropia. During the third attack of iritis of the left eye, atropia in the strength of five grains to the ounce, was used persistently before it dilated the pupil.

To a question by Dr. Greenough Dr. Fifield answered that there was no hereditary history of rheumatism, and to one by Dr. Minot, that the heart remains as before.

HYDROCHLORATE OF COCAINE IN GENITO-URINARY, EYE, AND THROAT SURGERY.

Dr. A. T. Cabot reported several observations upon the anæsthetic properties of hydrochlorate of cocaine, showing its power of annulling sensation upon the mucous membrane of the urethra, glans penis, and prepuce: —

Observation 1. An elderly man with congenital adhesion of the prepuce over the posterior portion of the glans; suffering also from balanitis, which rendered the parts extremely sensitive, presented himself for treatment. A four per cent. cocaine solution was applied with a camel's hair brush; three applications being made within ten minutes; at the end of which time the prepuce was dissected-off from the glans without causing the patient any pain. Towards the end of the operation a slight sensitiveness showed itself, but was almost instantly annulled by a reapplication of the drug.

Observation 2. The same patient had a stricture of large calibre requiring the passage of a sound. The meatus and mucous membrane just within it were extremely sensitive, as was tested with an instrument.

The cocaine was applied about the orifice and as far within the urethra as it could be carried on a camel's hair brush. Fifteen minutes later a large sound was passed without any uncomfortable sensation, until it reached the deeper portion of the canal.

Observation 3. A young man, with narrow meatus, who was extremely nervous and anxious to take ether rather than suffer any pain, had his meatus slit thoroughly to double its natural size without a sensation, the cocaine having been applied three times in the previous ten minutes.

Observation 4. A small abscess of the scrotum was painted over with a four per cent. solution of cocaine, three times in ten minutes, and at the end of twelve minutes it was incised. This caused considerable pain, although it seemed somewhat less than would have been expected had the cocaine not been applied.

Experiments are as yet wanting to show whether healthy skin is more readily affected than skin infiltrated with inflammatory products, and whether a solution of the drug strong enough to render the horny skin insensible can be safely employed.

It is worthy of note that in the first case reported, the application, when made to the raw surface of the wound, was followed almost instantly by anæsthesia.

Dr. C. H. Williams spoke of a case reported by Dr. Polk as showing clearly the anæsthetic effect of cocaine, for here the operation was prolonged until the effect of the drug began to pass off and pain was felt, but a fresh application of cocaine again produced anæsthesia, and the operation was completed without discomfort.

When applied to any mucous membrane, a decided effect of numbing is obtained, but on the skin no certain results have been got as yet.

Mr. Theodore Metcalf states that the best coca leaves come from Peru. Many are also shipped from Brazil, but the supply of cocaine is likely to be quite limited for some time, as only from one to two grains are obtained from a pound of leaves.

Dr. H. W. Williams reported the successful use of cocaine in two operations for cataract in the forenoon of the day of meeting. Only a single application of two drops of a two per cent. solution was made to each eye. At the end of five minutes the corneæ, which had been previously tested and found to be sensitive, had lost their sensibility, and appeared to have no consciousness when touched. No fixation forceps were used, the patient turning and keeping the eyeballs in the required position. The corneal incisions were made and the cataracts extracted with great facility and without any unsteadiness or any manifestation of pain on the part of the patient.

Dr. F. I. Knight said that he had tried the drug as a local anæsthetic in operating on two cases of papilloma of the larynx. The preparation used was the only one obtainable at present in this market — a muriate made from the alkaloid by the addition of muriatic acid.

Dr. Knight at first sprayed the larynx with a two per cent. solution without much effect. On a subsequent day he applied the same solution to the larynx with a camel's hair brush. In one case the anæsthetic effect was marked, and the remaining papillomatous tissue removed with ease. In the second case, although the patient spoke of the "numb feeling" in his throat, there was not sufficient diminution of sensation to facilitate the operation. On another day a four per cent. solution was applied to the larynx of this patient with the brush, but with little effect.

The most marked effect on the throat which Dr. Knight had seen was on the pharynx of a phthisical subject, which had been very irritable, as is frequently the case in such patients. The pharynx was brushed over with a two per cent. solution, and almost immediately the patient complained of a queer feeling in her throat, and sensation was so much reduced that he could drum on the pharynx with the laryngeal mirror without exciting the least reflex action, in fact the patient said she did not feel it.

Dr. Knight said he felt confident that in this drug laryngologists would have a great aid in operative procedures, but that we had everything to learn in regard to the strength of the solution to be employed and the best manner to apply it.

Dr. E. H. Bradford read a paper on

CASES OF LITTLE'S DISEASE,

which is reserved for publication.

Dr. J. J. Putnam asked if any cases had been acute.

Dr. Bradford answered that one of his cases was thought by the parents to be acute, but that on cross-examination it seems very questionable. The statement is often made that an attack came on after acute sickness, but on inquiring it is found that the patient did not walk before.

Dr. J. J. Putnam said that he was unable to throw any light upon the pathology of the interesting disease spoken of by Dr. Bradford. He was inclined to think that the seat of the lesion might vary within certain limits, and yet the outward features of the disease — due, namely, to a spasmodic influence probably brought to bear on all the muscles, but permitting a predominant action on the part of the strongest or most automatic — remain the same.

Perhaps in some cases there is no gross lesion at all.

Dr. Putnam had recently made the post-mortem examination of a boy who had suffered for five years from a bilateral mobile spasm, with impairment of the intelligence, and had been able to detect no lesion whatever with the naked eye.

Dr. Cabot mentioned cases in which the adductors acted to make the patients knock-kneed and in which the legs were tied apart in bed for many days, only to return to the old position in a few minutes. In these cases cutting the adductors has enabled the flat-footed patients to walk with a crutch one foot at a time.

Dr. Bradford remarked that he had not himself seen cases so severe, but he did not see any reason why tenotomy or myotomy should not be done.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. M. GREEN, M. D., SECRETARY.

October 11, 1884. The President, **Dr. C. Ellery Stedman**, in the chair.

Dr. Wellington read

A SUMMARY OF SIX HUNDRED CONSECUTIVE CASES OF MIDWIFERY.[1]

Dr. Reynolds said that the Society owed its warm thanks to Dr. Wellington for his valuable and interesting report. The very small number of instances in which forceps were needed, once only in thirty-three cases, was worthy of notice; and this especially in connection with the extremely low rate of mortality — half of one per cent. It was instructive to observe a similarly low rate of death in the admirable report of the Dublin Rotunda, just laid before the profession by Dr. Macan. Equally good results with those recorded in Dublin had of late been obtained also in other places.

Dr. Driver, present by invitation, observed that he used forceps in ten per cent. of his cases; but the number of cases in which he performed version was small, as he believed that as a rule the forceps operation was safer.

Dr. Reynolds said: In reading the statement, now commonly made, of the very frequent employment of forceps, one cannot help wondering whether this instrument is not often used merely that one may promptly end a tiresome and difficult process. "Delay" in labor, as justification for operative interference, should bear a precise and definite meaning. Mere slowness, the general condition of mother and child remaining excellent, and steady progress, however moderate, being made, is not in this sense "delay." In this relation, the unwarrantable prescription of anæsthesia, which is becoming the habit of not a few accoucheurs in this vicinity, is to be greatly regretted; for hydrate of chloral, an excellent resource during the period of dilatation, is of no value in the expulsive stage. This abandonment of ether is excused, by asserting that anæsthesia delays the progress of labor, and farther that it must, if it lessens suffering, diminish at the same time uterine contraction and so prepare the way for flooding. Now it is as clear a canon in trying to relieve the suffering of childbirth as it is in treating intestinal colic, that the use of every remedy, opium, chloral, or anæsthetics, is conditioned utterly upon the presence of pain, upon its severity and its persistence. If there be but little pain, resort to any one of them is wholly unjustifiable. If under the employment of either of them the process of labor is arrested, the indication for continuing the agent ceases. It is true that in a small minority of cases ether suspends uterine action and must be withdrawn; but these instances, few in number, are more than offset by that other minority, not infrequently women of powerful frame and strong muscular development, who, broken down by intense suffering and wholly unmanageable, are yet able, when under moderate anæsthesia, to give invaluable aid.

In reply to questions the speaker admitted that he frequently saw fit to make the administration of ether for a time nominal, that he might test the value of voluntary efforts; but said that he believed that he had not for a long time been obliged in any case to formally relinquish anæsthesia on the ground under consideration. It is to be understood that in these remarks reference is had exclusively to what may be called the judicious employment of ether in average cases: and by this is intended such an exhibition of it as will lessen suffering without arresting the progress of labor; withholding it wholly the moment that pain subsides; never abolishing consciousness, and seldom taking away the power of intelligible speech. In thus using it the mere duration of labor is no doubt in most cases increased; but by what right does an attendant grudge for this purpose an added hour or half hour, provided the patient, who has little or no knowledge of time, is in great measure freed by his treatment from that risk of exhaustion which comes from the continued endurance of suffering. Obstetricians cannot be too strongly warned that the risk of hæmorrhage in childbirth, following loss of uterine contraction, is due wholly, utterly, exclusively, to loss of nervous power; that to bring about such exhaustion prolonged endurance of pain is the one all-powerful factor, as the wise palliation of agony is the best of all expedients for preventing the danger.

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[1] See page 509 of this number of the Journal.

In operative obstetrics deep surgical anæsthesia is often of priceless value. Thus used, this remedy has been of incalculable worth in saving life. Nay more, its employment bids fair to revolutionize the practice of difficult obstetrics. Etherization carried to this extent will of course bring subsequent risk: the effect of the remedy must then be carefully watched and every precaution observed. Yet here also the good that is achieved far outweighs the added danger. Patients worn out in advance by mental worry or by bodily fatigue and those exhausted by repeated and continuous childbearing bring indeed to labor conditions that after delivery favor uterine relaxation; but even in these cases, provided severe suffering be present, the hope of escape from peril is probably not lessened, but rather increased, by the judicious employment of ether. The criticism upon it is as unreasoning as that which forbids us to administer hypnotics and opiates in the delirium of typhoid, on the ground that opiates arrest the secretions and diminish appetite. What suitable opiate will ever equal the exhaustion of sleepless delirium in producing these very results? "I am sure," an eminent practitioner lately said, "that I saved two valuable lives by adding under those conditions to chloral, bromide, and opiates the inhalation of ether, without which last I could give no relief." Few obstetricians in the United States can base their judgments upon a clinical experience more extended than that of Dr. Fordyce Barker: other observers are encouraged to express their strong convictions by his outspoken declaration of last year, that while he rarely, if ever, conducts a labor of any importance without an anæsthetic, he could not recall during many years a patient under his care, in whose case there had been post-partum hæmorrhage. It is a satisfaction to put once more these expressions of opinion before this Society. Would that the words could be made more emphatic! No man has a right to habitually withhold in his lying-in hospital this inestimable form of relief, or in the case of private patients to insinuate the alleged peril of its use, unless he can show clear and unmistakable evidence that such danger exists; and the burden of proof should lie wholly on his side.

Dr. Richardson did not favor the use of ether in childbirth for two reasons: in the first place he thought that ether caused a diminution in the force and frequency of the pains, whereby the labor was prolonged and the child's life occasionally endangered; in the second place he was persuaded that the uterus did not contract so well post partum when ether had been given and that therefore there was more danger of hæmorrhage. He had seen in hospital practice several instances of post-partum hæmorrhage which he was led to ascribe to the ether which the patient had taken: he had never seen post-partum hæmorrhage in private practice. In the first stage of labor he used chloral hydrate to prevent unnecessary suffering; but in the second stage he believed in the timely use of forceps, both to save time and to prevent suffering. He never waited until the fœtal pulse began to flag or intermit; but when with a fully dilated os the labor did not make constant progress, he seldom waited more than two or three hours before completing the delivery with forceps. In private practice one is frequently called upon to use ether, and in such cases he would never hesitate to use it, but should always feel a certain amount of uneasiness with reference to both mother and child.

Dr. Sinclair said that for twenty years it had been his firm belief that the use of ether not only predisposes the patient to post-partum hæmorrhage but prolongs the labor: he therefore very seldom used ether in private practice except at the close of the labor and in instrumental deliveries. He was in favor of the early use of forceps, especially when a flagging fœtal pulse indicated that the child's life was in danger.

Dr. Boardman said that of late years he had given ether in private practice, and thought it promoted the labor and relieved suffering. He used it only in the second stage and gave it sparingly. He had never seen post partum hæmorrhage either in hospital or private practice which could be attributed to the use of ether.

Dr. Abbot said that after such a protracted discussion he would merely mention a case in his own practice which he thought well illustrated the evil of too free administration of an anæsthetic in labor as well as delay in the use of forceps. The case occurred years ago, at the time when the use of ether in childbirth was a novelty. A lady engaged him to attend her in her first confinement on the express condition that he should give her ether, and as freely as she wanted it. At the time little was known about the judicious use of this agent in labor. According to agreement she was allowed to inhale it very freely. As time passed its use was somewhat suspended, as it seemed to check the progress of the child. It did not, however, restrain the efforts of the patient in expulsion, for these were so great as to cause extensive emphysema of the cellular tissue, which extended from the eyes down to the breasts, probably from a rupture at the bifurcation of the trachea. The labor progressed slowly, at the end of thirty hours the head being partly through the superior strait. At this time, the child being alive, it seemed advisable to apply forceps. At the period when the case occurred this instrument was an obstetrical bugbear. Students were warned not to use it, except in great extremity. An eminent obstetrician was called in consultation, who, after due consideration of the situation, advised longer delay, as the patient was in a fair condition and pains were still active. Yielding to the authority of age and experience the patient was allowed to go unaided for twenty-four hours longer, the child making slow progress. At the end of that period, the head being pretty low down, forceps were applied by the gentleman who had been called in the day before, with the result of a not difficult delivery of a dead child, very large, probably weighing twelve pounds. Dr. Abbot had no doubt that the free use of ether in this case had greatly retarded the labor, and that the delay in the use of forceps was responsible for the death of the child. This with subsequent experience had taught him the wisdom of a judicious use of anæsthetics in labor, as well as the great value and harmlessness of a timely use of forceps. The emphysema occurred during the last stages of labor, and the amount of ether inhaled was probably over two quarts. The emphysema disappeared by the end of a week, and the patient made an uninterrupted convalescence.

Dr. Wellington said, in reply to a question, that he did not believe it was safe to attend lying-in women coincidently with cases of scarlatina and erysipelas.

Dr. Ingalls stated that in 1860 he had the professional care of about one hundred and thirty cases of scarlatina during an epidemic which lasted a period of seven months: this was in Winchester. There were all grades of the disease. Obstetrical and any other practice that offered he attended to as at any other time: careful review of the history of the epidemic soon after its close and many times since permits the assurance of his not having been the medium of communicating the disease.

PHILADELPHIA CLINICAL SOCIETY.

G. BELTON MASSEY, M. D., RECORDING SECRETARY.

Meeting of October 24, 1884. **Dr. Beates** in the chair.

EXTRA-UTERINE PREGNANCY.

Dr. Montgomery reported A Case of Extra-Uterine Pregnancy, Rupture, Peritonitis, Recovery.[1]

Also, for **Dr. James Sibbald**, A Case of Extra-Uterine Pregnancy Successfully Treated by Electricity.[2]

Dr. John B. Roberts coincided with Dr. Montgomery as to the advisability of performing laparotomy where the symptoms of rupture continued urgent,

Dr. Clara Barton asked what form of electricity had been used.

Dr. G. Belton Massey: The question put by Dr. Barton is of no little importance, and the answer should depend on a clear conception of the work to be done in a given case. Electricity is called upon for two separate and distinct functions in extra-uterine pregnancy: to kill the fœtus and to produce its absorption. In the former case a somatic death of the germ contained in the tumor is desired; in the latter merely a molecular death or change. In this latter instance, where the death of the fœtus has occurred, and we merely wish to promote its absorption, together with any effused blood or other material, the indications are almost exactly similar to those of any other intra-abdominal tumor, the current with greatest electrolytic power — the galvanic — is to be preferred. On the other hand, if we wish to arrest the onward progress of life in the fœtal mass in the interest of the unfortunate mother, that current which will accomplish this object with least danger to the mother is to be preferred. This is undoubtedly the faradic current. Shock must be the quality of value here. It is simply a question of transmitting a sufficiency of shock through the abdominal walls of the mother to the more vital parts of the fœtus. If the ordinary faradic battery is not strong enough the gravity of these sad cases would even warrant the building of a weak dynamo for this special purpose. As to method of application: the external percutaneous passage of the current by moistened electrodes would seem to be the best. A vaginal electrode might be used, however, the principal endeavor being to send the current directly through the tumor. Drs. Thomas and Mundé have recently reported a number of cases to the American Gynecological Society where successful results had followed the use of electricity. To my mind, however, their remarks as reported lacked definiteness in this matter of the choice of current, and the exact object desired in the individual case. Dr. Thomas does not advise the use of electricity after the fifth month, but an operation instead. Possibly he anticipated difficulty in then producing death, but this could be overcome by increasing the strength of current in the manner I have indicated; even if an operation was afterwards performed the previous arrest of the placental circulation might be of value.

In response to inquiries from Drs. Hall and Roberts, Dr. Massey said that an insulated sound with free extremity would form an excellent vaginal electrode, but that the use of acupuncture needles was totally unnecessary.

Dr. Montgomery, in closing the discussion, said that he had applied one electrode in the vagina in contact with the uterus and the other over the hypogastrium. He thought acupuncture unnecessary, though it was formerly the practice to use this procedure, as it was liable to cause peritonitis from the liquor amnii escaping into the peritoneal cavity. There is but little difference in the use of either current. There were two reasons why electricity was unavailable after four and a half or five months. The liability to rupture was greatest in the early months, — before the third month. After that we may as well allow the case to go on to a later month, as an operation will be necessary any way. A large fœtus is more dangerous to the mother after loss of vitality, and cannot be allowed to remain. Although the woman had fallen in the case related he thought the fœtus was still living, and therefore advised the electricity with the direct purpose to kill. Subsequently the tumor became smaller. The fœtus and appendages become encapsulated in the abdominal cavities of the mothers in these cases. There is no advantage in destroying the fœtus prior to operation.

— The proceeds, amounting to $22,000, of a fête held at the International Health Exhibition, were distributed October 10th among the hospitals and dispensaries of London.

— The City Council of Philadelphia have been soliciting medical opinions regarding the effect on public health of salting the tracks. They have got views of diametrically opposite character, and will have to decide for themselves.

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[1] See page 510 of this number of the JOURNAL.

[2] See page 511 of this number of the JOURNAL.

FIRST ANNUAL MEETING OF THE NEW YORK STATE MEDICAL ASSOCIATION.

Held at the Murray Hill Hotel, New York, November 18, 19, and 20.

First Day — Morning Session.

The report of the Committee of Arrangements was made by **Dr. J. W. S. Gouley**, Chairman; after which was delivered the

ADDRESS BY THE PRESIDENT,

Henry D. Didama, of Syracuse. In it he warmly advocated the three years' graded course of medical education, and strongly urged that it should be adopted in the large schools in New York as a worthy example to be followed by the others throughout the State.

THE ADDRESS IN SURGERY

was given by **Dr. E. M. Moore**, of Rochester, who took Transfusion for his subject. He preferred natural blood to defibrinated blood, milk, or saline solutions, and had devised a simple apparatus by which the blood could be conveyed to the veins of the patient without danger of injecting air or having the blood coagulate, which he considered the great points to be avoided. It consisted of a narrow rubber sac, into which the blood of the donor was to be received, to the lower end of which was attached a canula and mandrel, by means of which the stream flowing into the patient's vein could be instantly arrested whenever desired. He believed that a transfusion should never occupy more than one minute at the outside, and that two ounces, or less, of blood was quite sufficient for most cases. In case a larger quantity seemed necessary, the operation was to be repeated without withdrawing the canula.

Congratulatory addresses were made by **Dr. Wm. Detmold**, President of the New York County Medical Association, **Dr. Shoemaker**, of the Pennsylvania State Medical Society, **Dr. Clark**, of the Vermont Medical Society, and **Dr. Wylie**, of the Connecticut Medical Society.

Dr. Gouley, Chairman, read the

REPORT OF THE COMMITTEE ON ORGANIZATION OF DISTRICT ASSOCIATIONS,

proposing a plan for five such branch associations in the various sections of the State, which should each hold one stated meeting each year, and the president of each of which should be the vice-president residing in that district. The plan was unanimously adopted, and a recess was then taken for the organization of the district associations.

Afternoon Session.

Dr. J. C. Hutchinson, of Brooklyn, read a paper on

TRANSFUSION,

in which he described an apparatus devised by himself, the principal feature of which was a graduated glass cylinder provided with a thermometer, and surrounded by a double rubber sac filled with hot water for maintaining the temperature at the required point. Into the bottom of the cylinder was secured a rubber tube, to the lower end of which was attached a canula, provided with a stopcock, to be inserted into the median basilic vein of the patient. The fluid he used was a saline solution, and he thought that from twelve to twenty ounces was required, which should not be allowed to flow at a faster rate than one ounce per minute. He believed that the benefit to be derived from transfusion was not so much of a nutritive character as the restoration of vital fluid to the circulation and the stimulation of the heart.

Dr. Alfred L. Carroll, of New Brighton, Staten Island, read a paper on the

DURATION OF CONTAGIOUSNESS AFTER ACUTE INFECTIOUS DISEASES.

This was a question which had never been definitely settled; but was one of great practical importance, especially as regards the time that children should be kept from school after recovering from such diseases. With a view to obtaining light on the subject he had addressed inquiries to a number of prominent medical teachers and practitioners throughout the State; but for the most part had found a very wide variance in their replies, and he trusted that the Fellows of the Association would endeavor to aid him in the further prosecution of the matter by communicating to him the results of their own experience.

Papers were then read by **Dr. John S. Jamison**, of Steuben County, on Chronic Intestinal Catarrh, and by **Dr. E. R. Squibb**, of King's County, on

THE MODERN PROGRESS OF MATERIA MEDICA.

Dr. Squibb thought that polypharmacy was much less in vogue now than formerly; fewer and more active agents, the power and definite action of which were known, being employed. The more concentrated forms of drugs, like fluid extracts, were used in preference to tinctures and syrups, and they were prescribed not in the fixed doses set down in the books, but according to the physiological and therapeutic effects noticed in each special case.

Dr. W. H. Robb, of Montgomery County, read a paper on

THE MANAGEMENT OF CRIMINAL ABORTION.

In the discussion which followed **Dr. Ely Van de Warker** said that he regarded the use of ergot for the relief of hæmorrhage in abortion at or before the third month as a waste of time, and that irregular contractions were often excited by it; an opinion which was concurred in by **Dr. Moses H. White**, of New Haven, who thought it not only useless, but harmful, at this period, as it not infrequently caused the retention of the ovum by the abnormal contraction of the organ which it excited.

Dr. Charles Buckley, of Monroe County, read a paper on

CHRONIC MERCURIAL POISONING.

In a case under his care very serious symptoms resembling those of arsenical poisoning were found to be due to mercury used in coloring the hard, red rubber plate of a set of false teeth worn by the patient. He had since also noted several other similar cases, though less severe in character.

Dr. R. H. Sabin, of Albany County, read a paper on

A CASE OF ACUTE LEAD POISONING RESULTING FATALLY.

The patient, apparently in good health, suddenly became unconscious and remained in this condition for thirty-two hours, when death ensued. No autopsy was permitted; but the immediate cause of death was supposed to be cerebral effusion. Other men occupied in the same work as the patient suffered from the ordinary symptoms of lead poisoning.

The following papers were read by title: The Therapeutics of Diphtheria, by Dr. J. W. Moore, of Albany County; Notes on Dislocation of the Hip, based upon 238 Cases Occurring in the State of New York, by Dr. Frederick Hyde, of Cortland County; and Intestinal Obstruction, by Dr. Avery Segur.

NIGHT SESSION.

Dr. H. E. Mitchell, of Rensselaer County, read a paper on

ERRORS OF REFRACTION: THE IMPORTANCE OF THEIR RECOGNITION AND CORRECTION IN EARLY LIFE.

On account of the rapidly increasing number of defective eyes in children he thought general practitioners should be on their guard, and do what they could to put a stop to it. By means of an ordinary set of test types and the optometer, a simple variety of which he exhibited, such difficulties could be readily detected.

Dr. Austin Flint, of New York, read a paper on the

DIETETIC MANAGEMENT OF DYSPEPSIA.

In what he said he wished it to be understood that he regarded indigestion and dyspepsia as distinct affections. As a rule, the diet which was beneficial to the healthy individual was beneficial to the dyspeptic, and the guides for eating should be the appetite, the palate, and common sense. Dietetic idiosyncrasies were by no means as frequently met with as was generally supposed to be the case, and the old adage that what was one man's food was another man's poison had little truth in it. It was of prime importance that the dyspeptic should be disabused of the notion that he should observe strict rules in regard to the quantity, quality, and variety of his food, as well as to the time of eating; and nothing was so well adapted to prolong digestive trouble as the habit of introspection indulged in by so many dyspeptics.

Dr. N. C. Lynde read a paper on

DOUBLE SYNCHRONOUS AMPUTATIONS.

It was accompanied by a table which he had made from reports received from surgeons throughout the State. The cases were nearly one hundred in number, and nineteen twentieths of them were due to railroad injuries. In amputations of the upper extremities nearly all recovered, while in those of the lower extremities (thirty-four in number) half recovered. He urged immediate operation, as a rule.

Dr. Lynde also read a paper on

THE FUNCTIONS OF THE AURICLES,

in which he took the ground that the auricles acted merely as reservoirs and diverticula for the blood poured into the heart, and did not contract, as claimed in the books.

This opinion was vigorously opposed by Drs. Austin Flint, Jr. Austin Flint, Sr., Moore, and Ross. The latter stated that at the last meeting of the New York State Medical Society he had reported a case of rupture of the auricle, which he thought could not possibly have occurred except in the act of contraction.

Dr. E. D. Ferguson, of Rensselaer County, read a paper on

THE USE OF THE ASPIRATOR IN HYDROTHORAX,

in which he said that owing to the dangerous and even fatal results which he had seen produced by the aspirator by causing pyothorax, he now never resorted to it except when dyspnœa or other serious symptoms supervened. Dr. Bowdich had maintained that the aspiration should be continued until the patient complained of pain in the epigastrium or dyspnœa; but he thought that it was much better that it should be stopped before this point was reached, as the occurrence of these signs indicated a more or less grave condition already, and he would advise that more than a pint of fluid at the outside should never be withdrawn at one time. In the pelvic cavity much evil had resulted also from the too free use of the aspirator, and on the whole he thought that the instrument had perhaps been productive of more harm than good.

Dr. Thomas F. Rochester, of Erie County, read a paper on

A NEW PROCEDURE IN PARACENTESIS THORACIS.

This was the introduction of the finger through the opening, and the separation with it of the ribs, when the latter were so close together that it was impossible to insert a drainage-tube. He had practiced it in three cases with marked success.

In the discussion of these two papers which followed, **Dr. Flint** said that there was no doubt a great deal of truth in what had been said, but he was hardly willing to go so far as the author of the paper, and **Dr. Moore** said he was disposed to agree with Dr. Ferguson in regard to the use of the aspirator in acute pleuritis, but that in empyema it was vastly safer and better than opening the pleural cavity; while **Dr. Rochester**, who said he had probably performed paracentesis thoracis oftener than any one in the country except Dr. Bowditch, thought that it was a waste of time to employ aspiration in empyema, and that the use of the drainage-tube was the only satisfactory method of treating it. **Dr. Fifield**, of Boston, remarked that ten years ago Dieulafoy had insisted that only a certain quantity of fluid, not to be exceeded, was to be withdrawn, and that he believed Dr. Bowditch had some time ago resorted to the procedure described in Dr. Rochester's paper. With his last instrument Dieulafoy had provided a set of canulæ which could be left in situ in the chest walls, and such a contrivance he thought was better than the drainage-tube.

The following papers were read by title: Pyæmia and Death after the Operation for Convergent Squint, by Dr. J. J. A. Burke, of Monroe County; Relations of Habit to Disease, by Dr. C. M. Kittredge, of Dutchess County; Report of a Case of Nephro-Lithotomy for Calculous Pyelitis, by Dr. Wm. Watkyns Seymour, of Rensselaer County; and Report of a Case of Excision of the Rectum for Cancer, also by Dr. Seymour.

SECOND DAY. MORNING SESSION.

PROPOSED LIBRARY.

On motion of **Dr. Goulky**, resolutions were passed providing for the establishment of a library for the Association in the city of New York and for a library fund.

DR. S. C. ALLEN read a paper on

A CASE OF DIARRHŒA FROM DISEASE OF THE PANCREAS.

The patient had for some time what Dr. Allen called "adipose diarrhœa," but greatly improved under treatment. He had also granular disease of the kidney, however, as indicated by the condition of the urine, and finally died of uræmia combined with senile debility.

THE ADDRESS ON OBSTETRICS AND GYNÆCOLOGY

was delivered by **DR. T. GAILLARD THOMAS**, of New York. In it he spoke of the great advance in the prevention and treatment of puerperal septicæmia which the obstetrician had been enabled to make through the discovery of the bacterial origin of disease, of the treatment of extra-uterine pregnancy by electricity and laparotomy, of the induction of premature labor in placenta previa and aggravated nephritis, of the usefulness of Tarnier's tractors (which he regarded as the only real improvement in the forceps since the days of Smellie and Levret), of the advantages of laparo-elytrotomy, and of Emmet's, Battey's, Hegar's, and Tait's operations, and of the drugs recently introduced into this department of practice, such as permanganate of potash, and the fluid extracts of ergot of corn, viscum album, and viburnum.

DR. DARWIN COLVIN, of Wayne County, read a paper on

VENESECTION IN THE CONVULSIONS OF PREGNANT AND PARTURIENT WOMEN,

in which he claimed from a large experience that this was better than any other treatment; citing instances in which he believed death would inevitably have resulted had not free bleeding been resorted to.

In the discussion which followed **DR. MOORE** said that he believed that bleeding was of service in suspending the convulsions until the cathartics, which were always given in connection with it, had time to act, and that it was the cathartics that really cured the patient by eliminating from the system the poison which gave rise to the convulsions. Anything that would temporarily suspend these, therefore, would be useful, and he thought that ether was better for this purpose than bleeding, chloroform, morphia, or any other agent. Its inhalation was to be freely and steadily kept up until either the uterus was emptied or the bowels well moved by a purgative.

DR. THAYER, of Brooklyn, said that Norwood's tincture of *veratrum viride*, in doses of a teaspoonful, would also fulfill very admirably the indication referred to by Dr. Moore.

DR. C. C. F. GAY, of Erie County, read a paper on

FRACTURE OF THE BASE OF THE ACETABULUM.

Uncomplicated cases always got well without any treatment except rest, and as the positive diagnosis was always difficult, if not impossible, he wished to warn the profession against the danger of too much manipulation. He presented a specimen of fracture in three directions and involving the *os innominatum*, and read a history of the case.

TUBAL PREGNANCY.

DR. J. G. ORTON, of Broome County, read a paper on A Case of Tubal Pregnancy, at Full Term, of Fourteen Years' Standing.

Nearly one hundred bones of the fœtus had been removed through an opening which appeared spontaneously in the rectum, about four inches above the anus, when the patient died from an attack of diarrhœa, which was epidemic at the time in the town where she resided. The bones and sac were exhibited.

DR. NATHAN BOZEMAN, of New York, read a paper on a Case of Tubal Pregnancy, considered in Relation to Rupture of the Tube; Diagnosis and Treatment.

Dr. Bozeman performed laparotomy in this case; but as it was not until more than a week after the rupture of the cyst (the physician in attendance having mistaken the diagnosis), the patient died thirty-three hours afterwards from exhaustion. He urged the use of electricity to destroy the fœtus before the rupture of the cyst, and, in the event of a rupture, the immediate resort to laparotomy to arrest the hæmorrhage in the abdominal cavity.

The following papers were read by title: The Practice of Medicine of Forty Years Ago with Comparative Position at Present, by Dr. B. L. Hovey, of Monroe County; Notes on Peat as a Surgical Dressing, by Dr. W. S. Tremaine, of Erie County; and A Case of Ovarian Cyst, with Operation, by Dr. T. M. Lloyd, of Kings County.

DR. C. S. BULL read a paper on

HYDROCHLORATE OF COCAINE IN OPHTHALMIC SURGERY.

He had used it with success in a large number of operations, and spoke successively of its effects upon the sensory nerves of the cornea and conjunctiva, upon the pupil, and upon accommodation. He considered it a great boon to the ophthalmic surgeon in relieving him from the thraldom of ether and chloroform.

DR. MITCHELL said that he had been equally pleased with the results obtained from its use, though for a considerable time past he had found bromide of ethyl an excellent substitute for ether and chloroform. It was much more prompt in its action, and he believed that for short operations at least it was perfectly safe.

NIGHT SESSION.

The following papers were read by title: Common Sense Versus Hypothetical Medication in Treating Chronic Diseases, by Dr. Jonathan Kneeland, of Onondaga County; Cerebral Epilepsy, by Dr. C. F. Macdonald, of Cayuga County.

DR. FREDERICK W. PUTNAM, of Broome County, read a paper on a Case of Dislocation of the First Phalanx of the Thumb Forwards. The author of the paper had been able to find but four cases of this dislocation on record.

(To be concluded.)

— Sir Spencer Wells has been urging the claims of cremation in England, where, among its active supporters, are to be counted the Earl of Shaftesbury, Sir Henry Thompson, Mr. Ernest Hart, several of the Bishops of the Established Church, and the City of London Commission of Sewers.

Medical and Surgical Journal.

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THE WISDOM AND CONSTITUTIONALITY OF STATE REGULATION OF THE PRACTICE OF MEDICINE.

Any movement in a democratic country like our own, having for its object a State regulation of the practice of medicine, is generally met and opposed by a cry of interference with individual rights, class legislation, and other well-known demagogical formulæ. When, moreover, such a movement is supported by qualified medical practitioners, who best know the evils which prevail in the absence of restrictions upon medical practice, a suspicion immediately presents itself to the minds of a certain portion of their fellow-citizens — a suspicion which is sedulously cultivated by the quacks and pretenders — that a monopoly is being created, and that such men, however respectable in their daily walk of life, are seeking their own advantage rather than that of the public.

This being the case, as we have on several occasions had reason to assure ourselves, it was with particular pleasure that our attention was drawn to a very clear and cogent statement of the constitutionality and desirability of the regulation of medical practice by State Legislatures, emanating lately from a member of the legal profession, a judge of the Court of Appeals of West Virginia.

The Legislature of West Virginia passed a law in 1882, similar to that existing in Illinois, to regulate the practice of medicine. The execution of the law, as in Illinois, was intrusted to the State Board of Health, which, like the State Board of Illinois, seems to perform its duties under the law in an active, efficient, and discreet manner. The law provides, in brief, that all persons desiring to practice medicine in the State shall present themselves before the Board for examination and a license, except such as had practiced in the State continuously for ten years prior to the passage of the law, or such as are graduates of a "reputable" medical college in the school of medicine which they profess, who may, upon presenting their diplomas and satisfying the Board, also obtain a license. Under this law the Board brought an action two years ago against a quack and obtained judgment. The defendant did not take exception to the allegations proved against him, but appealed on the ground of the unconstitutionality of the law. Judge Green, who presided, with his colleagues, at the second trial, affirmed the constitutionality of the law in an opinion which covers at some length and with much clearness, as we have said, both the merits and the soundness of such legislation.

Whilst there can be no doubt, as his Honor thinks, that the Legislature of every State should permit the utmost freedom of action by each citizen consistent with the public welfare, and ought not by law to impose any restraint thereon which the paramount claims of the community do not demand, it, of course, does not follow that the Legislature cannot legitimately restrain the action or conduct of any individual or citizen by a general law applicable alike to all, when such restraint is imposed for the purpose of promoting the comfort, the health, or the prosperity of the community at large. Under these circumstances the Legislature of any of the States has a perfect right under its general police power to pass laws placing individuals under restraint in the exercise of any business, calling, or profession. This power has been constantly exercised by State Legislatures, and the courts have universally recognized such power and have held that acts of the State Legislatures passed in the exercise of this power were constitutional and valid. In a great variety of cases State Legislatures have required licenses to be granted before a citizen could engage in a certain business or in certain professions, when from the character of the business or profession the public was liable to be imposed upon, unless the individual citizen was placed under this and other restraints imposed on all alike who engaged in such business or profession. Thus, laws have been passed to license bakers and to regulate both the weight and price of bread, and to prohibit the baking of bread for sale by those not licensed. And such acts of the Legislature have been held valid and constitutional. In no State in the Union is a citizen permitted to engage in the selling of intoxicating liquors without being placed under restraint by legislative acts. These restraints vary much in different States, and in very many of them the person desiring to engage in such business has first to obtain a license from a specified body or person, and before obtaining such license has to establish his fitness to engage in such business by proving his moral character. The general right of the Legislature by statute to regulate the sale of intoxicating liquors, and to place persons engaged in this business under whatever restraint the Legislature deems necessary to protect the community from injury, either to its morals or health, by those engaged in this business, is universally recognized by the courts, and is so well understood that no decision need be referred to as recognizing this species of legislation as valid.

Other sorts of business have also been put under restraint and regulation, the general rule being that the Legislature may restrain any one in the exercise of his natural rights to engage in any business whenever the promotion of the public safety, health, or prosperity requires a restraint of any particular sort to be put upon any particular business. The principle involved in this regulation by law of various sorts of business has been also extended to various callings and professions. Thus the practice of law is a profession which the Legislature of every State has deemed one which should be regulated by law, and those engaged in this profession put under restraints for the protection of the general public. The person proposing to practice law is everywhere required to obtain a license from some person or persons qualified to determine whether the applicant has the qualifications necessary to practice law. The constitutionality of such laws or even their propriety has never been questioned.

The authority of the Legislature to require any one engaging in the practice of law to obtain a license is recognized as a matter of course. Statutes requiring that any person who undertakes to practice law must first be examined by judges competent to determine whether he has the requisite qualifications are based upon the well-known fact that none but those who have been specially educated with reference to practicing law can do so without great injury to the community who must employ lawyers in their business, and who are necessarily incompetent, to a considerable extent, to judge of the qualifications of a lawyer, and are thus subject to be imposed upon by pretenders ignorant of their profession. To furnish the community some protection against such impostors the statute law in perhaps every State in the Union prohibits any one from practicing law till he has first been examined by a competent judge or by a competent body of men, and a certificate of his qualifications and a permission to practice law has been obtained. The same reasons would seem to equally require that no one should be allowed to practice medicine who has not been first examined by some competent person, or body of men, as to his qualification to practice medicine, and obtained permission to do so, for it is obvious that the doctor equally with the lawyer requires a special education to qualify him to practice, and that the community in the case of the doctor, at least as much as in the case of the lawyer, are incompetent to judge of his qualifications, and are liable to be imposed upon by impostors and quacks professing to practice medicine. Indeed, the liability to imposition on the community through quack doctors would, Judge Green thinks, be even greater than their liability to be imposed upon by pretenders in the practice of law, yet the Legislatures of many States have singularly neglected to protect the community against imposition on them by quack doctors, but have left the community to only such protection against them as was furnished by the common law, and by it physicians undertaking to practice their profession were held responsible not only for due care and diligence, but for that degree of skill and capacity which ordinarily belongs to those who practice medicine. But, as in the case of lawyers, many of our State Legislatures have by statute law afforded additional protection to the community against the humbuggery of quack doctors.

It was claimed by the defendant that the law regulating the practice of medicine in West Virginia violated an article of the State Constitution, which provides that "all men are by nature equally free and independent, and have certain inherent rights, of which, when they enter into a state of society, they cannot by any compact deprive or divest their posterity, namely, the enjoyment of life and liberty with the means of acquiring and possessing property, and of pursuing and obtaining happiness and safety." This claim was disposed of quite summarily, the judge expressing himself as follows: "Of course all men have a right to the means of acquiring property, but the means used must be lawful means. An individual cannot acquire property by stealth or robbery. In so doing he infringes on the rights of others, on their right under this very provision of our bill of rights to possess property. So he cannot have a right to acquire property by the practice of medicine if he has no qualifications to practice medicine, and if in his attempt to do so he destroys the health of others in violation of the law of the land. And therefore the Legislature has a right by law to declare that he shall not acquire property by the practice of medicine unless he possesses the requisite qualifications, and there can be thus given some assurance to the community that he will not destroy the health of others. For how can others enjoy their life as provided for by this section of our bill of rights if any quack has an absolute right to destroy life by his attempt to practice medicine. The Legislature, therefore, in declaring what shall be the qualifications of a person before he shall acquire property by practicing medicine does not violate this provision of our bill of rights."

We do not reproduce these portions of the arguments advanced and the opinions expressed in this decision because they will be new to our readers, but because they come from a non-medical source, and are couched in plain words suitable for plain people. Those of our colleagues who have long been convinced of their truth themselves may some time find them useful in their efforts to convince others. We are glad to congratulate the State Board of Health of West Virginia upon the sturdy support which it receives in the discharge of beneficent but disagreeable duties.

DR. CLEVENGER ON POLITICAL ABUSE OF THE INSANE.

At a recent meeting of the Chicago Medical Society Dr. S. V. Clevenger, special pathologist to the Cook County Asylum, a few miles from Chicago, read a paper on the Political Abuse of the Insane. Stating that the European governments subsidize laboratories and salary eminent physicians, he contrasted with this fact the condition of things existing in the average American asylum, more especially those controlled by local trustees instead of by legislatures. There is, he continued, a wonderful uniformity in the degradation of American institutions for the insane; the same brutalities are rife in them; the employees are generally of the same class; the same intriguing, bickering, and general roguery occur, and all of the so-called physicians are nearly of the same stripe; the same air of secrecy is maintained in one as in the others. While he admitted that a majority of asylum attendants were kind hearted, the pernicious influence of the brutes was too prominent to be overlooked. These brutes were mostly active workers in political campaigns, who felt entitled to the political spoils. The average official who appoints such men is often of the same stripe. When $200.000 or $300,000 are yearly appopriated for the maintenance of an asylum the chances for division are excellent, because the inmates do not know enough to complain, and any officer who is not corrupt is usually intimidated into silence. If he cannot be entangled in some scandal or some hold cannot be secured on him the gang often concocts a scheme out of whole cloth and uniformly swears to it. It is pure accident if a good physician succeeds in effecting an entrance to an asylum as an appointee. The charlatan who abides in saloons and is well acquainted with the "boss" or members of the gang stands the best chance for election to office. Such a person is usually of the bummer order, who delights in pistol shooting and threatenings, who prostitutes his position in all sorts of ways for the benefit of bad politicians, — this he said and more.

We have quoted these remarks at length because we believe the author to be entirely misinformed with regard to the "average American asylum." We wish also to protest against such misrepresentation. With such statements upon record we cannot wonder that there has been so much unfair criticism of our institutions in Europe, and that most English alienists come over here to be agreeably surprised at the superiority of our asylums, in many respects excelling their own. Our distinguished colleague Dr. Tuke is the latest to bear witness to the admirable character of all of our insane asylums [1] which he had seen.

In speaking of the Cook County Asylum, Dr. Clevenger says of the newly-appointed reform medical superintendent, Dr. J. G. Kiernan, that his first order to the attendants was to restrain no patient without an order from a physician. A great uproar followed. This was an unheard-of proceeding there, and much nonsense was talked over the new order. The next order was that the night watch should not issue medicines to the patients at their own will, but were to call up a physician. As much as ten gallons of sleeping potions were doled out per month in the most unskillful manner to all classes of noisy patients. Any death resulting from this was of course attributed to "exhaustion from insanity." Among the new arrangements which disgusted the gang most of all was that requiring employees to take off their hats in the wards and address the patients in a decent manner. . . . The patients are insufficiently fed and scantily clothed. They suffer for everything. The medicines are impure and often valueless, and upon investigation, without whitewash in it, many terrible things may be brought to light.

If Dr. Clevenger has generalized from this one asylum we can readily believe that he had good grounds for his severe criticisms. But having had a pretty large experience in inspecting American insane asylums, and far from wishing to extenuate their faults, we must say that the Cook County Asylum is unique for its bad management, so far as our knowledge goes. Nearly ten years ago we called the attention of the Chicago physicians to some gross abuses [2] in the treatment of the patients there, and they (the Chicago Medical Society, if we remember correctly) promptly had them corrected. The Chicago Citizens' Association has requested the Chicago Medical Society to appoint a number of physicians to act in conjunction with laymen of the Association in investigating the charges of mismanagement at the County Insane Asylum. Drs. C. G. Smith, E. Ingalls, C. G. Paoli, R. Tilley, and C. W. Earl were appointed by the chairman, the Citizens' Association to select three names of the five presented.

We have always been opposed to insane asylums governed by local authorities, of which there are not very many in this country, believing that all such institutions should be under State direction, and we regret exceedingly the action of our last Massachusetts Legislature in going back to them.

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QUARANTINE AS A SIEVE.

The discovery of a man dying from yellow fever in a boarding-house on Spring Street, in New York, November 19th, is a sufficiently good illustration of the value of quarantine in *excluding* disease from a country. The sick man had been steward of a vessel which arrived the day before from Costa Rica. The vessel passed quarantine upon the assurance of the captain that there was no sickness on board. A similar occurrence was reported from New York not many months since.

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A REMARKABLE LAPAROTOMY.

Dr. W. T. Bull, visiting surgeon at the New York Hospital, performed, November 3d, a remarkable laparotomy, the result of which has thus far, November 22d, been strikingly successful. The patient was a male, the victim of accidental shooting with a 32 calibre revolver, the ball entering to the left of and just below the navel. There were no symptoms of perforation, and he was in good general condition twelve hours afterwards. The bullet wound was explored under ether and found to penetrate the abdominal cavity. Laparotomy was performed, sutures taken in seven intestinal perforations, and the ball removed from the wall of the sigmoid flexure.

Favorable progress has been made since without serious symptoms of any kind, complete recovery being only delayed by an extra-peritoneal abscess in the abdominal wall.

— It is said that Bellevue Medical College will hereafter issue its diplomas in English instead of in Latin as heretofore.

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[1] We exclude, as we suppose Dr. Clevenger does, the British provinces of Canada.

[2] See vol. xciii., p. 692.

MEDICAL NOTES.

— By the will of the late Mrs. L. J. Kowles the sum of $25,000 is bequeathed to the City Hospital, Worcester, Mass.

— *The North-Western Lancet*, published at St. Paul, Minn., has passed under the editorial charge of C. B. Witherle, M. D. (Harv.), formerly of this city. The magazine is to be enlarged and otherwise improved.

— An epidemic characterized by hysteric and choreic phenomena is described in *Lyon Medical* (October 5th, *et seq.*) remarkable for its extent among a rural and ignorant class of persons and of young age. It occurred in a town of Ardèche, and began with a girl of eleven who was frightened by hearing the particulars of the death of a young companion. There was marked hyperæsthesia, especially of the senses of touch, hearing, and sight, followed by spasmodic contractions of certain groups of muscles. She continued at her work (connected with silk weaving), and soon other children who at first had laughed at her contortions were similarly affected. Nine other girls and two boys in all became victims to this strange disorder. When all were at work in a common hall an attack of convulsions would come upon all at once as by an electric shock. A peculiarity of the case was that several of the girls had not yet menstruated; in these no ovarian tenderness could be detected. Isolation and hydrotherapeutics constituted the principal treatment, which was effective in stopping the epidemic.

— A young female in a Spanish town is reported in the *Deutsche Medizinal Zeitung* (16th October) as in a remarkable cataleptic condition. She is twenty years old, and for nine months has not opened her eyes. She has become completely deprived of sensation. Various mechanical means, such as pricking, burning, friction, etc., have been tried to rouse her, but in vain. The respiration is regular, somewhat slowed, as is also the heart beat. The face neither very pale nor red. Body and limbs are very emaciated, with normal temperature. The teeth are closely shut on one another. The eyelids can scarcely be opened enough to allow of seeing the sclerotic.

— A correspondent of the *Medical Record* has recently published a list of "Therapeutical Delusions" of a pretty sweeping character, among which many practitioners will recognize some of their own pet prescriptions. That journal says editorially: —

"We have carefully examined the 'delusions' set forth by our correspondent, and find that in the main they agree with the results of the more conservative clinicians and of pharmacological experiments." They are as follows: "It is a delusion that veratrum viride or aconite will abort croupous pneumonia or essentially modify its course; that chlorate of potash is of any use in catarrhal angina; that nitrate of potash is an anti-pyretic, anti-rheumatic, or (to any appreciable extent) a diuretic; that lime-water will dissolve a diphtheritic or croupous membrane; that nitrate of silver is of any value in epilepsy; that the excessive and continuous use of iron induces plethora with dizziness, flushings, and palpitations; that iron should be given in phthisis; that mercury is anti-plastic and antiphlogistic; that arsenic has any value in diabetes; that iodide of potassium promotes absorption of serous exudations and of non-specific connective tissue in hyperplasia; that sulphur and sulphur in baths is of any value in rheumatism; that charcoal, when moist in the stomach and intestines, has any absorptive power, or is of any use in flatulence by virtue of that power; that dilute acids are 'cooling,' that is, lower temperature and lessen heart action in the non-febrile; that colchicum is beneficial in rheumatism; that drinking sulphuric acid prevents chronic lead-poisoning; that iodoform given internally is anything but a poor substitute for iodide of potassium; that croton-chloral has a specific effect on the fifth cranial nerve; that tannic acid (or the plants containing it) is of any value given internally for hæmorrhages, except, perhaps, those of the stomach and bowels, or that it is of any value as a gargle in chronic pharyngitis, or that it is an astringent to mucous surfaces or blood-vessels; that turpentine is a stimulant to the heart and nervous system; that musk is a nerve or heart stimulant (it belongs with turpentine to nerve depressants); that ox-gall is of the slightest therapeutical utility; that hydrocyanic acid in ordinary medicinal doses is either a local or general sedative (it is rather an irritant); that quinine in either large or small doses is a stomachic, except in convalescence from malarial attacks; that hydriodic acid has any specific effects other than those possessed by the iodides."

— The significance of "intermittent pulse" is treated of by Dr. B. W. Richardson in the *Asclepiad*, July, 1884. The author states that if it occur in infancy it is an important indication of the existence of serious nervous derangement. Occurring in young adults it has the same meaning, and tells the story of commencing failure of power. In five cases the author has known it to be the first physical indication of derangement of mind in which suicide was attempted. In persons advanced in life and in persons prematurely old intermittency is often the herald of symptoms of nervous failure. Persons in whom there is permanent intermittent action of the pulse pass through all acute diseases with less chance of recovery than others of similar age and like constitution who have no such failure. The author also states that he has often noticed the hereditary character of the phenomenon. With reference to treatment, there is no known specific method. Excitement should be avoided, and in cases where there are symptoms of cerebral congestion depletive measures are sound. Nothing relieves the intermittent action of the heart so rapidly as alcohol judiciously administered, and nothing clenches the affection more decisively than alcohol indiscriminately prescribed. All alcoholic fluids as beverages must be avoided, but if the case demand it then at bed-time half an ounce of pure alcohol in warm water will often act most effectively.

NEW YORK.

— At a meeting of the County Medical Association held November 17th, Dr. Charles A. Leale read a paper entitled A Study of Asiatic Cholera during the Epidemic of 1866, in which he said the following formula had proved of service in his hands: —

℞	Morphiæ sulph.	gr. i.
	Tinct. cardamom comp.	f ʒ i.
	Tinct. capsici	f ℥ ij.
	Spts. camphoræ	f ʒ i. M.

Of this a teaspoonful was to be taken, in two ounces of water, every fifteen minutes until the symptoms were relieved or rendered tolerable. It was then to be given at longer intervals until the effects of the morphia were observed on the pupils. The medicine might be required for at least three days.

— The recent meeting of the State Association was a splendid success in every way, and it was especially noteworthy for the large number of gentlemen in attendance from distant parts of the State, as well as of delegates from other States. Among the latter were Dr. Fifield, of Boston, Drs. Clark and Upham, of Vermont, Drs. M. H. White and W. C. Wile, of Connecticut, Dr. Garnett, of Washington, and Drs. Gross, Atkinson, Shakespeare, Solis-Cohen, Keating, Packard, and Nancrede, of Philadelphia. Dr. Earle, of St. John, New Brunswick, was also among the guests.

— *New York Cancer Hospital.* By the will of the late Mrs. General Cullum, one of the founders of this hospital, the Halleck estate in San Francisco, estimated to be worth $100,000, is left to this institution. At the time of its organization Mrs. Cullum subscribed $50,000. It is this hospital to which Mr. John Jacob Astor gave $200,000 a few months ago. The buildings are in process of erection at Eighth Avenue and One Hundred and Fifth Street, opposite Central Park, and will be completed in about a year's time.

— *Abdominal Surgery in the General Hospitals.* The general surgeons are entering on this field of practice, and with marked success. Dr. Stimson has recently reported two successful cases of supra-vaginal hysterectomy from the Presbyterian Hospital. At St. Luke's Drs. Peters, Little, McBurney, and Bull have performed eight laparotomies for ovarian or uterine tumors, with but one death, and one vaginal extirpation of the uterus with recovery. At the New York Hospital within the past three months the services of Drs. Weir and W. T. Bull have furnished a series of two ovariotomies, one supra-vaginal hysterectomy, and three vaginal extirpations of the cancerous uterus without a death. With the exception of Dr. Stimson's cases, which were treated in the General Hospital wards, most of these patients were operated on and treated at least for a week or ten days in private rooms. At the Woman's Hospital the "tumor patients" are still put into cottages.

WASHINGTON.

— Dr. Hosmer A. Johnson, of Chicago, has resigned from the National Board of Health, and Mr. W. P. Dunwoody, formerly clerk of the Board, has been appointed in his place. Mr. Dunwoody has also been appointed secretary of the Board to succeed Colonel Waring, who has resigned that office. We understand the funds of the Board are completely exhausted.

— Dr. S. V. Bemiss, of New Orleans, a former member of the Board, died lately.

Miscellany.

ADJOURNED CONFERENCE OF STATE BOARDS OF HEALTH.

At the conclusion of the report on the Prevention of Epidemic Cholera in America, during the meeting of the National Conference of the State Boards of Health at St. Louis, Mo., on the 13th and 14th of last month, and after urging upon Congress in the strongest terms its duty to enact such legislation and to appropriate such funds early in its coming session as will prevent the importation of this disease to our shores, it was resolved that when this Conference adjourned it should be to meet in Washington, D. C., the second Wednesday in December next, and that the Secretary be directed to invite the attendance at that time of the quarantine officers and the health officers of the principal cities in the United States and Canada; and that all delegates to that meeting be prepared to report the sanitary status of their State or locality, and what steps have been taken to improve the same, and to prevent the introduction of disease.

In accordance with this resolve a meeting of the Conference will convene at the Ebbitt House at ten A. M. December 10th.

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SEWAGE FARMING AT PULLMAN.

The Pullman sewage farm, which is the largest experiment of purification of sewage by filtration in this country, says the *Chicago Tribune*, is *apparently* a success, both as to the purification of sewage, quantity and quality of crops, and financial return. It is on the Calumet River, near Kensington, and the sewage from Pullman is conveyed to it through an immense iron pipe three miles in length. The sewage is distributed through surface drains, and is carried off clear and odorless by a system of under-drainage. It has been in operation two years with the following comparative result: —

	1883	1884
Cabbages, heads.	120,000	200,000
Potatoes, bushels.	7,958	6,000
Onions, bushels.	1,000	3,500
Squash, tons	10	45
Turnips, bushels	100	500
Celery, dozen bunches.	8,200	18,000

Full cars of produce have been shipped all over the United States to such places as Vicksburg, Miss., Pittsburg, Pa., New Orleans, La., Atlanta, Ga., Memphis, Tenn. In less than car load, produce has been shipped as far east as Hartford, Conn., and Preston, Mass., and south as far as Galveston, Tex.

Sauerkraut works have just been completed, and if the low price of cabbage continues a large quantity of the article will be manufactured. A dairy farm stocked with Holsteins has been started. Undrained land sown in oats averaged twenty-two bushels to the acre this year. Hay to the amount of one hundred tons was cut. About forty men and boys are employed. Middle men are not allowed to handle the produce. The crop of this year is larger than that of last year, but prices are lower. The crop of 1883 paid eight per cent. on the investment.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 15, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	659	262	20.40	16.66	2.25	2.05	10.35
Philadelphia	927,995	394	139	22.75	13.75	1.00	4.00	13.25
Brooklyn	644,526	—	—	—	—	—	—	—
Chicago	632,100	222	92	31.50	10.80	2.70	3.60	15.75
Boston	423,800	215	71	16.92	15.51	.97	4.23	4.65
Baltimore	408,520	133	42	15.54	15.54	4.44	1.48	4.44
St. Louis	400,000	160	59	34.65	11.34	5 67	3.78	15.75
Cincinnati	272,400	128	50	23.40	14.82	8.58	3.12	3.90
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	78	20	14.80	25.60	1.28	5.12	6.40
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	46	13	21.74	10.85	—	6.51	6.51
New Haven	62,882	29	7	10 35	10.35	—	3.45	6.90
Nashville	54,400	18	5	44.44	16 66	16.66	—	22.22
Charleston	52,286	29	9	10.35	10.35	6.90	—	—
Lowell	71,447	24	7	12.48	12.48	—	—	8.32
Worcester	69,442	16	7	25.00	6.25	—	—	—
Fall River	62,674	20	9	25.00	10.00	5.00	5.00	5.00
Cambridge	60,995	15	5	20.00	13.33	—	6.66	13.33
Lawrence	45,516	15	6	13.33	20.00	6 66	6.66	—
Lynn	44,895	11	4	—	27.27	—	—	—
Springfield	38,090	7	2	14.28	14.28	—	14.28	—
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	—	—	—	—	—	—	—
New Bedford	30,144	10	1	30.00	10.00	—	20.00	10.00
Salem	29,503	12	3	—	16.66	—	—	—
Chelsea	24,347	[illegible]	2	—	22.22	—	—	—
Taunton	22,693	8	0	12.50	—	—	12.50	—
Gloucester	21,400	3	1	33 33	33.33	33.33	—	—
Haverhill	20,905	8	3	50.00	12.50	25.00	—	—
Newton	19,421	7	1	—	14.28	—	—	—
Brockton	18,323	5	1	—	20 00	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	8	1	—	25.00	—	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Ninety-two Massachusetts towns	—	85	15	15.34	18.88	5.90	—	5.90

Deaths reported 2374: under five years of age, 837; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 514, consumption 360, lung diseases 303, diphtheria and croup 228, typhoid fever 76, diarrhœal diseases 64, scarlet fever 49, measles 31, whooping-cough 23, malarial fevers 20, cerebro-spinal meningitis 13, puerperal fever six. From *scarlet fever*, Philadelphia 11, Boston 10, New York eight, Chicago seven, St. Louis four, Cincinnati three, Providence two, Haverhill, Quincy, Chicopee, and Randolph one each. From *measles*, New York 15, Cincinnati six, Philadelphia, Chicago, and Fall River one each. From *whooping-cough*, New York eight, Boston four, Philadelphia and Baltimore three each, Chicago two, St. Louis, District of Columbia, and Haverhill one each. From *malarial fevers*, St. Louis nine, New York five, Baltimore three, Philadelphia, Chicago, and Nashville one each. From *cerebro-spinal meningitis*, New York and Chicago four each, Worcester two, Cincinnati, Providence, and Lowell one each. From *puerperal fever*, Chicago four, Providence and Charleston one each. From *erysipelas*, New York, Philadelphia, Chicago, and Lowell one each.

Two cases of small-pox were reported in St. Louis. Cases reported in Boston: scarlet fever 61, typhoid fever 32, diphtheria 20, and measles eight.

In 109 cities and towns of Massachusetts, with an estimated population of 1,379,064 (estimated population of the State 1,955,104), the total death-rate for the week was 18.01 against 22.66 and 17.72 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending November 1st, the death-rate was 20.6. Deaths reported 3464: infants under one year of age 902; acute diseases of the respiratory organs (London) 348, diarrhœa 84, fever 67, scarlet fever 66, measles 57, whooping-cough 50, diphtheria 31, small-pox (London 21, Birkenhead two, Hull one) 24. The death-rates ranged from 15.0 in Norwich to 28.8 in Preston; Birkenhead 17.2; Birmingham 21.1; Bradford 21.4; Leeds 21.0; Leicester 25.5; Liverpool 23.0; London 19.5; Manchester 23.9; Nottingham 16.5; Sheffield 21.0; Sunderland 20.8. In Edinburgh 18.8; Glasgow 26.8; Dublin 24.7.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM NOVEMBER 15, 1884, TO NOVEMBER 21, 1884.

Cowdery, S. G., captain and assistant surgeon. Granted leave of absence for one month. S. O. 237, Department of the East, November 17, 1884.

Havard, Valery, captain and assistant surgeon. Granted leave of absence for four months, — permission to go beyond sea, — to take effect when his services can be dispensed with at his present station. S. O. 268, A. G. O., November 14, 1884.

Phillips, Jno. L., first lieutenant and assistant surgeon. Assigned to duty at Fort Keogh, M. T. S. O. 134, Department of Dakota, November 5, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING NOVEMBER 22, 1884.

Ames, Howard E., passed assistant surgeon. Detached from the Greely Relief Steamer Bear and assigned to special duty in New York. November 17, 1884.

Bright, George A., surgeon. Detached from the Galena and placed on waiting orders. November 19, 1884.

Cleborne, C. J., medical inspector. To duty at Philadelphia, Pa., as member of Medical Examining Boards. November 21, 1884.

Du Bois, F. L., surgeon. When detached from the Naval Examining Board, November 29th, is ordered to the Galena. November 20, 1884.

Green, Edward H., passed assistant surgeon. Detached from the Greely Relief Steamer Thetis and assigned to special duty in New York. November 17, 1884.

Hall, J. H., surgeon. Detached from Navy Yard, Mare Island, and assigned to duty at the Naval Hospital at that Yard. November 19, 1884.

Hugg, Joseph, surgeon. To the Minnesota as relief of Surgeon Woolverton. November 15, 1884.

Martin, William, assistant surgeon. To special duty in connection with the New Orleans Exposition. November 19, 1884.

Nash, F. S., passed assistant surgeon. Detached from the Greely Relief Steamer Alert and assigned to special duty in New York. November 17, 1884.

Simon, W. J., surgeon. To the Philadelphia Hospital for treatment. November 17, 1884.

Woolverton, T., surgeon. Detached from the Galena and placed on waiting orders for sea service. November 15, 1884.

OBITUARY.

Dr. Samuel Augustus Fisk died at his residence in Northampton, of organic disease of the heart, on Sunday, November 16, 1884, at the age of sixty-three. He was born in Cambridge, Mass., graduated at Yale College in 1844, and received his degree of M. D. at the University of Pennsylvania in 1846, establishing himself at Northampton four years later. He was President of the Massachusetts Medical Society from 1870 to 1872.

Of few men could it more regretfully be said, "The place which knew him shall know him no more." His life was eminently not one of those to be measured by figures on a dial, but rather by all which he did and purposed, and by all the sterling influences of his character. The good he did will live after him.

During his term of active practice his kindly presence and acknowledged skill were the solace and reliance of his patients; while his energy, sagacity, and high sense of honor gave him influence, not only among his fellow townsmen and the physicians of his immediate neighborhood, but extending through the counties of Western Massachusetts.

Thus he lived, devoted to his family, loyal to his friends, faithful to his profession. The education of his nephew for the profession he loved was to him an object of the deepest interest.

As in all his social and professional relations, so as President of the Massachusetts Medical Society he was an example of dignity, courtesy, fidelity, and sound judgment; and his zeal for its interests and reputation continued during his life, through all the anxieties and infirmities of threatening disease, of which he knew himself to be the subject. *

Books and Pamphlets Received. — A Practical Treatise on Massage. Its History, Mode of Application, and Effects, Indications and Contraindications, with Results in 1400 Cases. By Douglas Graham, M. D., Fellow of the Massachusetts Medical Society. New York: Wm. Wood & Co. 1884.

An Aid to Materia Medica. By Robert H. M. Dawbarn, M. D. New York: J. H. Vail & Co. 1884.

Diseases of the Nose. By Clinton Wagner, M. D., Professor of Diseases of Nose and Throat in the New York Post-Graduate Medical School, etc. New York: Bermingham & Co. 1884.

Medical Diagnosis. A Manual of Clinical Methods. By J. Graham Brown, M. D., F. R. C. P. Edin., etc. Second Edition. Illustrated. Bermingham & Co. 1884.

Lectures on Diseases of the Rectum. Delivered at the Medical Department of the University of the City of New York. By J. Williston Wright, M. D., Professor of Surgery. New York: Bermingham & Co. 1884.

Tracheotomy in Croup. By George W. Gay, M. D., Surgeon to the Boston City Hospital. (Extracted from the Medical News, July 12, 1884.)

Harlan P. Hubbard *vs.* The Dr. S. A. Richmond Medical Company. Arguments of Ex-Gov. Silas Woodson and Col. J. W. Strong. In Opposition to the Allowance of Claim Presented.

Eighth Annual Report of the Boston Water Board for the Year ending April 30, 1884. Boston.

Third Annual Report of the State Board of Health of the State of New Hampshire. For the Fiscal Year ending April 30, 1884. Concord, N. H. 1884.

Forty-Second Report to the Legislature of Massachusetts Relating to the Registry and Return of Births, Marriages, and Deaths in the Commonwealth for the Year ending December 31, 1883. Together with the Report relating to the Returns of Libels for Divorce for the Year 1883. Public Document.

Medical Rhymes. A Collection of Rhymes of ye Ancient Time and Rhymes of the Modern Day. Rhymes Grave and Rhymes Mirthful, etc., etc. Selected and Compiled from a Variety of Sources by Hugo Erichsen, M. D. Illustrated. St. Louis: J. H. Chambers & Co. 1884.

On Oxygen as a Remedial Agent. By Samuel S. Wallian, A. M., M. D. (Reprint from Medical Record.) New York. 1884.

Fourth Annual Report of the State Board of Health of New York. Transmitted to the Governor, February 21, 1884.

Transactions of the Michigan State Medical Society. For the Year 1884. No. IV. Vol. VIII.

The Use of Ergot in Obstetrics. By Philip C. Williams, M. D. (Reprint from Transactions of the Medical and Chirurgical Faculty of Maryland.) 1884.

A Theoretical and Practical Treatise on Hæmorrhoidal Disease, Giving its History, Nature, Causes, Pathology, and Treatment. By William Bodenhamer, A. M., M. D. Illustrated. New York: Wm. Wood & Co. 1884.

A Practical Treatise on Diseases of the Ear, including a Sketch of Aural Anatomy and Physiology. By D. B. St. John Roosa, M. D., LL. D. Sixth Edition, Revised and Enlarged. New York: Wm. Wood & Co. 1885.

Some Notes on the Pathology of Intra-Nasal Inflammation. By John N. Mackenzie, M. D., of Baltimore. (Extracted from Medical News, October 4, 1884.)

Quiz Compends? No. 10. A Compend of Organic and Medical Chemistry, including Urinary Analysis and the Examination of Water and Food. By Henry Leffmann, M. D., D. D. S., Professor of Chemistry and Metallurgy in the Pennsylvania College of Dental Surgery, etc. Philadelphia: P. Blakiston, Son & Co. 1884.

Manual of Chemistry. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-Book specially adapted for Students of Pharmacy and Medicine. By W. Simon, Ph. D., M. D., Professor of Chemistry and Toxicology in the College of Physicians and Surgeons, Baltimore, Md. With Sixteen Illustrations on Wood and seven Colored Plates, representing fifty-six Chemical Reactions. Philadelphia: Henry C. Lea's Son & Co.

Hair, Microscopically Examined and Medico-Legally Considered. By Wm. J. Lewis, A. M., M. D., F. R. M. S., Hartford, Conn. Read at the Annual Convention of the American Society of Microscopists, August, 1884. (Reprint from Proceedings of the Society.)

Address.

CONSERVATIVE PROGRESS.

FIRST ANNUAL ADDRESS TO THE NEW YORK STATE MEDICAL ASSOCIATION, DELIVERED IN NEW YORK, NOVEMBER 18, 1884.

BY HENRY D. DIDAMA, M. D., SYRACUSE, PRESIDENT.

THE advance of science is hindered not more by obstinacy than by fickleness.

The skepticism which uses an honest crucible is a blessing; the skepticism which wields a club, and smashes old things indiscriminately *because* they are ancient is a curse. Underneath its destructive malice is often a credulous and craven tenderness for anything which is new.

One face of Janus was emblematic of Memory, and looked benignly upon the past with its garnered treasures; the other represented Hope, and peered eagerly into the rich possibilities and promises of the future. These faces were not mutually inimical; they were complemental; they were unity in diversity.

In medicine, bigotry and laziness sometimes call themselves conservative; opposed to these are discontent and love of novelty, which may assume the label progress; but genuine progress and enlightened conservatism work harmoniously together to perfect medical science: the one patiently tests all things, the other holds fast that which is good.

In medicine much is worthy of conservation; not a a little is still moot; research is very active and confident; vast fields await exploration. Your attention is invited to a few illustrations and suggestions.

In *Pathology* the predisposing causes of disease are fairly well known by long and careful observation: but in the dazzling field of the microscope they are apt to be forgotten.

Inheritance, acquired vices, insufficient or improper or excessive food and drink, vitiated air, deficient sunlight, exposures, indolence, overwork, worry, these are predisponents which act by so impairing the resisting power that attacking foes of feeble potency are able to gain an easy victory.

Many diseases, such as eruptive, contagious, and malarial fevers; pneumonia, consumption, erysipelas, septicæmia, pyæmia, and even suppuration are now quite generally regarded as the work of micro-organisms — the *contagium vivum.*

The doctrine of germs is essentially modern; although Harvey is thought to have had glimpses of its truth more than two hundred years ago. But Harvey never regarded germs as living particles, capable of prolific multiplication; he considered the emanations from a certain disease able — by what he called a seminal influence — to propagate the same disease in a healthy person.

The witty Jonathan Swift, in the early part of the last century, described a microscopic specialist whose enthusiasm is hardly eclipsed by the zeal of any modern observer. He had discovered worms in the flesh of certain diseased animals, and he published an account of his observations. His paper attracted some attention and received favorable comment. Inflated with flattery and vanity, the now famous discoverer continued to use his lens, and forthwith published the startling announcement that worms are the fountain and origin of all diseases.

In the present germ excitement — analogous to the gold fever of 1848 and the petroleum craze of later years — we are not to ignore other and well-established causes. We encourage the search for new *microzymes* — as we do prospecting for gold and oil; we watch intently each promising indication, but we prudently reserve our credence and wait for verifications of alleged discoveries, knowing that some observers have that keen vision pointed out in the couplet: —

> "Optics sharp it needs, I ween,
> To see what is not to be seen."

We not only braid fadeless chaplets for the modest brows of those who unearth a new *Bacillus,* whose pedigree can be established beyond question, but we bestow our admiration upon those ingenious philological microscopists who, if they cannot diagnosticate hereditary diseases by the physiognomy of the blood corpuscle, are yet able to invent some magnificent name for the minutest pest which infests the human organism.

We urge that investigation cannot be too extensive and thorough, but we counsel that there be no premature rushing into print with generalizations, lest the observations shall turn out illusory, lest alleged causes shall prove to be but unimportant coincidences.

The reward for patient work may be slow in coming, like the flour from the mills of the gods, but it will be of excellent quality at last.

If he is worthy of national gratitude who makes two blades of unnecessary grass grow where but one had a feeble struggle for existence before, how much more deserving of temporary immortality is he who establishes his claim to a new *cacozyme,* be it *bacillus* or *micrococcus* or *spirillum,* especially if he can tell us what to do with it.

The specific micro-organisms of tuberculosis and splenic fever and — perhaps — cholera have been differentiated; those of miasmatic diseases, seen as the *palmella* in Ohio by a genius of sharp optics, and as a micrococcus by Italian observers, remain to be verified. There should be little doubt of their existence, notwithstanding the incredulity recently expressed by an eminent writer who still pins his faith to the ancient notion that a poison is generated by decomposing vegetation. For while a living and developing organism will account for all the facts of origin, incubation, and behavior of miasmatic fevers, a dead poison is quite unsatisfactory and insufficient.

But the germs which cause scarlatina, measles, pertussis, etc., have thus far eluded search. It is still an undecided question whether croupous pneumonitis be a germ fever with a local expression.

The suggestions of our eminent friend and associate, who called attention to this point several years ago, are entitled to, and are receiving, consideration throughout the world. Continued observations are still needed to confirm or overthrow the proposition.

In *Therapeutics* conservative progress finds an ample field. To prevent, to guide to a favorable termination when prevention has been neglected, to alleviate when recovery is impossible, to delay the inevitable escape of the soul from its weary prison, — these are the important duties of the physician.

A thorough knowledge of the composition and structure of the body, and of the relation of parts, is indeed of great importance. The action of organs in health, and their perverted action in disease, rightly demand the most careful study.

The foes which boldly attack the citadel of life, and the occult influences which insidiously undermine and sap the vital forces, these may well engage our earnest attention.

The fascinating analysis of our secretions and excretions, of our food and medicines and poisons, deserves all the consideration which it receives.

The innumerable instruments of precision, which promise to substitute mathematical accuracy for vague guess, and which are too often used not to supplement but to supplant other and valuable methods of investigation, these, like the tribe of Abou Ben Adhem, will continue to increase, till they become multitudinous — if not perplexing — like the grasshoppers of the West; these rightfully challenge recognition and study, while with unappeasable appetite they devour our substance if we attempt to add them all to our Armamentarium.

But anatomy and histology, physiology, pathology and chemistry, ætiology, diagnosis and prognosis; the possession of all the scopes, all the graphs, and all the meters, and the familiar and dexterous use of them; all these, interesting as they may be to the scientist, important and indispensable as they may be as preliminaries, foundations, and aids to medical skill, all these are practically worthless except as they contribute to the relief of human suffering.

"The real physician," says Broussais, "is the one who cures; the observation which does not teach the art of healing is not that of a physician, it is that of a naturalist."

And paraphrasing Sacred Writ, it may be added: there remaineth therefore pathology, diagnosis, therapeutics, these three; but the greatest of these is therapeutics.

Therapeutics, then, — which includes all means to prevent and manage disease, — being the superstructure to which all medical ologies are but foundation stones and adornments; the very fruitage of the tree of life; the sole beneficent application of all medical science, its importance to humanity, and therefore to the physician, cannot be overestimated.

Efforts to elevate the standard of medical requirements are worthy of commendation. Owing to the fierce rivalry of schools and the facility with which incompetence secures its diploma, it has been deemed very important, by many reformers, to have the licensing power placed in the hands of an independent Board of Examiners.

Should such a Board be constituted, it may properly require a thorough preliminary training, it may be so comprehensive in its demands, and so vigorous in its examinations, that no one guilty of ignorance regarding the fundamental branches of medical and other cognate sciences shall be able to gain admission to the ranks of a noble profession.

But if, in these exalted demands and these exacting examinations, therapeutics be ignored or belittled; if therapeutics be not elevated to the highest position and regarded as the one thing needful, the very vital principle without which everything else is but dead and useless science, and with which alone the physician does all his skillful deeds of benevolence, then the ordeal to which the candidate is subjected is delusive and beggarly. It may even deserve reprobation. The object of a Board of Examiners should be to protect the community from the ravages of additional incompetency. Its action must of necessity be prospective. It cannot hope to uproot a professional ignorance, which, associated with length of years and engaging manners, has become popular and almost sacred. But it can determine the minimum amount of knowledge which must be possessed by every candidate who shall gain admission to the medical fraternity.

If its examinations shall be comprehensive and searching, and at the same time not so narrow and technical as to regard an error in orthography less excusable than a gross blunder in medical practice, it may accomplish its good purpose. But if it tithes rigorously the mint, anise, and cumin, and neglects the weightier matters of applied medical science, if it shows partiality, allowing Vitreus Ceruleus, who believes the radiance which filters through blue glass to be the only and omnipotent remedy for all diseases, and the gushing Aquarius, who dotes on and swears by magnetized spring water as a panacea, and the innocent Credulus, who puts all his faith in faith alone, and the oily and plausible Sinbad, who pretends to be under the guidance of disembodied spirits, if the Board allows these to shirk entirely the examination in therapeutics and materia medica to which plain, unpretending Medicus — who recognizes the importance of these sciences — is subjected, then when it puts these five on the same high level before the public, giving each the same indorsement and the same license, it inflicts a wrong on Medicus, places an unnecessary and useless burden on Ceruleus, Aquarius, Credulus, and Sinbad, and perpetrates a fraud on a confiding and misled community.

To serve the public wisely and well the Board should subject every applicant, whatever his callow crotchets or prejudices or intentions may be, to the same examination in every branch of medical science as understood by the vast majority of the profession. Possessing the learning requisite to pass this examination, and endowed with his credentials, the tyro should be at liberty to adopt and practice any special delusion or idiocy which his fancy may indicate or the credulity of the public make profitable. For as he can never entirely divest himself of his useful knowledge the community will have all the protection it is possible for an Examining Board to furnish.

Some of the general principles of Therapeutics are worthy of the most careful preservation. Many of the measures employed in preventing and stamping out various so-called zymotic diseases are fairly successful; and constant research is adding largely to their numbers and potency. The importance of iodine and mercury in certain diseases; the palliative and curative effect of opium in a variety of complaints; the efficacy of Peruvian bark in miasmatic affections; the desirability and possibility of preventing and subduing high temperatures in fevers and inflammations; the wonderful results secured by certain heart tonics; the neutralizing and eliminating measures which have shortened the term of rheumatism from six weeks to six days; the undiminished power for good of ferruginous preparations in suitable cases; the occasional utility and even saving power of the once abused and now as much maligned venesection: these are merely samples of therapeutic principles and practice, whose truth is attested by countless critical level-headed observers throughout the whole world.

New discoveries in etiology, pathology, and materia medica will modify our views and constantly increase our ability to overcome disease. They will show us when to interfere actively and when to watch and wait.

And while we hold fast to well-founded principles of treatment and to remedies whose adoption has been tried, we give a hearty welcome and testing to every new measure, to every new medicine, which has a satisfactory indorsement. We are hampered by no dogma; so that while we are not seduced by utopian theories, while we make no experiments with obvious and gross delusions, and while we set our faces like flint against fraudulent pretenses and practices, we carefully consider every promising suggestion, by whomsoever made, and we gladly adopt every useful discovery, and every tested new application of old principles and remedies.

(*To be concluded.*)

Original Articles.

SOME DISEASES WHICH MAY BE MERELY SYMPTOMS OF THE EFFECTS OF POISONING BY SEWER GAS.

BY F. GORDON MORRILL, M. D.

Notwithstanding the attention which bad drainage and defective plumbing with consequent evils have attracted of late years, I am quite sure that we are in the almost daily habit of overlooking the fact that certain diseases are often caused and prolonged by the unsuspected presence of sewer-gas poison. I believe that a considerable percentage of all cases of sore throat (including both forms which tonsillitis usually assumes), trouble of the digestive tract, neuralgia, rheumatism, pneumonia, gout, asthma, and even so-called "nervous prostration," is attributable to this cause; and I have named these affections in the order of frequency with which they have occurred under my personal observation when good proof of their causation or prolongation by the presence of sewer-gas has been obtained.

The cases which I give are merely outlined for the purpose of illustration (as their only claim to interest is based upon their ætiology), and are fair samples of a respectable number of each kind which I have seen during the past five years.

Case I. Gastro-duodenal catarrh. A. B., aged six, had a very severe convulsion December 10, 1883, which proved to be a manifestation of the above-named disorder, the symptoms of which had been well-marked for a month preceding. Under a proper regimen of diet and medicinal treatment the case progressed favorably for a fortnight, when a relapse occurred, and the child seemed as far from recovery as ever. The peppermint test revealed trouble in the bath-room adjoining her chamber, which was promptly remedied and speedy recovery followed. A younger sister, who had suffered from nausea and diarrhœa during the forty-eight hours preceding the examination of the drainage, at once got better, and both children have remained perfectly well ever since.

Case II. Diarrhœa of a watery character. C. D., aged fourteen, was suddenly seized with intense abdominal pain in April, 1879. Numerous watery discharges soon followed, and persisted in spite of energetic treatment until the third day, when the trouble ceased, only to return again in a grave form (for now blood was present in the discharges) twelve hours later. A break in the drain under the cellar floor was found and repaired, and the child at once recovered. This would read well if reported in full as a case of "winter cholera."

Case III. E. F., aged fourteen, had been under the care of an eminent practitioner during the four months preceding my first visit. Her symptoms were weakness, progressive emaciation, and great distress after taking food, the cause of which neither physical examinations nor the condition of the urine revealed. The long continuance of her trouble, its mysterious nature, and the fact that previous treatment had obtained no better results, led me at once to have the drainage examined, strongly suspecting that something wrong would be discovered. The result justified my suspicions, for the waste pipe of the bowl in the adjoining bath-room was found untrapped and leading directly into the soil pipe (which was not continued up through the roof), and a bad break was discovered in the main drain. A slow but steadily progressive recovery followed the necessary repairs.

Case IV. G. H., aged forty-two; mother a chronic consumptive; the lady herself of poor physique and worn out with family cares, had pneumonia, right apex, front, December 10, 1882, from which she very slowly recovered. January 20, 1883, harsh respiration still detected over seat of trouble. Progressed slowly but favorably until February 5th, when a sudden attack of watery diarrhœa, accompanied by pain and a great many discharges, reduced her greatly. This condition lasted in spite of all remedial measures for five days, when the defects of drainage which had been discovered meanwhile were remedied, and the diarrhœa ceased as quickly as it had begun. The patient's condition was such at one time as to excite grave fears, and I think a possibly fatal result was avoided by recognizing the cause of the trouble.

Case V. Neuralgia. A young lady, aged twenty-three, who had been subject to paroxysms of intense pain in the hepatic region during the two winters preceding my visit, was seen by me for the first time November 28, 1883, on which occasion the paroxysm was severe enough to require the hypodermic injection of one half grain of morphia. A history of her trouble revealed the fact that while absent from the city during the summer months she never had pain, but that upon her return to town the paroxysms at once began, and towards midwinter occurred with great frequency. She had been treated homœopathically for a long time as a case of congestion of the liver. Examination of the plumbing revealed an absence of any trap under the set bowl — which in this case was placed near the patient's bed. This deficiency was supplied, and the pain has never returned.

I can recall a number of neuralgia in which sewer gas has played an important part, and mention this one merely on account of its somewhat rare location.

Case VI. Tonsillitis. J. K., aged thirty-seven. Subject for years to inflammation of the tonsils (accompanied by enlargement, but no deposit of any kind), which would confine him to the bed. In 1880 he came under my care twice with this affection.

No trap under set bowl. The patient, who is an active business man, decided to prevent any possible further trouble from this source, so had the pipe cut and sealed up, and a large jar placed under the bowl to receive the flow off. Since that time he has not had a tonsillitis.

Cases of follicular tonsillitis are often attributable to sewer-gas poison, and numerous instances illustrating this fact have come under my observation, with the details of which I will not trouble my readers, as I think most of us realize that both this trouble and the ordinary erythematous sore throat may be thus caused. Dr. Langmaid informs me that in cases of public singers sojourning at hotels he has on several occasions advised cutting and sealing the waste pipes of set bowls to hasten the cure or prevent the recurrence of throat troubles.

Case VII. Rheumatism. L. M., aged forty-two, subject to very severe attacks of inflammatory rheumatism and also gout, the latter being hereditary. In the house which he lived in cerebro-spinal meningitis, pneumonia, scarlet fever, and nearly all the other ills which flesh is heir to held full sway during the two years following the introduction of modern conveniences into an old-fashioned family mansion. His wife, too, had two severe attacks of rheumatic fever during this period. Competent authorities pronounced the entire arrangement of plumbing and ventilation to be faulty in the extreme, and L. M. decided to seek another residence, which he speedily found. Results: In his wife's case no more rheumatism. In his own case neither rheumatism or gout for eighteen months, when an attack of the former followed long exposure on a marsh during a shooting trip in the West.

Case VIII. Pneumonia. An aged lady, the grandmother of Case II., a monomaniac on the subject of warmth, who never ventured out-doors from November 1st to the middle of May, had an attack of acute pneumonia in April, 1879, after a winter passed under the protecting influences of furnace heat, open fires, window strips, and numerous shawls and wraps of all kinds. At the same time another member of the family had watery diarrhœa (Case II.) and I think both diseases may be fairly attributed to the same cause.

Case IX. Asthma. A little girl, aged eight, had severe paroxysms of asthma in the winter of 1878. The patient lived in a house where numerous faults in drainage and plumbing were discovered. The family were in poor circumstances, and the terms of their lease were such as to render them responsible for all repairs, while their lack of means prevented their seeking another residence until the present lease expired. Up to the time of their removal (October, 1878) the child continued to suffer from asthma, but the attacks ceased immediately after changing her residence to a house where the sanitary arrangements were good.

Case X. Nervous prostration. Mrs. X., a lady of rather flighty temperament, but who had enjoyed good health until within two years of her first coming under my observation, in December, 1881. During the period mentioned she had suffered from intense weakness and all sorts of anomalous complaints, in short, her condition seemed composed of equal parts of hysteria and debility, and her life had become a burden to her family as well as herself. She had been assiduously treated by a regular physician during the first eighteen months, and during the six months preceding my first visit had been trying the "faith cure," so called, which in her case seems to have consisted in hiring a female of unprepossessing exterior and exaggerated dignity of manner to stare at her steadily for an hour or two every day. I was summoned to advise regarding an acute rheumatic affection which had recently appeared. Her other symptoms, with the mysterious nature of which she was fully impressed, she preferred to have remain under the supervision of the exponent of the "faith cure." Salicylate of soda very soon relieved her rheumatism, and I ventured to suggest that it would be well to have the drainage inspected. To be brief, this was found to be decidedly bad, and the mason and plumber soon brought about the disappearance of the nervous prostration and the dismissal of the exponent of faith.

This case has led me to wonder whether oil of peppermint might not prove indirectly the means of relieving some few of the cases of neurasthenia, with the details of which our ears are constantly filled by sympathetic friends of the sufferers.

The point which I have tried to establish is one which is often hinted at but not pressed so strongly as I think it deserves to be. When we are called to a case of typhoid nor diphtheria we at once order an inspection of the drainage and plumbing, and are seldom disappointed in finding defects, but I am convinced that we ought also to do this in many other cases of diseases which are as yet merely suspected of being infectious, and in some to which no suspicion is attached. Sewer-gas poison seems to seek out the patient's weak spot, and often brings discredit upon the physician, whose inability to relieve his patient is due to his failure to appreciate its unlimited powers of mischief.

THE USE OF MANACA (FRANCISCEA UNIFLORA) IN THE TREATMENT OF ACUTE RHEUMATISM.

BY HERBERT C. ROGERS, M. D., BROOKLYN, N. Y.,

Adjunct Surgeon Long Island College Hospital.

My attention was first called to manaca by a physician practicing in South America. I am in the habit of giving the fluid extract in ten to twenty drops, using the preparation made by Parke, Davis & Co., of Detroit, Michigan.

Case I. March 3, 1883. Was called to see James D., aged twenty-one, a native of Ireland, car driver. He had enjoyed good health until three days ago, when he was suddenly seized with a severe chill followed by fever and sharp pains in his limbs. The next morning he was unable to walk. The left knee and ankle were swollen, red, and painful. The right knee had been affected, but got better before he sent for me. He perspires profusely. Suffers most from his pain at night. He complains much of headache. Tongue badly coated. Bowels constipated. Urine deeply colored and free from albumen; specific gravity 1030. Pulse 130. Temperature 104° F. He was ordered five grains of calomel and ten grains of compound jalap powder, also ten drops of fluid extract of manaca every three hours. The painful joints to be covered with cotton.

March 4th, eleven A. M. He has had but little sleep during the night. The right knee and ankle have become inflamed. He suffers a good deal from headache. Bowels have moved several times. Examination of his heart negative. Ordered ten drops of tincture of opium with the fluid extract manaca every three hours. The painful joints to be wrapped in cloths wet with liq. plumbi et opii. Temperature 104½° F. Pulse 130.

March 5th, 11.30 A. M. Patient passed a better night. Has been able to sleep three hours. Swelling and pain less. Temperature 103½° F. Pulse 120. Headache better. Vomited once towards morning Bowels have moved three times during the last twenty-four hours. Examination of heart negative. Treatment continued.

March 6th, two P. M. Still improving. Temperature 103° F. Pulse 120. Stopped opium unless pain should become severe. The fluid extract of manaca increased to fifteen drops every three hours.

March 7th, ten A. M. Pain, heat, and swelling have disappeared from all the joints with the exceptions of the right knee and left elbow. Treatment as before. Temperature 101° F. Pulse 114.

March 8th. Temperature 100¾° F. Pulse 110. No change in condition since yesterday.

March 9th. Found patient sitting up. The inflammation has disappeared from elbow. He says he feels well, and wants to go out. Temperature 99¾° F. Pulse 100. Is to take the manaca three times daily.

March 12th. Patient about the house. Says he feels as well as he ever felt in his life, and is anxious to go to work. All joints are in a healthy condition. Appetite good. Is to take the manaca for a few days longer. Careful examination of his heart fails to detect any abnormal murmur.

Case II. March 22, 1883. Fannie C., aged twenty-one, born in England, single, a seamstress by occupation. She had been confined to her bed for two days. Complains of pain, attended by swelling and redness, in almost all her joints, particularly of the knee and wrist. She has not been able to sleep for two days. The pulse rapid, 120. Tongue thickly coated. Urine high colored, free from albumen. Temperature 103° F. Ordered ten drops of the fluid extract of manaca in water every three hours, and one fourth of a grain of sulphate of morphia at bed-time. The painful joints to be enveloped in cotton-wool. Ordered a milk diet.

March 23d, ten A. M. The patient feels about the same. Has been able to sleep a few hours during the night. Temperature 102⅘° F. Pulse 120. Treatment continued.

March 24th, 10.30 A. M. Patient complains of severe pain in the shoulders and hands. Other joints are a little better. Increased the fluid extract of manaca to fifteen drops every three hours, and to take one sixth of a grain of sulphate of morphia every two hours till pain is relieved. Careful examination of the heart fails to disclose any abnormal murmur. Temperature 102° F. Pulse 118.

March 25th. Slight improvement. Pain in the hands and shoulders not so bad. The morphia seems to affect her bowels. Temperature 102° F. Pulse 118.

March 26th. Condition about the same. Pain, swelling, and redness disappearing from the joints. Reduced the fluid extract of manaca to ten drops every four hours. Temperature 101¾° F. Pulse 100.

March 27th. Same as last note. Temperature 101¾° F. Pulse 100. Continued treatment.

March 28th. A distinct systolic murmur was heard at the base of the heart to-day. The pulse has increased in frequency, being 120. Temperature 101¾° F. Is to take twenty drops of the fluid extract of manaca every three hours.

March 29th. Examination of heart to-day reveals a very loud murmur at the base, completely masking the second sound, and heard under the clavicle. A few bronchial râles are heard over the anterior part of the chest. Temperature 100¾° F. Pulse 116.

March 31st. Symptoms continue about the same. A double murmur is still plainly audible. The pain in all the joints is much less. The fluid extract to be taken every four hours. Temperature 100° F. Pulse 100.

April 2d. The improvement still continues. Her appetite is increasing, and she sleeps better. Temperature 100° F. Pulse 100.

April 4th. Condition about the same as last note. Temperature 99° F. Pulse 90. Treatment continued, with ten drops of tincture of iron three times daily.

April 7th. The double murmur still continues, but not so loud. It is heard at the upper end of the sternum, below the clavicle, but faintly at the apex. Temperature 98° F. Pulse 90.

April 10th. The pain is gradually passing away. The murmur is very faint at this examination. To take five drops of the fluid extract of manaca three times daily.

April 14th. The murmur has entirely disappeared. The patient is up and about the house. As she is still anæmic is to take the tr. ferri for a few days longer.

Case III. January 15, 1884. Samuel A., aged twenty-three, bar tender, born in Germany, married, always enjoyed good health until a few days ago, when his left knee began to pain him, and became swollen, red, and hot. By advice of some of his friends he rubbed the joint with kerosene oil, and wrapped it up with flannel.

January 16th, two A. M. Patient had a chill this morning followed by pain in the right knee and thigh, which are red and swollen. He cannot bear anything to touch them, and complains if any one walks across the floor, as he says it jars the bed and increases his suffering. Temperature 103° F. Pulse 124. Ordered fluid extract of manaca in doses of ten drops every three hours, and sufficient opium to ease the pain. His joints to be enveloped in cotton-wool.

January 17th. The inflammation has extended to the left thigh, both shoulders, and ankles. He is covered with a profuse, acid perspiration. Urine scanty, but free from albumen. Temperature 103½° F. Pulse 130. Increased the manaca to fifteen drops every three hours.

January 18th. Condition unchanged. Is obliged to take one and one half grains of opium to produce sleep. Increased the manaca to twenty-five drops every three hours.

January 19th. Condition about the same as last note.

January 22d. Mr. A. is feeling more comfortable. He slept better last night than he has done for over a week. The pain, heat, and redness have nearly disappeared from all the joints, with the exception of the left knee, which is still quite painful and moderately swollen. His appetite, which has been very poor for the last two weeks, is improving, and he begins to relish such food as he is allowed to take. This consists of Volentine's beef juice, milk, and Vichy water. Temperature 101° F. Pulse 116. Continued treatment, with the exception of the opium, which is to be omitted.

January 24th, nine P. M. Patient's condition about the same as last note. No abnormal heart murmur can be detected. Temperature 100⅘° F. Pulse 110.

January 27th. Found patient sitting up in bed The pain, swelling, heat, and redness have disappeared rom right knee, thighs, shoulders, and ankles. The left knee is somewhat swollen, and gives him pain when moved or touched. Careful examination of heart and lungs negative. Temperature normal. Pulse 100. Manaca to be reduced to fifteen drops every three hours. Also ordered

℞ Ferri et quiniæ cit. . . . . gr. lxiv.
Tr. gentianæ co. . . . . . q. s. ad ℥iv. M.
Sig. Teaspoonful after eating.

February 3d. Patient resumed his business this morning. The left knee is still a little swollen, but free from pain.

Case IV. Patrick C., aged twenty-five, expressman, born in Ireland, married, came under observation April 3d. On the 1st of April the patient had a well-marked chill, with vomiting, headache, fever, and acute pain in left wrist, accompanied by heat, redness, and considerable swelling. He grew weak, lost his appetite, and felt unable to exert himself, but attended to his business until April 3d, when he sent for me. I saw him at eleven A. M. The inflammation had attacked the ankles, knees, and right shoulder. Urine scanty, high colored, free from albumen. Temperature 102° F. Pulse 118. No abnormal cardiac murmurs perceptible. Ordered milk diet and twenty drops of fluid extract manaca every three hours. The painful joints to be bathed with the following liniment: —

℞ Liq. plumbi subacetatis . . . . ℥ij.
Tr. opii . . . . ℥i.
Aquæ . . . . q. s. ad Oi. M.
Sig. External use only.

April 4th, ten A. M. Condition about the same. Slept fairly well last night. Complains that the milk makes him sick. Ordered five grains of sodii bicarb. to each glass of milk. Treatment continued. Temperature 101° F. Pulse 120.

April 6th, eleven A. M. Pain in all the joints, with exception of the left wrist, has been considerably relieved. Appetite is improving. Temperature 100¼° F. Pulse 110. Applied small blister (2×2) to left wrist.

April 7th and 8th. Condition same as last note.

April 10th. The swelling, redness, and pain in all the joints have greatly diminished. Careful examination of the heart to-day fails to detect any abnormal murmur. Temperature 100° F. Pulse 100.

April 16th. All acute inflammatory symptoms have disappeared. Only slight stiffness of the limbs remains. The patient is able to go about the house. Appetite fairly good. Ordered the fluid extract of manaca to be discontinued, and the following tonic to be taken: —

℞ Tinct. ferri chlorid.,
Syr. Zingiberis,
Aquæ, ... āā ℥ij. M.
Sig. Teaspoonful in wineglass of water, after eating, through a glass tube.

◆

REPORT ON DISEASES OF CHILDREN.

BY T. M. ROTCH, M. D.

SIMULATED DISEASES IN CHILDREN.[1]

Dr. Julius Eross, assistant in the hospital at Budapest, has written a long and interesting article on this subject, describing the bad influence which sympathetic parents have on this class of cases, also the results of healthy children being brought in contact with those suffering from various nervous disorders, such as chorea. Girls were found to carry out the rôle of pretended disease better than boys. The symptoms were of all kinds: deafness, blindness, headache, pains in the extremities or thorax, palpitation, dyspnœa, spasmodic cough, vomiting, weakness of joints: clonic contractions, paralysis, convulsions, and many others. Eröss states that the unmasking of the pretended symptoms was found to be the best way to cure the children, and he cites a number of cases which he had observed in the hospital during the last three years. The following are some of the more interesting of his cases: —

I. H. K., a girl twelve years of age, began on the 8th of February to have such an intense spasmodic cough that a physician had to be summoned. Examination of the organs of respiration showed them to be normal; the cough continued with short intervals for four days, when she was sent to the hospital and soon recovered.

II. N. N., a girl six years old, pretended to be totally blind in one eye. Her father stated that she had received a blow on the left eye, that inflammation had followed, and resulting blindness. The ophthalmoscope showed the eye to be normal. The right eye was closed with a bandage and the child told to walk towards the examining physician, Dr. Vidor, who by various manœuvres soon proved that the sight of the pretended blind eye was perfectly good.

III. J. S., a girl eleven years old, was reported by her mother to have had repeated attacks of vomiting for three years; the vomiting lasted for days, sometimes weeks, and would then cease for five or six days and begin again. The vomiting was without straining. The child always retained solid food, but even a few spoonfuls of soup, milk, coffee, or water were immediately rejected. The patient looked so well nourished, and her functions were so regular, that it was soon observed that she really did not vomit at all, but that the liquids were retained in the mouth and not swallowed. She was kept in bed and only allowed to have soup and milk, which she very soon decided to swallow and retain.

IV. J. D., a girl eleven years old, had for two weeks complained of pain in the stomach, and during the attacks pains also in the upper extremities; the hands would begin to tremble so that she let her work fall and the trembling would last for several minutes.

V. R. L., a girl thirteen years old, was reported to have had the following symptoms for two years: tonic and clonic spasms of the upper extremities, of the trunk, diaphragm, and abdominal muscles followed each other in quick succession; the rigidly extended arms presented the appearance of epilepsy; the muscles of the shoulders were in active motion, so that the shoulder-blades moved quickly backwards and forwards. The lower extremities remained quiescent. These movements continued until the child had been in bed for an hour, and even then the shoulders and arms would twitch for a minute at a time. Sleep brought complete quiet, but on the next day the contractions returned as before. The child's confidence having been obtained it was found that she could at will control part of the movements while the other muscles were in action, and finally she consented to control all the movements, though for a long time she found it impossible to keep her fingers quiet on account of the contractions having extended over the long period of two years.

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[1] Jahrb. für Kinderheilk., xxi. B., 4 H.

GASTRIC SYMPTOMS CAUSED BY INFLAMMATION OF THE LARYNX.[1]

The pharyngitis which accompanies certain diseases of the stomach in children, notably gastric catarrh, has for a long time been recognized and properly classed as a gastric symptom, and on the other hand disease of the larynx or pharynx may extend to the stomach either by swallowing the secretion of catarrhal, ulcerative, or malignant inflammation, by reflex irritation, or in consequence of the constant desire to swallow causing a frequent clearing of the throat and forcible swallowing of a small quantity of mucus, accompanied each time by a little air which may be thus pumped into the stomach in a sufficient quantity to cause serious derangement. In connection with this class of cases Dr. E. Löri reports some severe gastric symptoms in children, produced by inflammation of the posterior wall of the larynx.

In one case, a boy eleven years old had suffered from persistent vomiting of everything he ate for about three weeks in spite of careful treatment, all food being vomited a few moments after it was swallowed. The boy was intelligent and complained of nothing but slight pain in the stomach. On examination the posterior wall of the larynx was found to be intensely congested and swollen, so that it projected like a half hazel-nut. On the right side of the swelling was a raised white point, which proved to be a fish bone five centimetres long. This was removed, and all symptoms of stomach trouble vanished. Another child, five years old, had complained for three weeks of pain in the larynx and stomach, and during the last two weeks had had frequent eructations occurring ten to twenty-four times a minute, and only partially ceasing in sleep. The appetite was poor and the child pale and thin. Examination showed the larynx to be normal except on the posterior wall, where there were two raised points of inflammation. Tannin was insufflated, and in two days all the symptoms were improved, and after repeating the insufflation daily for two weeks the case was entirely cured. The author reports several cases of the same kind to show that in children it is not extremely rare to find gastric symptoms arising from inflammatory disease of the posterior wall of the larynx.

SEPTIC PNEUMONIA.[2]

Dr. Oscar Silbermann reports his observations on eleven cases of the septic pneumonia of infants, which have come under his care. Ten of the mothers had well-marked puerperal fever, and six of them died. Five of the infants were taken sick on the first day, five on the second, and one on the fifth day. All died. Four had pneumonia alone; seven had pneumonia and pleurisy. Icterus was only observed in four cases.

The disease always began with tracheo-bronchitis and fever. Dullness was often not well marked, and the other organs, as a rule, were not attacked.

The introduction of the poison in these cases was, apparently, by aspiration of the infected amniotic fluid.

The pathological appearances found in these primary cases of septic pneumonia were catarrhal pneumonia, and the alveoli filled with white and red blood corpuscles and cast off epithelium, while the interalveolar connective tissue remained normal.

In contra-distinction to the conditions found in these primary cases Silbermann calls attention to the cases of secondary septic pneumonia where the infection, starting from the umbilicus, extends under the peritonæum along the vertebræ, and under the aorta to the mediastinum, and thence, beside the intercostal and bronchial arteries, to the interstitial tissue of the lung and to the pleura, the alveoli remaining free. In this secondary form of pneumonia the symptoms pointing towards the lung are much less prominent, being usually masked by those caused by an accompanying peritonitis and meningitis. The author mentions also an especial predisposition in the new-born for direct puerperal infection through the air-passages, found in the peculiarly active changes in the superficial epithelial cells of the air-passages, the tendency towards innervation of the pharynx, and thus aspiration of fluid into the trachea, while the weakness of the expiration hinders the expulsion of foreign bodies from the bronchi.

THE BROMIDES IN INFANTILE THERAPEUTICS.[3]

Dr. Jules Simon, in a clinical lecture on this subject, states that the physiological effect of bromide of potash is to diminish the reflex sensibility of the mucous membrane of the pharynx and fauces. Small doses stimulate the gastric mucous membrane and increase the appetite. Large doses irritate the stomach and may cause intense gastralgia. After being absorbed the bromide of potassium slows and regulates the heart's action, but though it is not so dangerous as digitalis it cannot be given indefinitely in cardiac affections. As soon as the effect is obtained its administration should be suspended, for the continued use of it enfeebles the muscular system and the genital organs.

The bromides are indicated in eclamptic manifestations and cerebral irritability. In epilepsy progressively increasing doses should be given for several days and then gradually diminished. It is necessary, however, to keep up its administration for a long time after the attacks have ceased, using it, for instance, for fifteen days in every month. The combination of the bromide with the iodide is especially indicated in epileptic attacks symptomatic of cerebral lesions. Bromide of potassium is also indicated in the cephalalgia and cardiac irritation of adolescence. In regard to the doses, the average amount to be given to infants less than one year old is three grains in two doses at the time of nursing. Over one year, six grains may be given in two doses with food, and always well diluted. Over two years, fifteen, thirty, or even forty grains may be given until a marked physiological effect is produced. In some cases very large doses are required; in others increasing doses for five or ten days, then decreasing until it is suspended altogether.

MODIFICATIONS OF TEMPERATURE BY INUNCTIONS.[4]

Fourcault having shown that the application of an impermeable varnish to the skin of an animal causes a lowered temperature, several physicians have attempted to make a practical application of this refrigerant effect in exanthematous diseases, using fatty matters, collodion, or traumaticine (gutta-percha) dissolved in alcohol.

Schlemann and a number of German physicians, after different trials, have found that fever seems most influenced by inunctions. Senator was the first to make experiments of a serious and practical nature on this subject, using the thermometer as a guide. The experiments showed that in the healthy subject the application of fatty matters or varnish caused insignificant modifications of the temperature, but that if fever was present they diminished the temperature to a greater or less extent. Dr. Cobrat, of Lyons, has experimented with lard, cerate, and vaseline in the different acute affections of children, and in every case he obtained an abatement of the general temperature of the body. The thermometer in the rectum often showed a diminution of $1\frac{4}{10}^\circ$ F., sometimes more, but rarely so much as $3\frac{6}{10}^\circ$ F. The maximum abatement was attained in these experiments in about one hour after the inunction, and in from two and a half to three hours the temperature had again risen, while another inunction at this time gave the same results. Dr. Cobrat's experiments were made on children of from one to two years of age. He had occasion also to use this method in the case of a child of three months, and on another thirteen days old. In these cases the abatement was considerable. Under the influence of vaseline the temperature fell $2\frac{8}{10}^\circ$ F. and even $3\frac{6}{10}^\circ$ F. This treatment has been conclusively demonstrated to be free from danger by Schlemann, who used inunctions on scarlet-fever patients for more than four weeks at a time.

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[1] Jahrb. für Kinderheilk., xxi. B , 1 und 2 Heft.

[2] Deutsch. Archiv. f. klin. Med,. xxxiv. Bd., 3 H.

[3] Journ. de Méd. de Paris, March 29, 1884. Amer. Journ. Med. Sciences, July, 1884.

[4] Journ. de Méd. de Paris, March 8, 1884. Amer. Journ. Med. Sciences, July, 1884.

SUPPRESSION OF URINE.[1]

Dr. Paxon reports an interesting case of a boy six years of age and exceedingly anæmic, to whom he was called on the 5th of January with the history of not having passed any urine for two days. The catheter was easily passed, but no urine was found in the bladder. This state of affairs continued until the 8th, when the child vomited, and began to have a sleepy appearance. At this time a somewhat fluctuating tumor, the size of a lemon, was discovered in the lumbar region, between the kidneys. Injections of pilocarpine were then given, and on the 9th the tumor disappeared, and the child passed with great difficulty 538 grammes of very dark urine. Two days later suppression for twenty-four hours again occurred, but on the pilocarpine injections again being renewed the secretion of urine became normal, and has since continued to be so.

HYPODERMIC INJECTIONS OF MORPHIA IN CONVULSIONS.[2]

Owing to the well-grounded reluctance of physicians to give subcutaneous injections of morphia to infants it is well to record the cases where such injections have been given in order that we may have some recognized data by which we can determine what is a safe dose at different ages; this is of especial importance in the treatment of those severe eclamptic attacks which at times resist the usual methods of dealing with them. Dr. Clark, of Oswego, New York, reports the case of a girl eighteen months old, who had been in almost unintermitted convulsions for two hours, various remedies producing no effect. The cause of the attack could not be ascertained, but was supposed to be of cerebral origin. One sixth of a grain of morphia sulphate was injected into the arm, and in about two minutes the convulsion ceased entirely, and after a quiet sleep of three or four hours the child awoke apparently well. Twenty-four hours later, after some evidence of the attack returning, the symptoms readily subsided to doses of Dover's powder, in moderate amount, the dose not being stated. In some days, however, the child was found to have her faculty of speech, which was considerably advanced, impaired; since then her appearance has been bright, and her power of speech is constantly improving. Clark believes from his experience that a child of from two to five years old will stand as much opium in proportion to the development at that age of the energies of the nervous system as an adult. He also states that he would unhesitatingly inject a thirty-second of a grain in persistent or recurrent convulsions and repeat in fifteen minutes if necessary. In connection with Clark's cases Dr. Hughson reports the case of a Negro boy, two years of age, who had been sick with a high fever for two days, and who had been in convulsions for an hour; the child was unable to swallow, and was rapidly sinking into a dying condition. A subcutaneous injection of a fifteenth of a grain of the sulphate of morphia was given, and in ten minutes he was quiet, and in twenty minutes asleep; the child had malarial fever. There was no return of the convulsions, and there was complete recovery from the malaria.

RÖTHELN.[3]

Dr. W. A. Edwards, having had an opportunity for observing one hundred and sixty-six cases of what he considered rötheln at the Philadelphia Hospital, presents the following conclusions in a paper on this subject: He places the stage of incubation at about ten days, or rather between ten and twelve days, and the prodromal stage, in which the temperature of thirty per cent. of the cases did not exceed 100° F., at three days. The eruption usually began on the face, and rapidly spread over the body and limbs; it was multiform in character, punctated, and at times macular, more or less confluent, and appearing in patches which were very irregular in outline and size, and the centres of which were much higher in color than any other part. In the eruptive stage the temperature rose from one to three degrees, being in proportion to the extent and severity of the eruption. The eruption lasted on an average five days, and was followed by a desquamation of furfuraceous scales. Sore throat was always present, and the cervical glands were enlarged. Slight albuminuria was present in thirty per cent. of the cases, and in nine cases the albumen was considerable, and was accompanied by dropsy, but no casts were detected. The chief points of differential diagnosis relied on by Dr. Edwards are the eruption appearing on the third day, first on the face, its rapid extension, its gradual shading off into the surrounding skin, its elevation, more particularly in the centre of the patch, which is also the brightest in color, and the point where desquamation first shows itself; also the laryngeal character of the cough and the continual presence of sore throat. He also notes in his cases as of diagnostic value that they never gave rise to or protected from measles or scarlatina. [These cases are reported in order to show that although there may be a disease rotheln *per se*, yet the reports of the symptoms of such disease as laid down by those who have observed it during epidemics vary so much that we are still at a loss to give an exact picture of the disease, as we can of measles and scarlet fever. T. M. R.]

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[1] Journ. de Méd. de Paris, December 15, 1883.

[2] Amer. Jour. of Obstetrics, October, 1884.

[3] Amer. Jour. of the Med. Sciences, October, 1884.

ERYSIPELAS.[1]

Erysipelas in infancy, especially if it invades large surfaces, is such a serious disease that the following case is of interest from the fact that the child recovered. An infant ten months old was attacked with redness and swelling of the right labium. The whole vulva soon became greatly swollen and very tender; the disease then extended to the pubes and the abdomen, and invaded every part of the body and limbs, requiring about four days from its appearance at any part until the skin of that part assumed its normal color again. When the erysipelatous inflammation extended to the feet there was marked œdema. The neck and head were also invaded, the eyelids and lips being the last points of attack; even the palms of the hands and soles of the feet were affected. The duration of the attack from its commencement at the vulva to its disappearance at the eyes and mouth was fifteen days. Iron and quinine were given internally.

Hospital Practice and Clinical Memoranda.

COCAINE IN OPHTHALMIC SURGERY.

BY B. JOY JEFFRIES, M. D.

I HAVE been using cocaine for eye operations during the month of November past with a little different result from those some others report. From two to eight per cent. solutions were tried. I judge four per cent. will answer, if, of course, the drug is pure. We can, however, be assured of the effect before operating. The cases were cataract, strabismus, secondary capsule, superficial and deep foreign bodies in cornea and sclerotic, chalazoin, etc. The solution with acid smarts a little, not over thirty seconds, and so does the drug dissolved in hot distilled water. In *thirty more* I have always found the eye anæsthetic. I therefore do not understand the reports of gentlemen here and abroad of having to wait several minutes, etc. In one case of squint the pupil dilated as with atropine. Several drops have to be used for this operation, and hence the effect is probably more marked.

Anæsthesia can readily be kept up by the application of a drop every few minutes. In between twenty and thirty operations I have seen no ill effect to be attributed to the drug. In one third of these I should have used ether. The time and pain saved in the foreign-body cases were well worth saving. If the drug only allowed us to hold the lids apart *continuously* it would be most valuable. The cases of foreign bodies deep in the cornea or sclerotic would have required prolonged use of ether.

After the first incision in chalazoin the solution applied to the wound deadened the pain, but seemingly only as far as it reached. This was also the case in squint operation. Sensation was destroyed by a few drops (four per cent.) in the conjunctival wound. The eye speculum, of course, gives an unpleasant dragging sensation, but its presence is tolerated for several minutes, in fact, as long as the anæsthesia is kept up.

From one to ten drops have proved sufficient for the operations I have done. The expense is nothing compared with the relief from pain and, in children, the fright, etc. *Pulling* on the iris seems to cause pain, and one must be careful on this account. *Cutting* it when drawn out does not. Hence a caution as to Passarant's operation. Enucleation I have not yet done with the drug. I see no reason why we should not use a drop to quiet the eye so as to get a thorough inspection in adult or child.

Reports of Societies.

FIRST ANNUAL MEETING OF THE NEW YORK STATE MEDICAL ASSOCIATION.[2]

SECOND DAY. NIGHT SESSION.

DR. JOHN P. GRAY, of Utica, read a paper entitled

HINTS ON THE PREVENTION OF INSANITY.

Many of the cases of insanity which he met with at the State Asylum at Utica might have been prevented, he thought, if the patients had been properly treated at the first. It was at the very beginning of nervous trouble that such cases should be taken in hand, and he gave suggestions of the methods by which, with judicious dietetic, hygienic, medicinal, and moral treatment, insanity might be warded off in a large number of instances.

DR. STEPHEN SMITH, of New York, read a paper on

EXCISION OF THE KNEE IN PREFERENCE TO AMPUTATION IN CERTAIN DEFORMITIES OF THE LEG,

in which he said that excision was preferable because statistics showed that it was at the least fully as safe as amputation above or below the knee, and that it was a recognized fact that an anchylosed knee was more useful to the patient than any stump.

In the discussion which followed DR. S. W. GROSS, of Philadelphia, who was one of the delegates from the Pennsylvania State Medical Society, described an operation devised by his father for breaking up the adhesions and releasing the patella in bony anchylosis of the knee-joint, so that the limb could be extended until the heel came within one inch of the ground, which was found to be the best position for such patients. DR. MOORE thought that excellent results could be obtained with the osteoclast of M. Robin, of Lyons.

THE CURETTE.

DR. GEORGE T. HARRISON, of New York, read a paper on The Curette: Its Place and its Power in Uterine Therapeutics, in which he described the various conditions of the uterus in which the instrument was applicable and the best method of using it in appropriate cases. Careful preliminary treatment was often required, and it was sometimes necessary to dilate the os uteri with steel instruments; while anæsthesia was advisable in some cases. Antiseptic injections were always to be made, and the patient should be advised to keep her bed for a day or two after the application of the curette.

DR. FREDERICK S. DENNIS, of New York, read a paper on

THE RELATIONS BETWEEN TUBERCULOUS JOINT DISEASES AND GENERAL TUBERCULOSIS.

The tuberculous origin of a large number of cases of joint disease was, in his opinion, clearly established;

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[1] Amer Jour. of Obstetrics, July, 1884.

[2] Concluded from page 521.

the presence of the bacilli tuberculosis at the seat of disease affording the most positive proof of this. According to the best statistics, only one sixth of the cases of joint disease were attributable to traumatism, while one third of them were associated with scrofula. Scrofula, however, acted only by presenting a suitable soil for the development of tuberculosis. The latter always spread from local foci, and if the local disease could be removed early by operation or otherwise, the development of general tuberculosis might be prevented. He related a case in which he performed amputation for disease of the knee-joint in which the presence of the bacilli tuberculosis was demonstrated by Prof. W. H. Welch, and in which the patient, although he recovered well from the operation, afterwards died of acute miliary tuberculosis; almost every organ in the body being the seat of tubercular deposit.

Dr. Gross, in an able address, during which he said that tuberculosis in its action in the system was precisely analogous to cancer, expressed himself in perfect accord with the views of the author of the paper.

Dr. Wm. T. Lusk, of New York, read a paper on

THE MANAGEMENT OF BREECH CASES IN WHICH THE LOWER EXTREMITIES ARE EXTENDED UPWARD PARALLEL TO THE BODY OF THE CHILD.

If instruments were required he preferred the forceps, especially with Tarnier's tractors, to any other. Next in his estimation stood the fillet, and then the blunt hook. If the child was believed to be dead the cephalotribe was the most useful instrument.

Dr. Thomas H. Manley, of New York, read a paper on

WOMEN AS MIDWIVES,

advocating the establishment in New York of training-schools for midwives.

Third Day. Morning Session.

CONGRATULATIONS TO MESSRS. CARNEGIE AND VANDERBILT.

Dr. Flint submitted resolutions, which were unanimously adopted, offering congratulations and thanks on behalf of the interests of science and of humanity, to Messrs. Andrew Carnegie and Wm. H. Vanderbilt for their recent munificent gifts to the cause of medical education.

ELECTION OF OFFICERS.

The following officers for the ensuing year, which were proposed by the Committee on Nominations, were unanimously elected: President, Dr. John P. Gray, of Utica; Vice-Presidents, Drs. W. H. Robb, of Montgomery County, J. G. Orton, of Binghamton, J. C. Green, of Buffalo, and J. C. Hutchinson, of Brooklyn. New members of the Council: 1st District, Dr. Wm. Gillis, of Franklin County; 2d District, Dr. R. C. McEwen, of Rensselaer County; 3d District, Dr. Frederick Hyde, of Cortland County; 4th District, Dr. Darwin Colvin, of Wayne County; 5th District, Dr. J. W. S. Gouley, of New York County. Dr. S. S. Purple was appointed member of the Council at large by the President-elect.

Dr. Austin Flint, Sr., of New York, delivered an

ADDRESS ON MEDICINAL AND NON-MEDICINAL THERAPEUTICS,

in which he urged that a common sense view of treatment should be taken; withholding drugs where the healing power of nature could accomplish the recovery of the patient better without their aid, and prescribing them judiciously where clear indications were presented for their use. In the course of his remarks he spoke at some length of the many useful properties of alcohol in disease, and also of the importance of moral influence upon the patient. A satisfactory work on mental therapeutics he thought was a desideratum in medical literature.

Resolutions of sympathy for Dr. L. A. Sayre in his long illness, proposed by Dr. Flint, were adopted, and the President-elect, Dr. Gray, who was introduced by the Chair, then made a brief address.

Third Day. Afternoon Session.

Dr. Caspar Griswold, of New York, read a paper on

FALSE ALBUMINURIA.

The substances found in the urine that were liable to give a precipitate resembling urine were, phosphates, mucus in such excess that a slight cloud would not be observed, uric acid, peptones, and resinous drugs, like copaiba. Having explained the methods of detecting these he spoke of cases in which albumen was present in the urine but did not come from the kidneys. It was then due to the presence of blood, pus, or prostatic or spermatic fluid.

Papers were read by Dr. Samuel W. Smith, of New York, on The Early Use of the Knife in Nævus of the Cavernous Angioma Variety as contrasted with other Modes of Operation for Removal; by Dr. E. G. Janeway, of New York, on Abscess of the Liver; and by Dr. Austin Flint, Jr., of New York, on Typical Cases of Diabetes Mellitus not before reported.

Dr. J. Lewis Smith, of New York, read a paper on

DIPHTHERITIC CROUP,

in which he contended that while the pathological appearances were practically identical in croup and in diphtheritic laryngitis and tracheitis, croup could exist without diphtheria, since before the appearance of the latter disease in New York a number of fatal cases of croup were reported each year. His main reliance in the treatment were alkaline inhalations, and to these he had lately been in the habit of adding *tripsin*, which was found largely in extractum pancreatis, and which was an excellent solvent for fibrine.

In the discussion which followed Dr. Garrish described the advantages of bichloride of mercury, Dr. Rochester those of insufflation of one part of iodoform to two of bismuth, Dr. Moore those of insufflation of bicarbonate of soda, and Dr. Reese those of inhalations of kerosene.

Dr. Ross, of Chemung County, reported a case of

RUPTURE OF THE UTERUS.

It occurred during labor at full term, and the child, membranes, and placenta all escaped into the abdominal cavity together. Dr. Ross believed this to be the second case of the kind on record.

Dr. Bontecou, of Rensselaer County, exhibited

A CASE OF CONSERVATIVE SURGERY.

The patient received a severe gun-shot injury of the shoulder-joint during the war, and resection was afterwards performed, care being taken that as much as possible of the periosteum should be left. The result was that several inches of the humerus were reformed by nature.

The following papers were read by title: Stretching of the Nasal and Intra-Orbital Nerves in Ciliary Neuralgia, by Dr. Ross, of Chemung County; Organic Disease of the Brain not a Constant Factor in Insanity, by Dr. Clark, of Niagara County; Supporting the Perinæum in the Act of Parturition, by Dr. Hartmann, of New York; and a Case of Gun-Shot Wound of the Stomach, with Recovery, by Dr. Hinton, of New York.

Dr. Gouley, of New York, read a paper on a case of

LIGATURE OF THE PRIMITIVE ILIAC ARTERY FOR DIFFUSE ANEURISM OF THE EXTERNAL ILIAC ARTERY.

Dr. Gouley regretted that he had not applied a second ligature and opened the sac, in which case he thought the patient's life might have been saved. As it was the walls of the sac sloughed, and the man died on the nineteenth day after the operation of pyæmia.

The paper was discussed by Dr. Moore, of Rochester, Dr. Fifield, of Boston, and Dr. Nancrede, of Philadelphia.

The Association then adjourned.

In the evening the Association was entertained at a banquet at the Murray Hill Hotel by the Fellows residing in New York. And on Friday, the 21st, surgical cases and operations, and an exhibition of various forms of bacilli, were seen at Bellevue Hospital, after which there was an excursion to the hospitals and other institutions on Blackwell's, Ward's, and Randall's Island under the charge of the Commissioners of Charities and Correction.

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SPECIAL MEETING OF THE BOSTON MEDICAL LIBRARY ASSOCIATION FOR THE PRESENTATION OF A BUST OF THE LATE DR. J. MARION SIMS.

November 25, 1884. Dr. Oliver Wendell Holmes, President.

A special meeting of the Boston Medical Library Association was held Tuesday evening, November 25th, to accept the gift of a bronze bust of the late Dr. J. Marion Sims from an anonymous donor. About one hundred members of the Association, as well as some distinguished strangers, were present when the meeting was called to order by the presiding officer, Dr. Holmes.

The presentation of the bust, which was regarded by those present as an admirable likeness of Dr. Sims, — especially in profile and three-quarters view, — was made by Dr. James R. Chadwick in the following words: —

Mr. President and Members of the Boston Medical Library Association, — Few of you who were present at the exercises held in this city a year ago, to commemorate the hundredth anniversary of the foundation of the Medical School of Harvard University and the dedication of its new building, will have failed to observe upon the platform the close shaven features and the erect form of the world-renowned gynecologist, Dr. J. Marion Sims. He looked the personification of health, so that the news of his sudden death within a month must have filled you all with sorrow. On the day after those ceremonies I had intrusted to my professional care by Dr. Sims a lady whose affection and gratitude he had richly earned by saving her life by a surgical operation and by subsequent assiduous attentions.

A month after his death I was invited to act upon the committee charged with raising a memorial fund with which to erect in Central Park, New York, a statue of Dr. Sims. On asking his former patient to give practical evidence of her oft expressed sense of gratitude to Dr. Sims, I was met by a refusal, on the ground that the form the memorial was to take was ill suited to keep alive his memory among that class of the community — the medical profession — which in future ages would alone be qualified to appreciate his life work at its true value. To meet this not unnatural sentiment I then suggested her placing in this hall, which is likely long to be the place of union of all the medical societies of this city, a bust of Dr. Sims. To this she at once assented and authorized me to order the bronze bust which I now have the honor of presenting to this association with the single condition that the donor's name should not be revealed. The bust was taken about three years ago, as a personal favor, by Dubois, the greatest living French sculptor. It represents Dr. Sims in his prime, and both as a likeness and as a work of art cannot be surpassed by any piece of modern sculpture.

Dr. J. Marion Sims was born in Lancaster District, South Carolina, January 25, 1813. Having received his medical degree from Jefferson College, Philadelphia, in 1834, he practiced his profession in and about Montgomery, Ala., until 1852, when, reduced almost to a skeleton by a persistent chronic diarrhœa, he moved to New York and there established himself. For the remainder of his life he divided his time between New York and Europe, finding a host of patients of the highest social position on both continents ever claiming his professional services. The highest honor was bestowed upon him by the profession of his native country, and the sovereigns of Europe vied with each other in covering him with their coveted decorations. He died suddenly of heart disease in New York on November 13, 1883.

The life work of Dr. Sims is too recent and the merits of his individual achievements too indeterminate to make it proper for us to estimate them now and here. The one salient fact of his career dominates all other considerations, that by his ingenuity, pertinacity, and enthusiasm he did more than any other man in the history of the world to stimulate the study of the diseases peculiar to the female sex and to lead up to their present successful treatment. This is enough to entitle him to the gratitude of our own and of all future generations.

The President, Dr. Holmes, on accepting the gift in behalf of the Association, said: In accepting the gift of the bust of Dr. J. Marion Sims to the Boston Medical Library Association, it is my pleasant duty, as President of that Association, to express our gratitude to the donor for this most acceptable present. Unfortunately, we do not know whom we are to thank. *Stat nominis umbra.* The name of the giver is not to be found on the pedestal but in the shadow of the bronze effigy. We can only draw our bow at a venture and discharge our thanks, trusting that they will find the object of which they are in search.

This bust is well entitled to a place of honor in our library. Dr. Sims stands upon record as one of those benefactors of the race whose contributions to human welfare are found all along the pages of the history of medicine. They are not emblazoned like the exploits of the conqueror, but they are no less victories. Nor do I know any forms of human suffering which it gladdens us more to relieve than the agonies and the injuries which a mysterious arrangement of nature has made inseparable from the lot of woman, the mother of mankind. It was in this sphere of medical art that Dr. Sims chiefly labored, and to this that he made his invaluable contributions. It is not for me to remind you of his ingenious inventions and operations. They are well known to all who are engaged in treating the diseases of women; that is, not merely specialists, but all family physicians, and they will carry his name to posterity on the list of those who have deserved the grateful remembrance of all mankind.

Let us hope that this bust will not stand alone, but that our profession will send forth many a master of his calling, who shall deserve to have his features reproduced in imperishable shape, and that future benefactors, known or unknown, will emulate the donor whom we thank this evening, and preserve their lineaments in bronze or marble.

Dr. George H. Lyman, being called upon by the Chair, made the following remarks: —

I respond very cheerfully, Mr. President, to the invitation to say something of Dr. Sims and his work, though all that can be said in a few words has, perhaps, been already uttered by yourself and Dr. Chadwick.

When I reflect upon the complete revolution which has taken place in that particular department of our calling with which Dr. Sims's name is so closely associated, and see so many representative men assembled to do honor to this occasion, it brings back to me very forcibly the beginning of my professional life some forty years ago. Returning from Paris full of zeal and enthusiasm, I brought with me the teachings of Jobert and others who were then beginning to feel their way in gynæcology. Of course I had a speculum or two as a part of my armamentarium. I soon learned, however, that my older friends by no means partook of my enthusiasm, and that unless I wished the reputation of an "irregular," I must be cautious how I encouraged such new-fangled notions. Still later, when ovariotomy was beginning to force its way against all manner of vituperation, a paper was called for as to the circumstances under which such an operation was justifiable! The result, among other things, was a collection of statistics which showed that up to that period only 300 well-authenticated operations had been performed throughout the world, with a mortality of some forty per cent. Now, on the other hand, there are numbers of individual operators who have done more than that, the experience of a few reaching to four or five times that number, and with a mortality varying from five to twenty per cent. Nowadays the use of the speculum, then so much derided, has become as common as the use of the stethoscope, and every well-informed practitioner employs it in suitable cases. The various chronic affections of the uterus and appendages, then so little understood, are now subject to a rational and very successful treatment. All this has gradually led to the recent wonderful advances in peritoneal surgery which fairly constitute a distinct era in the history of medicine, surpassed by nothing, perhaps, unless it be the discovery of ether.

These remarks, Mr. Chairman, will not seem irrelevant when we remember the large contribution to this progress which we owe to the distinguished man to honor whom, by placing his bust in our hall, we meet here to-night. None have done more, few as much, in this special department, and it is well for our own sakes and as a stimulus to those who are to come after, that this admirable memorial of him should be in constant view.

It was my good fortune to have known Dr. Sims for many years, and always as the most charming and genial of men. He was an enthusiast, as all progressive men must be, but he was earnest and honest with it all. His place in the medical history of this century will be, if not that of the originator of modern gynæcology, at least that of one who did the most for its advancement.

The evidences of this high appreciation of him are not confined to his native country. Frequent visits to Europe made his name and fame widespread in England and on the Continent, and honors were showered upon him with a liberal hand. His numerous operations there did much for the honor of American gynæcology, and already its students are so looking to this country for the latest and best information that we may expect them to come to us to find their best facilities among our American teachers.

The meeting adjourned soon after nine o'clock, and an agreeable hour was spent in the examination of autographs and diagrams recently presented, and the discussion of an informal collation.

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NEW YORK ACADEMY OF MEDICINE.

THE SURGICAL MANAGEMENT OF RACHITIC DEFORMITIES OF THE LOWER EXTREMITIES.

At a meeting of the Academy held November 20th, Dr. V. P. Gibney read a paper on the above subject. Having devoted some introductory remarks to terms and definitions, he expressed the conviction that a fair proportion of cases of the deformities referred to recovered spontaneously. This opinion was based on the results which he had witnessed at the Hospital for Ruptured and Crippled on Forty-second Street, with which he had been connected for a number of years. Between the years 1871 and 1877 255 cases of genu valgum under fourteen years of age had been observed at that institution. Where apparatus was used it consisted of external and internal steel springs, of moderate strength. The larger number of osteotomies were performed in children between the ages of three and eight. One reason why he thought a large number of cases recovered spontaneously was because no adults with such deformities were met with in the city. Of 1005 cases of bow-legs treated at the Forty-second Street Hospital, 997 were under fourteen, three in adults, and five between fourteen and twenty.

He then proceeded to inquire what cases could safely be left to nature. In children under two years he would not advise apparatus or operative interference unless the deformity was extreme. In those between two and three, with a moderate degree of deformity, he would also leave the case to nature; but would examine the condition of the bones very carefully and have the patient kept under close observation. As knock-knee and bow-legs were due, as a rule, to rachitis, medicinal and hygienic would naturally constitute an important element in the treatment, and he had known cases in which these deformities entirely disappeared during a sojourn in the country.

In case the bones were found to be yielding, he advised the use of manual force under certain circumstances, as, for instance, when parents were too poor to purchase apparatus or too improvident to look after it properly, and when there was little time in which to effect a cure. In one case where the child's parents were poor Italians he had broken the femur, tibia, and fibula on both sides.

In the matter of apparatus he thought Mr. Wm. J. Little stood at the head. He placed no limit upon the efficacy of splints, and undoubtedly cured with them many cases in which most surgeons would have adopted operative procedures. All the springs now in use acted on the principle of the bringing to bear of force against the convexity of the curve at its apex. Having remarked that osteoclasis had never been popular in this country, Dr. Gibney went on to speak of osteotomy, and referred to the brilliant success of McEwen with this operation. At the International Medical Congress at Copenhagen he had reported 820 personal osteotomies, in only eight of which did any suppuration occur. Five of the patients died, but in not one of them was the fatal result due to the operation. Severe arterial hæmorrhage in this operation had been reported by some surgeons, and in one case of his own he had had alarming hæmorrhage from the bone itself. He then described a case in which he had performed it in anterior tibial deformity, a condition in which he said he had never seen any effect produced by apparatus. In this instance the child had worn apparatus for twelve months prior to the operation. Dr. Gibney had performed nine linear osteotomies during the past six months at the New York Polyclynic, and he was in the habit of sending patients home as soon after the operation as the plaster dressing had become hard.

The lessons which he said he had learned in regard to this procedure were as follows: —

(1.) Exaggerate the curvature of deformity.

(2.) Examine the limb at the end of a week to ascertain whether the amount of curvature is the amount desired.

(3.) Do not hesitate to refracture by manual force, if it be necessary.

(4.) In dispensary cases do all the operating that you propose at one sitting.

Strict listerism was to be employed during the operation, and after it three months was not too long for the patient to wear some form of support. McEwen, he thought, had convinced every one that supra-condyloid osteotomy was the only one for *genu valgum*.

Dr. Joseph C. Bryant agreed with Dr. Gibney that there were a large number of cases which could be safely left to nature. No better proof of this could be desired, he thought, than could be afforded by a visit to some of the districts of the city occupied by poor blacks and Italians. The number of cases of such deformities among this class of the population was exceedingly large; yet when those who had suffered from them in childhood had grown up the deformities were usually found to have disappeared. In speaking of the treatment by manual force he said that if in connection with a case of bow-legs he found that the bones were springy, he would endeavor to correct the deformity by forcible pressure upon the point of greatest convexity, repeated two or three times. In one case of sharp anterior tibial curvature he found it necessary to divide the *tendo Achillis*. At the first operation he reduced the deformity two thirds, and then repeating the forcible pressure three times a week, in six weeks he secured a perfectly straight tibia. In a case of this kind he considered manual force better than osteotomy. In regard to osteoclasis he said that he would certainly never use it in the vicinity of a joint, as would be necessary in cases of genu valgum. Osteotomy he considered one of the important advances in surgery of the century. He always performed it with strict antiseptic precautions, and had never seen a drop of pus after any of his operations. It was apparently called for in all cases which had reached a stage where consolidation of the bones had taken place.

Dr. Charles T. Poore thought that rachitical deformities were more common now than formerly. There was no question that in the earlier stages of rachitis the bones could be bent, but he had not seen spontaneous recovery when the bones had become hardened. In regard to osteotomy he thought that the cases which had gone badly (as from hæmorrhage from arteries, etc.) were due, as a rule, to accidents which might have been avoided. In his own cases he had never kept the patient in bed more than five weeks, and at the end of four weeks he usually took off the plaster dressing. He had never seen a recurrence of the deformity. In correcting the deformity of bow-legs he considered the osteoclast better than manual force, care being taken never to fracture the bone within three inches of the condyles. He had had no experience in trying to bend bones without an instrument, and it must be very hard work. In osteotomy he did not use listerism, strictly speaking, and did not dress the wound after McEwen's plan, always endeavoring to secure primary union.

Dr. M. H. Henry said that at the Emigrant's Hospital he had seen a large number of young children, born in Europe, arrive with rachitical deformities of the legs, but under the good hygienic conditions with which they were there surrounded they all seemed to recover without surgical interference. The limit of their stay was five years.

Dr. M. J. Roberts made some extended remarks, in the course of which he said that while many of the cases might recover spontaneously the process was a slow one, and with the aid of appropriate apparatus the cure could be effected in half the time. Every case, therefore, in his opinion, ought to receive treatment if possible. In speaking of osteotomy he described an electro-osteotomy which he had devised, by means of which the femur of a child could be sawn through with perfect ease in two minutes, and of an adult in five minutes.

Dr. Gibney closed the discussion, and in reply to an inquiry from the President, Dr. Barker, said that he had not noticed any difference between the sexes as to frequency or curability of the disease. He had noticed, however, that a good many women who suffered from flat-foot had had bow-legs when they were children.

— The forty-second annual meeting of the New York Society for the Relief of Widows and Orphans of Medical Men was held at the hall of the Academy of Medicine on the evening of November 26th.

CHICAGO MEDICAL SOCIETY.

L. H. MONTGOMERY, M. D., SECRETARY.

STATED meeting, November 10, 1884.

DR. EDMUND ANDREWS reported

TWO CASES OF GASTROSTOMY.

He stated that the term itself was a barbarous one, — an etymological blunder so far as literary usages are concerned, — composed partly of Greek and partly of Latin, the "philological monstrosity" being, apparently, an attempt by its author to enlarge the word gastrotomy, which literally signifies stomach-cutting, and by the addition of a syllable to signify a mouth, so as to make the compound mean a cutting of the stomach to make a mouth, literally a stomach-mouth-cutting. He said the word should be gastrostomaty, and even then there would be nothing left in the compound to signify the "cutting;" therefore to express the full meaning of "stomach-mouth-cutting" would require the form gastro-stomatomy, a term whose length and harshness of sound is sufficient for its condemnation. The following is a brief synopsis of the balance of the paper.

CASE I. was a little girl, aged six years, who swallowed some concentrated lye several months previously, cauterizing the lower part of the œsophagus, and gradually inducing a stricture. Dr. E. P. Cook, of Mendota, Ill., dilated the stricture, after which the child was sent home greatly improved, but after leaving his care she relapsed, and was then placed in care of the writer. Upon her arrival it was ascertained that she had been unable to swallow anything for a number of days. Dilatation was essayed, and the patient improved for a time, regaining a partial power at least of swallowing liquid food. However, it was soon perceived that the advantage thus gained could not be maintained, and after faithful trial it became evident that the little one was gradually starving. So-called gastrostomy was then performed in a room which had been sprayed for an hour with carbolic acid, but the spray was not permitted to touch the peritonæum. The usual incision was made in the hypochondrium from the xyphoid cartilage downward and to the patient's left. The colon was found partly in the way, but it was easily pushed downward. The stomach was then drawn out with long toothed forceps. The viscus was identified by the relations of the gastro-epiploica vein, and secured to the abdominal wall by a long suture on each side, as it was feared starvation would ensue were not this plan pursued, and the patient's life be still further jeopardized. The stomach was opened at once, and its edges *sewed* closely to the skin all around the incision. There was a good deal of shock, but reaction occurred, and union by first intention followed without difficulty and with no peritonitis. Peptonized food was regularly inserted, and on inspection was found perfectly digested except when meat was used. This, whether raw or cooked, would be ejected from the wound unchanged even when retained twenty-four hours. For some days the patient improved, but it soon became evident that most of the food, though digested, did not pass through the pylorus. It seemed that this orifice of the stomach required a little pressure to unfold it, and that whenever the stomach contracted for the purpose the chyme escaped by the fistula into the dressings, and did not pass on into the intestines. A rubber pad tight enough to stop the outflow could not be tolerated. A soft rubber tube with a flange and valve was substituted, in which the inner disc could be adjusted to the inner wall of the stomach; then by clamping the tube outside of the outer disk to the wall of the abdomen a perfect valve was obtained which prevented leakage. The effect of the inner disk on the walls of the stomach was feared at first, but it produced no perceptible irritation. The opening in the stomach was purposely made pretty large, the surgeon hoping at a future time to introduce a finger upward into the lower end of the œsophagus, and then by pushing down upon it to succeed in restoring the natural passage. As above stated, the valve retained the food perfectly, and the patient took an abundance, and even learned to know when she was hungry, and to call for her meals. The improvement was but temporary, however, and she began slowly to fail again without obvious cause. The power of assimilation seemed to have exhausted itself. She constantly grew weaker, and died the thirty-sixth day after the operation.

CASE II. An adult male patient. Six months previously he swallowed some caustic ammonia, producing a contracting ulcer of the lower part of the œsophagus. In September last he placed himself in the care of the writer, having been unable to swallow anything for some days. By a persistent use of bougies the stricture was dilated, and the power to swallow liquid food restored. He then returned home, having learned to introduce the bougie himself. In time, however, he lost the art of passing the instrument, and in October returned in the same condition as before. Diligent trials to dilate the stricture a second time gained only a slight temporary power of passing small quantities of liquids a day or two at a time, and within a week or so it was perceived that his progress was downward, and that he was slowly starving. Moreover, the points of the bougies seemed to be creating a local inflammation in the right lung, as if making a false passage in that direction. To continue their use, therefore, was not deemed judicious, and an operation was decided on at once. The operation was the same as in the former case except that the opening was smaller. The same difficulty of regurgitation of the food occurred, and was controlled by a similar valve. The patient was doing well thirty-two days after the operation, and bids fair to recover.

The statistics of this operation are not very encouraging. Of 207 recorded cases forty were for cicatricial stricture of the œsophagus like those above cited. Of these forty twenty-one died. Yet when no other hope of life or relief is offered, an operation which gives one chance in two is a great benefit.

EXCISION OF THE RECTUM

was the next subject, of which DR. ANDREWS reported two cases, at present under treatment.

CASE I. An epithelioma not involving the border of the anus. In operating the entire external sphincter was saved. The incision was carried from an inch in front of the anus back to the coccyx, opening the anus antero-posteriorly, and cutting off the gut just above the verge. After dissecting it upward a little and tying numerous vessels the rectum was separated from the pelvic chamber mainly by the finger, and the *tube* divided about three inches upward just above the top of the growth. There was no shock and not much subsequent pain or inflammation.

Case II. was almost exactly a repetition of the first except that the verge of the anus was involved in the disease, and consequently was dissected out with the rest. Both patients were doing well and very comfortable at the time of the report.

Statistics. The statistics are much like those of epithelioma elsewhere. Billroth, of Vienna, thinks he permanently saves about one third of the cases. Of 608 collected cases 140 died of the operation, and of 100 of those who survived the operation, whose accounts were traced up, thirty-one were doing well at the end of one year, and seventeen were alive and well with no return at the end of three years.

LITHOLOPAXY.

Dr. Andrews reported having operated twenty-three times with one death. He is confident that the plan he pursued of keeping the nerves of the bladder benumbed during the operation by filling it with carbolized water tends greatly to prevent both shock and inflammation. He thought it worthy of inquiry whether the remarkable local anæsthetizing properties of the new agent, cocaine, would not enable us to operate without ether and without producing shock. . . .

A NEW INSTRUMENT FOR OPERATING ON VARICOCELE

was the next topic discussed by Dr. Andrews. Operations for destroying the veins in varicocele have occasionally produced death, and in other cases resulted in neuralgic scrotum, with or without atrophy of the testicle. Many surgeons have followed the lead of Prof. Frank Hamilton in preferring Sir Astley Cooper's plan of shortening the scrotum sufficiently to make it its own suspensory bag. This operation is vexatious because the imperfect character of the old-fashioned adhesive plasters rendered it difficult to support the sutures sufficiently to secure union by first intention. Now that we have the rubber plaster, which never lets go its grip, we can cut the scrotum very short and still hold the wound firmly together and secure a triumphant success. Sundry clamps have been invented to hold the skin of the scrotum firmly while the surgeon cut it off and sewed it up; the evil of the clamp is that it compresses the arteries so that after cutting away the pouch the surgeon is unable to find and ligate the vessels. If he sews up the wound without attending to this point, experience shows that after the clamp is removed hæmorrhage often takes place inside the scrotum, distending it with clot and forcing open the wound, thus delaying the cure. To meet this difficulty Dr. Andrews has devised a kind of "varicocele bow," which he exhibited and described as follows: It consists of two curved parallel bows connected at the ends and inclosing a slot three eighths of an inch wide between them. Twelve holes are drilled through the bars of a size to admit ordinary pins. The surgeon draws the scrotum through the slot (having the concave border towards the base of the scrotum) to such a distance as he deems sufficient, secures it there by inserting, one by one, as many pins as he finds necessary to hold the pouch securely. He then cuts off the scrotum outside the convex border of the bars. As the scrotum is not pinched by the instrument the blood spouts freely, especially from the artery of the raphe. The operator can carefully and deliberately secure every bleeding point, which being accomplished he sews the cut edges together, and then drawing out the pins removes the bow and applies his plasters. The neatness and despatch of the operation are thus greatly enhanced.

REPORT OF COMMITTEE ON NATIONAL SANITATION.

Dr. John Bartlett, on behalf of the Committee on National Sanitation, presented the following preamble and resolutions: —

Mr. President, — The committee appointed at the meeting of this Society September 15, 1884, to consider and report upon a series of resolutions presented by Dr. L. H. Montgomery, having reference to national sanitary matters, respectfully report the following preamble and resolutions as suitable to be adopted: —

Whereas, Experience has firmly established the fact that the ravages of certain infectious and contagious diseases may be in good measure prevented, controlled, or arrested by the enforcement of suitable sanitary regulations; and

Whereas, The United States is constantly exposed to the importation of disease from foreign countries, and, because of the facility and rapidity of inter-state transit, to the rapid spread of infection once finding lodgment on our borders; and

Whereas, This exposure, because of the prevalence of cholera in Europe, is just now unusually great; and

Whereas, The facts are that matters of sanitation are in some of the States of this Union entirely neglected, while in others they are simply taken cognizance of by the appointments of Boards of Health, in their functions advisory only, and not clothed with powers of authoritative action; and

Whereas, Either of these State Boards of Health, as now constituted, may prove derelict or inefficient in its duties, or act without concert with, or even in antagonism to, the Boards of other States; and

Wheaeas, The exigencies occasioned by the appearance of violent epidemics demand organized means for the prompt recognition of the outbreak of disease, and vested authority, limited in its area by the boundaries of the country only, to take such immediate steps in matters of protection as vaccination, isolation, quarantine, etc., as experience has taught to be useful; and

Whereas, No national authority in sanitary matters now exists; therefore

Resolved, That it is the judgment of the Chicago Medical Society that the sanitary interests of the United States demand the establishment of a national health authority, which shall have for its main functions the detection of pestilential and epidemic diseases, and the enforcement, where necessary, of sanitary regulations tending to prevent, to abate, or to suppress them.

Resolved, That as a step toward the consummation of the idea suggested in the foregoing resolution a committee of three be appointed by this Society to collate facts tending to show the usefulness and necessity of a national sanitary organization, and to compile the same in such form as may be available for disseminating information upon, and creating an interest in, national sanitary legislation.

Resolved, That the said committee be empowered and instructed to urge the importance of national sanitary legislation upon the attention of the congressional delegation from Illinois, and fittingly to present the subject to the representatives of the people in both houses of Congress.

O. C. De Wolf, *Chairman.*

Upon motion, duly seconded, the resolutions were voted upon *seriatim*, and were carried unanimously, when they were again read. The suggestions embodied in the report were unanimously adopted, and Drs. John Bartlett, R. E. Starkweather, and J. H. Hollister were appointed members of the committee.

After which two papers were read on Hydrochlorate of Cocaine.

Dr. Boerne Bettman reported some cases illustrating the use of

HYDROCHLORATE OF COCAINE AS A LOCAL ANÆSTHETIC.

Case I. Oloff D., aged twenty-two, consulted the writer for a stricture of the nasal duct. A few drops of a solution of cocaine produced complete anæsthesia in three minutes. A Weber's knife was introduced into the caniliculus, shoved forward into the sac, and the duct slit open with but trifling pain to the patient. With an Anel's syringe a few drops of cocaine were injected into the nose. Five minutes later the firm stricture was forced with a Bowman's probe. The pain, according to the patient's statement, was seventy-five per cent. less than that experienced five years ago when subjected to a similar operation. Anæsthesia lasted fifteen minutes.

Case II. A piece of steel had been imbedded in the cornea of a policeman for two days. The eye was extremely sensitive. Two drops of cocaine benumbed the eye in three minutes. The digging out of the mote with a spud was painless.

Case III. Mr. M. complained of severe earache, produced by an otitis media acuta purulenta. The introduction of a cotton holder or speculum was not permitted. Instillation of two drops of cocaine was followed by almost immediate cessation of pain, when the ear could be manipulated without the slightest annoyance to the patient.

Case IV. The most striking results were obtained in the case of Mrs. T., on whose right eye an operation for cataract was performed. Several drops of cocaine applied every few minutes produced complete anæsthesia in ten minutes. The corneal section was made without the patient being aware of the fact. The only step in the operation which caused the slightest pain was excision of the iris. At this stage, when questioned about the sensation, the patient remarked that it felt as if a pin were pricking her.

The physiological and therapeutical effects of this remedy may be tabulated as follows: —

First. Hydrochlorate of cocaine is a powerful local anæsthetic, not penetrating in nature, rapid in its effects, which, however, are only temporary.

Second. It is a mydriatic, the effect of which is regulated by the strength of the solution.

Third. It produces paralysis of the ciliary muscle, the near point receding from the eye, distant vision is not influenced.

Fourth. By virtue of its benumbing powers it may be classified as an anodyne.

Dr. Jefferson Bettman reported a case of

ASTHMA NERVOSUM,

illustrating the applicability of muriate of cocaine in nasal surgery: —

Dr. K., a physician, had been under treatment suffering from asthma nervosum. The asthma is purely reflex, induced by great hypertrophy of both inferior turbinated bones, excepting an occasional obstruction to free nasal respiration, but little discomfort is experienced during the day. A recumbent position, the warmth of the bedding, are sufficient to produce a reflex turgescence of the lower turbinated bones, a subsequent serous discharge, and, to complete the clinical picture, a culminating violent attack of asthma. The nares are extraordinarily hypersensitive. The introduction of any instrument into the nose is exquisitely painful. Previous treatment had consisted in applications of the galvano-cautery to reduce the volume of the erectile tissue in the nose. The abnormal sensitiveness would only permit of superficial cauterizations, so the results obtained were but partially successful. On the 8th of the present month the writer resolved to apply the muriate of cocaine prior to cauterization. A pledget of cotton of sufficient size was soaked with fifteen drops of a four per cent. solution of the remedy and placed in the inferior meatus of the left nostril. At the expiration of ten minutes the nostril was perfectly anæsthetized. At the end of a quarter of an hour the plug was removed and the parts thoroughly cauterized with a sharp-cutting electrode. The period of application exceeded three seconds and produced but a minimum degree of pain. In fact, the discomfort was so trifling that the hitherto sensitive colleague cheerfully submitted to a second vigorous application at the same sitting. After a period of twenty-five minutes sensibility of the parts was fully restored.

At a very late hour a motion prevailed that the Society do now adjourn.

Recent Literature.

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M. D. Philadelphia: Henry C. Lea's Son & Co. 1884. Fifth American from the Sixth Revised and Enlarged English Edition.

With the existence of so much better books on the subject as Ziegler's text-book and Coat's Manual of Pathological Anatomy it is not at first sight evident why another edition of the above work is needed. All that can be said in its favor is that the style in which it is written is quite easy reading, probably from the diffuse way in which the subject is treated. The author has tried to infuse new life into it by having some chapters written by a colleague, Mr. Stanley Boyd, those on Tumors, Degeneration, Septicæmia and Pyæmia, and Vegetable Parasites. Even with a new handle and a new blade we fear that it will always be the same knife. The publishers have done well in rendering the volume attractive.

A Text-Book of Pathological Anatomy and Pathogenesis. By Ernst Ziegler. Translated from the German by Donald Macallister, M. A., M. B. Part II. Special Pathological Anatomy. Sections I.–VIII. London: Macmillan & Co. 1884.

We are glad to welcome the continuation of Professor Ziegler's valuable work. The first part, treating of general pathology, has already been noticed. This volume treats of the Changes in the Blood and Lymph, the Vascular Mechanism, the Spleen and Lymphatic Glands, the Serous Membranes, the Skin, the Mucous Membranes, the Alimentary Tract, and the Liver and Pancreas.

The descriptions are concise, perhaps too much so for easy reading, but abundant cross reference renders them very intelligible, and at the same time does away with a great deal of repetition. The accounts are further augmented by an index to the principal articles, from which a more extended knowledge of each particular subject can be obtained by one desiring to do so. The author is, perhaps, inclined to be a little positive in his statements, but he at least writes as one who has seen and studied most of the changes referred to, and therefore has a right to an opinion of his own. The text is well illustrated by numerous good wood-cuts of microscopic appearances, most of which are original. There is certainly nothing better in English than this, and thanks are again due to Mr. Macallister for his admirable translation, and a speedy completion of the work is greatly to be wished. The name of the publishers is the guarantee of a handsome volume.

Medical and Surgical Journal.

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THE ACCOUNTABILITY OF MEDICAL MEN. COMMONWEALTH *vs.* FRANKLIN PIERCE.

"The accountability of medical men has been a fruitful source of lego-medical discussion, and in early times was the subject of much variety of judicial, as it is still of popular, sentiment." Thus reads the first sentence of the chapter on common law practice in criminal prosecutions for medical malpractice in Wharton and Stillé's Medical Jurisprudence. It has had a forcible illustration lately in the case of the Commonwealth *vs.* Franklin Pierce before the Supreme Judicial Court of Massachusetts.

The defendant was tried last May before the Superior Court of Worcester County on an indictment for manslaughter, and the jury returned a verdict of guilty on evidence that he publicly practiced as a physician, and being called to attend a sick woman caused her, with her consent, to be kept wrapped in flannels saturated with kerosene oil for three days, more or less, by means of which she died. There was evidence that he had made similar applications with favorable results in other cases, but that in one the effect had been to blister and burn the flesh, as in the present case.

The defendant alleged exceptions to rulings and refusals to rule of the presiding judge of the Superior Court, relying largely upon the famous case of Commonwealth *vs.* Thompson, decided in 1809 (6 Mass. 134). Thompson was the originator of the system of practice which, under the name of Thompsonianism, gained so much notoriety in the earlier part of this century. The case for which he was indicted was as aggravated an instance of reckless malpractice with a fatal result as can be found in the annals of any court. Yet he was acquitted, the judicial ruling emanating from no less a worthy than Chief Justice Parsons, who held that to constitute manslaughter the killing must have been the result of some unlawful act, but, there being no law prohibiting any man from prescribing for a sick person, with his consent, if he honestly intend to cure him by his prescription, the prisoner should be acquitted.

Since 1830, certainly, the case of Thompson has not generally been held to be sound law, and, moreover, doubt has been thrown upon the exactness of the report of the judicial ruling.

Wharton and Stillé give the following propositions representing the law as deduced from the leading cases in this country and England: —

(1.) If the defendant acted honestly, and used his best skill to cure, and it does not appear that he thrust himself in the place of a competent person, it makes no difference whether he was at the time a regular physician or surgeon or not. (2.) To constitute guilt, gross ignorance or negligence must be proved. (3.) A defendant who, with competent knowledge, makes a mistake in a remedy, is not answerable; but it is otherwise when a violent remedy, shown to have occasioned death, is administered by a person grossly ignorant but with average capacity, in which case malice is presumed in the same way that it is presumed when a man *compos mentis* lets loose a mad bull into a thoroughfare, or casts down a log of wood on a crowd. (4.) Where competent medical aid can be had, the application of violent remedies, by an ignorant person, though with the best motives, involves him in criminal responsibility. (5.) Express malice, or an intent to commit a personal or social wrong, makes the practitioner criminally responsible in all cases of mischief.

In presenting the case of the Commonwealth against Pierce the Attorney General remarked: At common law, a private person guilty of gross negligence in the performance of a lawful act is guilty of manslaughter; the ordinary person is so guilty; is he then to be acquitted the moment he assumes the position of surgeon or physician? "Licensed to kill," as the old jest goes? Medicine is a useful profession — so is a switchman's, a pilot's, a policeman's; and a pilot's or captain's is not judged by the knowledge of an ordinary man of the rocks and shoals and other dangers of navigation; but by that ordinarily possessed by pilots and captains. An ordinary man does not know how to turn a switch; but a switchman is bound to turn it the right way; if he does not do so, it is manslaughter.

Judge Holmes delivered the decision of the Supreme Court, sustaining the rulings of the justice of the Superior Court and overruling the defendant's exceptions. The opinion as delivered was substantially as follows: —

> The defendant has been found guilty of manslaughter on evidence that he publicly practiced as a physician, and, being called to attend a sick woman, caused her, with her consent, to be kept in flannels saturated with kerosene for three days, more or less, by reason of which she died. There was evidence that he had made similar applications with favorable results in other cases, but that in one the effect had been to blister and burn the flesh as in the present case. The main questions which have been argued before us are raised by the fifth and sixth rulings requested on behalf of the defendant, but refused by the court, and by the instructions given upon the same matter. The fifth request was, substantially, that the defendant must have so much knowledge or probable information of the fatal tendency of the prescription that the death may be reasonably presumed by the jury to be the effect of obstinate, willful rashness, and not of an honest intent and expectation to cure. The sixth re-

quest was as follows: "If the defendant made the prescription with an honest purpose and intent to cure the deceased, he is not guilty of this offense, however gross his ignorance of the quality and tendency of the remedy prescribed or of the nature of the disease, or of both." The court instructed the jury that it was not necessary to show an evil intent; that if by gross and reckless negligence he caused the death he is guilty of culpable homicide; that the question is whether the kerosene, if it was the cause of the death, either in its original application, renewal, or continuance, was applied as the result of foolhardy presumption or gross negligence on the part of the defendant, and that the defendant was to be tried by no other or higher standard of skill or learning than that which he necessarily assumed in treating her; that he was able to do so without gross recklessness or foolhardy presumption in making it. In other words, that the defendant's duty was not enhanced by any express or implied contract, but that he was bound at his peril to do no grossly reckless act, when he intermeddled with the person of another, in the absence of any emergency or other exceptional circumstances. The defendant relies on the case of the Commonwealth vs. Thompson, 6 Mass., 134, 1809, from which his fifth request is quoted. His argument is based on another quotation from the same opinion, which recites: "To constitute manslaughter the killing must have been a consequence of some unlawful act. Now there is no law which prohibits any man from prescribing for a sick person with his consent, if he honestly intends to cure him by his prescription." This language is ambiguous, and we must begin by disposing of a doubt to which it might give rise. If it means that the killing must be the consequence of an act which is unlawful for independent reasons, apart from its likelihood to kill, it is wrong. Such may once have been the law, but for a long time it has been just as fully, and, we may add, much more willingly, recognized, that a man may commit murder or manslaughter by doing otherwise lawful acts recklessly, as that he may be doing acts unlawfully for independent reasons, from which death actually ensues. But recklessness in a moral sense means a certain state of consciousness with reference to the consequences of one's acts, or the actual condition of the individual's mind with regard to the consequences, as distinguished from mere knowledge of present or past acts or circumstances, from which some one or everybody else might be led to anticipate or apprehend them if the supposed act was done.

The questions raised by the exceptions are whether an actual good intent and the expectations of good results are an absolute justification of acts, however foolhardy, when judged by the external standard, and whether the defendant's ignorance of the tendencies of kerosene administered as it was will excuse the administration of it. If the principle which has been established both for murder and manslaughter is adhered to, the defendant's intention to produce the opposite result from that which came to pass leaves him in the same position with regard to the present charge that he would have been in if he had had no intention at all in the matter. We think that the principle must be adhered to where, as here, the assumption to act as a physician was uncalled for by any sudden emergency, and no exceptional circumstances are shown, that we cannot recognize a privilege to do acts manifestly endangering human life on the ground of good intention alone. We have implied, however, in what we have said, and it is undoubtedly true as a general proposition, that a man's liability for his acts is determined by their tendency known to him, and not by their tendency under all circumstances actually affecting the result, whether known or unknown. The using of the thing must be dangerous according to common experience. If the danger is due to the specific tendencies of the individual, and is not characteristic of the class to which it belongs, a person to be made liable must have known of that peculiar character. The court escape on the ground [illegible] the common experience. Common experience is necessary to the man of ordinary prudence, and when a man assumes to act as the defendant did he must have it (common experience) at his peril. When the defendant applied kerosene to the person of the deceased in a way which the jury have found to have been reckless, or, in other words, seriously and unreasonably endangering life according to common experience, he did an act which his good intent could not justify by her consent, and which, therefore, was an assault, notwithstanding her consent.

— Dr. C. P. Bancroft, Superintendent of the Concord, N. H., Insane Asylum, who was severely beaten on the head by a patient, is recovering from his injuries.

"TRICKS AND MANNERS."

In previous numbers of the Journal we have studied some of the words and curious expressions of our patients and found them interesting: their actions are equally deserving of regard. One who sits day after day in a hospital out-patient department watching a number of people who pass rapidly before him, each with his tale of woe, finds certain little peculiarities in their actions constantly recurring. By far the greater number of his patients grow confidential and urge their chair towards him. The patient's chair in the surgical room of the old Boston Dispensary will occur to those of our readers who were familiar with it. It was fastened to the floor, and the surgeon sat in front of it in a chair on casters so that he was able to approach or recede from his patient as circumstances dictated. With hardly an exception the patient as he sat down in the chair would give it a hitch to draw closer to the surgeon, and many, not satisfied with a single attempt, would try again and again to move it. In process of time the seat of the chair was actually torn away from the legs by these many wrenches. In other similar positions the surgeon's foot is almost automatically brought against the round of the patient's chair when this hitching process begins. This hitch is the result usually of a desire to pour into the doctor's private ear the object of the visit, or sometimes to give a better opportunity for close examination, but even when no reason exists the hitch is a moderately certain preliminary to a conversation. In extreme cases, when secrecy seems particularly desirable, the patient follows up the hitch by rising and whispering in the doctor's ear. Only particularly dirty patients who are perfumed with sweat, gin, and onions ever go to such a length.

There is an instinctive action on the part of many patients to feel with their own hands the spot which the doctor is exploring. Almost inevitably the patient's hands thus follow the doctor's in feeling for an enlarged gland in the groin, and only a little less certainly in searching for a broken rib. A similar fatality attends the putting of the double stethoscope to one's ears. It is a signal for the patient to open his mouth, and the most silent patient becomes garrulous under the stimulation.

To ask a patient to lie upon his back is, in a very large number of cases, followed by his turning his back upwards. The mention of his back gives the idea that that is the part of his body the doctor desires to see, and with great readiness to assist in the examination he pays no attention to the words that accompany it. Such excessive zeal to assist the doctor shows itself in many other ways. In examining a joint, unless movement is painful, the patient will often assist in a manner that renders the examination futile. But when it is desirable to examine the corresponding healthy joint for the sake of comparison even the too willing patient will insist that there is nothing the matter with that joint, and exposes it very unwillingly, and only after explanation of the reasons for its examination.

The mother who brings her child for examination gives sometimes no little trouble by insisting on helping it when the doctor is specially desirous of seeing how it walks and moves. He throws an object on the floor, and asks the child to pick it up; the mother picks it up and tells the child to give it to the doctor. He asks the child to lie down, and the mother feels that she must help. Sometimes this extra help is of great service in showing the daily influence to which the child is subjected, but not of much use in helping the surgeon to diagnosticate the physical disabilities of the child. Children themselves are often a plague, and nowhere does a doctor's tact show itself more plainly than in his ability to gain their confidence and coöperation. To recognize the earliest stage of joint disease in a young child without its own assistance is almost an impossibility. Such coöperation is usually quite as easily obtained as that of grown people, but there are children — bless 'em — that practically refuse to do anything but yell. The rebel yell of rebellion days pales beside that unreasoning, unmeaning cry which increases when coaxed to stop, becomes frightful under threats, and continues unabated when left to follow its own sweet will.

It is always an annoyance and one only too frequently repeated to hear a child told that the doctor will carry him off or do some horrible act of mutilation if he does not behave. Parents who thus use the doctor as a bogy to frighten their little ones into good behavior can hardly blame the doctor if he fails to overcome in a single visit the prejudices they have so carefully implanted.

To the doctor the tongue proves itself most literally an unruly member. Patients will protrude but its tip when asked to show it, and push it out to its fullest extent when they open their mouths for inspection of the fauces, and on the application of a spatula it is sure to arch itself like a cat's back at the sight of a strange dog.

One of the most troublesome traits is the tendency to misquote previous opinions. We know how very difficult it is to repeat any conversation, but a peculiar difficulty seems to attach itself to the remarks of physicians. Doctors learn to be very skeptical in regard to the opinions attributed to their colleagues, especially after such an experience as that of a physician at a charitable institution who was consulted, not long ago, by a mother in behalf of her young child. In giving the history of the case she said that the little one had been sick almost since its birth; that a year ago she consulted Dr. ——, mentioning the name of the man with whom she was talking, but whom she had failed to recognize, and "he said the child had n't any inwards."

Another troublesome habit is that of attributing every untoward event to the medicine or at least in some way to the doctor. This is offset in great measure by similarly attributing to him favorable results to which he knows he can establish no valid claim. The two errors may be left to balance each other in establishing his reputation with the public, but his unwillingness to accept the responsibility in the first case ought to assist him in distinguishing in his own mind between *post* and *propter* in the second case.

THE SINGULAR MORTALITY REPORTED FROM WESTERN VIRGINIA AND EASTERN KENTUCKY.

A SINGULAR and very fatal disorder has been devastating the sparsely settled mountainous counties of Southwestern Virginia and Southeastern Kentucky. The afflicted district is said to embrace a strip of country about eighty miles long by seventy miles wide, extending through the portions of Lee and Wise Counties in Virginia, and those of Knox, Harlan, Letcher, and Pike Counties in Kentucky, situated upon the slopes of the Cumberland Mountains. A number of rivers have their source here, the Cumberland, the Kentucky, the Licking, and the Big Sandy flowing into the Ohio River. It is a region in which the railroad and the telegraph are unknown, and the inhabitants are dependent for a somewhat precarious livelihood upon the resources of a primitive agriculture.

It was lately reported that no rain had fallen in this region, until very recently, for several months; the limited crops had been a failure, the live stock were dying upon the hills, and the unfortunate inhabitants were themselves falling a sacrifice to a rapidly fatal malady of a choleraic character. This intelligence was supposed at first to be of a rather sensational character, but later, and apparently trustworthy, accounts tend to confirm the worst of what had been previously reported. It is now estimated that fully 1000 people have died of the disorder.

The water through all this district has been extremely low, the streams and springs on the mountain sides being nearly dried up. The little water which could be had, and which the inhabitants have been forced to drink, has been very strongly impregnated with mineral substances, and perhaps also with decaying vegetation. As yet we have seen no accurate analysis of it. The malady as manifesting itself is accompanied, it is said, by intense thirst, by griping pains in the abdomen, and frequent profuse discharges from the bowels. In many instances those attacked have died in a few hours, but the usual course has been about two days, and the termination is generally a fatal one.

It is probable that the usual rains of this season of the year will put an end to the trouble, but further and more accurate details will be awaited with interest.

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THE QUARANTINE CONFERENCE IN NEW YORK.

ON the 20th of November a conference of sanitary officers was held at the office of the New York Board of Health, at the invitation of Dr. Wm. H. Smith, Health Officer of the Port, to discuss, first, the measures necessary to prevent the introduction of Asiatic cholera at New York and contiguous ports, and, second, the measures necessary to prevent the extension of cholera should it develop in the seaboard cities. Among those present were most of the members of the New York State Board of Health, and representatives from the health boards of New York, Brooklyn, Boston, Buffalo, and New Haven. Resolutions were passed maintaining that a vigilant quarantine of sanitation at our maritime quarantines *ought* to prevent the introduction of cholera, and setting forth the measures which those present believed necessary to secure a successful quarantine against the disease. As to the prevention of the spread of cholera if once introduced, it was thought that measures to this end must be left to local authorities throughout the country; but a resolution was adopted calling attention to the need of an active sanitary administration on the part of all railroad and other transportation companies concerning the condition of cars, stations, latrines, etc. The chairman was requested to present a copy of the resolutions to the National Conference of the State Boards of Health which is to meet on December 10th, at Washington. Resolutions were also adopted requesting the Legislature to place in the hands of the New York quarantine authorities full powers for meeting the special dangers of the invasion of cholera by such appliances as science has proved to be necessary.

These last resolutions contained a provision that they should be presented to the Governor and Legislature under the authority of the State Board of Health, and at the quarterly meeting of the latter Board, which was held the day following, November 21st, the more fully to carry out the recommendations of the conference, the following was adopted: —

"*Whereas*, The State Board of Health has visited the quarantine buildings in the Lower Bay of New York, and is convinced of the urgent need of repairs, to make them available, if cholera should arrive on vessels entering the port, therefore, be it

"*Resolved*, That this Board recommend to his Excellency the Governor, and the Legislature, such consideration of the resolutions of the conference as will secure the means for the necessary repairs at the earliest possible moment."

MEDICAL NOTES.

— The data obtained by the Anthropometric Committee of the British Association for the Advancement of Science reveal some curious facts respecting the influence of occupation upon physical development. As a rule, the inhabitants of the country are taller and heavier than those of the large towns; London is, however, an exception, and seems to exert an attraction that draws in the more vigorous part of the country population. The police of that city are, as a rule, nearly as tall as the laborers of Galloway — the tallest of Britons — and twelve pounds heavier. The members of the Fire Brigade, who need not be so solid, but are expected to be active, are two and a half inches shorter and twenty-five pounds lighter than the policemen. Athletes average five feet eight and one third inches in height, and only about one hundred and forty-three pounds in weight; from which it is inferred that the majority of the population carry from ten to twenty pounds weight which they would not carry if they were in the highest physical condition. The Fellows of the Royal Society — representing a class of most prominent intellectual gifts — are among the tallest of the race, averaging five feet nine inches and three quarters. Perhaps it is an evidence of nature's allegiance to the supremacy of Law that the criminal class are forty-five pounds lighter than the police and four inches and a half shorter; and they are eighteen pounds lighter and two inches shorter than the average of the population. Lunatics are about as short as the criminals, but heavier. In men of the same occupation belonging to different races the influence of race appears to be predominant over that of occupation.

— The dialects of the respective branches of science are becoming, with the progress of knowledge and of nomenclature, more and more unintelligible to each other. We find, for instance, in an English paper the following sentence from a recently published paper by Sir William Thomson, the eminent physicist: "The stream-lines are as represented in the diagram, in which the region of translational-velocity greater than wave-propagational velocity is separated from the region of translational-velocity less than wave-propagational velocity by a cat's-eye border pattern of elliptic whirls." Mr. Herbert Spencer's famous "Formula of Evolution" is as follows: "Evolution is a change from an indefinite, incoherent, homogeneity to a definite, coherent heterogeneity, through continuous differentiations and integrations." Mr. Kirkman, the mathematician, has rendered this formula into a shape which is, after all, less uncouth (in the true meaning of that word), to wit: "Evolution is a change from a nohowish, untalkaboutable allalikeness to a somehowish, and in-general-talkaboutable not-all-alikeness, by continuous something-elseifications and stick-togetherations."

NEW YORK.

— At the last meeting of the County Medical Society, held November 23d, Dr. S. O. Vanderpoel retired from the presidency after making a brief address, in which he reviewed the work of the past year. The new president, Dr. Daniel Lewis, then made his inaugural address, in the course of which he spoke of the importance of carrying through the suit now pending against the disreputable eclectic medical college, and advocated the establishment of State examining and licensing boards (the latter also to have the power of revoking licenses) for the medical profession. The standing committees for the year were appointed, with Dr. Stephen Smith chairman of the committee on hygiene, Dr. George A. Peters chairman of that on ethics, and Dr. F. R. Sturgis of that on prize essays. Dr. Simon Baruch read a paper on The Management of the Third Stage of Labor.

— At a meeting of the Medico-Legal Society held November 19th a paper on Poisoning by Canned Goods, by Dr. Thomas Stevenson, of London, government analyst, 'was read. A paper on the same subject which was read by Dr. J. A. Irwin, before the Society recently by Dr. Johnson, of Brooklyn, had attracted his attention, and it was on account of this that he was led to prepare the one then presented. In it he said that no positive case of acute metal poisoning by canned goods was known in London, and it was reasonably certain that where persons had been injuriously affected by eating canned meats the meat itself was tainted before being canned. In February last, he added, there were in Glasgow several cases of poisoning from tinned provisions, the symptoms being those of gastro-enteritis. An analysis showed salts of tin present, but it could not be proved that the illness was due to the tin. That canned goods usually contained traces of tin had been shown by several British chemists, and was a well established fact, but that such provisions did not usually produce any serious results was a matter of common experience. "I am not prepared to say," he stated in conclusion, "that tin compounds are inert, but evidence is wanting to show that the daily ingestion of fractions of a grain of tin compounds is manifestly injurious to health."

— "The American Society of Public Analysts" was organized at the office of Health Commissioner Raymond, in Brooklyn, on the 24th of November, the principal object of the Society being the dissemination of knowledge relating to the detection of adulteration and falsification of food products and drugs. A committee consisting of Dr. Cyrus Edson, of the New York Board of Health, Dr. E. H. Bartley, of the Brooklyn Board, and Dr. William K. Newtown, reported a form of constitution and by-laws, which was adopted.

— At a meeting of the New York Health Board held November 25th Dr. Cyrus Edson, chief of the Second Sanitary Division, reported that he had seized over fifteen hundred pails of preserved fruits on the ground that they were unfit for human food. He claimed that these fruits, being acid, were liable to attack the metal of the pails, which had loose covers, freely admitting air, and thus become exposed to dangerous contamination. A sample pail was examined by Dr. Waller, analyst to the Board, Inspector Martin, and himself, and the tin plate was found to contain lead. The action of Dr. Edson was indorsed by the Board.

— The Board of Health has been censured by the grand jury for alleged neglect of duty. The foreman reported to Recorder Smyth that in their opinion the storing of manure within the city was dangerous to the public health. It had been shown, it was set forth, that there were many tons of this manure along the East River, between Forty-Sixth and Forty-Seventh Streets, and diseases had been traced to this place as the originating point. In the opinion of the grand jury this was all due to neglect on the part of the Board of Health, which, they understood, was now meditating plans for the abatement of the nuisances. The Board was, however, deserving of censure for permitting such a state of things to exist. It is claimed by some that the Board is not as efficient now under the presidency of General Shaler as it was under that of Dr. Chandler.

— Dr. Charles Carroll Gray, a distinguished retired army surgeon, died at Geneva November 22d. He was educated at Hobart College, Geneva, and also studied medicine at that institution, receiving the degree of M. D. in 1861. In May of the same year he received an appointment as assistant surgeon in the army, and at the battle of Bull Run he was taken prisoner. He was confined successively in the prisons at Richmond, Salisbury, and Charleston, and was exchanged from the latter in 1862. He served throughout the war, and after it was over remained in active service in the army until 1879, when he was retired. His last assignment when on duty was at Fort Riley, Kansas.

— The report of the Committee on Vital Statistics of the State for the year ending September 30th shows that the number of registered deaths was 50,000; unregistered, but reported, 14,000; registered births, 44,000; unregistered, but reported, 24,000; registered marriages, 20,000; unregistered, but reported, 17,000. The average number of deaths per month was about 2200.

PHILADELPHIA.

— Our schools have settled down to their winter's work with classes not quite so large as last year, but they are better equipped, and are apparently doing better work than ever before. Professors Mallett and Osler have been warmly welcomed, and are considered decided accessions to the teaching strength of the two schools.

— A movement is now on foot which may result in good. For several years there has been a strong undercurrent of feeling in the medical profession throughout the State in favor of the establishment of some form of supervision over persons engaged in the practice of medicine, in order to protect both the community and the profession from the unqualified sharks who prey upon the sick. It is reasonable to suppose that the power to grant licenses to practice medicine belongs properly to the State, which cannot certainly evade the responsibility by delegating its duties to the College Faculties. The colleges, however, having enjoyed free trade in doctor-making for a long time, are extremely jealous of having their ancient rights restricted, and when a bill was brought before the Legislature a few years ago to establish a State Board of Health with power to regulate medical practice, the colleges at the last moment came in and quietly crushed it. This was a bitter disappointment to the Committee of the State Medical Society, which had been laboring for years to obtain a State Board of Health, and they naturally blamed the colleges for the defeat, and the result is that we have no Board of Health to this day. Without stopping to discuss who is to blame, we merely give this scrap of history to explain in part the hostile feeling which unfortunately and to some extent unjustly exists between some members of the State Medical Society and the schools.

— As an illustration of the state of public opinion, it is noticed that the County Medical Society and the Medical Jurisprudence Society have each appointed a Committee to confer with a Committee of the State Medical Society with regard to the advisability and feasibility of establishing a State Board of Examiners, which shall be empowered to grant licenses to practice to those found qualified, and to refuse the privilege to those who after examination are found to be incompetent. This Committee has had several meetings and has agreed as to the advisability and necessity of establishing such a Board, all its proceedings to be matters of record, and they are now engaged in discussing whether there shall be one additional for sectarian practitioners, or whether it shall be a mixed Board. One of the most active members of the Committee is Professor Wood of the University of Pennsylvania. It seems very likely that something will be accomplished by this joint Committee, and that a bill will be submitted before our next Legislature. A little, a very little, was gained by the adoption of the Registration Act, but it was a step in the right direction, and we believe that the community is now sufficiently enlightened to take another step. It is now generally known that the value of a medical diploma is chiefly of an æsthetic character, for it is not trustworthy evidence of the skill, professional attainments, moral character, or length of preparation of its possessor. Certainly some other proof of qualification should be demanded besides a stereotyped certificate of doubtful accomplishments, written in a dead language, before an individual may enter upon the serious and responsible duties of the profession of medicine.

— The Medical Jurisprudence Society, which started last January, is growing rapidly, and its meetings are well attended and interesting. At the October meeting Dr. John B. Roberts read a paper entitled Remarks on Legal Control of Medical Practice by a State Examination, which led to the appointment of the Committee just referred to. At the November meeting Dr. Charles K. Mills read a paper on The Case of Joseph Taylor, and Dr. H. C. Wood on The Absurdities of the Law as Illustrated in the Taylor Case. John Taylor was an inmate of the prison who killed his keeper, and who was found guilty by the Court, in spite of the fact that a Medical Commission had pronounced him insane, and suffering from delusional monomania. Weak-minded criminals have a hard time of it since Guiteau was hanged. What is very much needed is a sliding scale of responsibility suited to various degrees of mental unsoundness.

— Professor DaCosta recently exhibited a case at his clinic in which an attack of facial erysipelas was cut short in a remarkable manner by a hypodermic injection of a third of a grain of pilocarpine muriate. The patient received a blow in the face on Wednesday night, and the next morning the upper part of his face was erysipelatous, the inflammation extending rapidly up on the brow and over to the other eye. On Thursday afternoon he received the injection and after profuse sweating the tumidity of the eyelids subsided, and by the next morning he could open both of his eyes. The disease did not return and he became at once convalescent, but took iron for a few days before going home again.

— A curious form of lead poisoning was reported in a case of a woman whose death was investigated by the Coroner last week. The physician who made the examination reported that death was caused by inhalation of the fumes of the white lead paint on old boards which she had been in the habit of using for fuel.

— Dr. Robert H. Alison having resigned the position of Port Physician, it was tendered by the Governor to Professor Bartholow, who declined it; subsequently Dr. Henry Leffmann was appointed.

— On the 18th of November the large addition, built in modern style of Yardleyville freestone, to the German Hospital and out-buildings were presented to the Board of Trustees by John D. Lankenau, Esq., the President of the Board, who at his personal expense had purchased the ground and erected the buildings at a cost of three hundred thousand dollars. A most generous and philanthropic gift.

Correspondence.

COCAINE HYDROCHLORATE IN THE LARYNX.

Boston, *December* 1, 1884.

Mr. Editor, — In the report of the Proceedings of the Society for Medical Improvement published in the Journal of last week I said we had everything to learn in regard to the strength of the solution of cocaine hydrochlorate to be used as a local anæsthetic of the larynx, and also in regard to the best manner of applying it.

I have since tried a twenty per cent. solution (which I learned from recent German papers was the strength used in Schrötter's clinic) on the patient mentioned in the discussion as showing little effect from a four per cent. solution. The result was all that could be desired, sufficient anæsthesia being produced to enable me to reach any part of the larynx without exciting reflex phenomena, which before had been very marked and troublesome.

The solution was applied thoroughly to the larynx by means of a camel's-hair brush, and the anæsthetic effect was almost immediate. The solution was made without acid by adding a few drops of absolute alcohol.

I make this communication to prevent others wasting time with too weak solutions.

Yours respectfully,

Frederick I. Knight, M. D.

Miscellany.

PRECAUTIONS AGAINST CHOLERA.

Under the above heading President Arthur makes the following discreet recommendations in his recently delivered annual message: —

The pestilence which for the past two years has been raging in the countries of the East recently made its appearance in European ports with which we are in constant communication. The then Secretary of the Treasury, in pursuance of a proclamation of the President, issued certain regulations restricting, and for a time prohibiting, the importation of rags and the admission of the baggage of immigrants and of travelers arriving from infected quarters. Lest this course may have been without strict warrant of law, I approve the recommendation of the present Secretary, that Congress take action in the premises, and I also recommend the adoption of measures that will be likely to ward off the dreaded epidemic, and lessen its severity in case it should unhappily extend to our shores.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 22, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	603	225	22.40	16.64	3.52	7.68	2.56
Philadelphia	927,995	361	114	27.24	15.68	5.32	16.52	3.08
Brooklyn	644,526	239	79	16.38	23.94	—	8.40	.84
Chicago	632,100	229	99	36.90	12.15	4.50	20.70	4.05
Boston	423,800	159	42	15.75	16.38	1.89	6.93	.63
Baltimore	408,520	147	42	22.16	14.48	4.08	10.20	—
St. Louis	400,000	151	50	31.02	9.90	3.30	7.26	7 26
Cincinnati	272,400	131	53	19.76	13.68	1.52	5.32	1.52
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	81	25	14.76	14.76	4.92	3.69	2.46
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	46	11	13.02	10.85	4 34	2.17	6.51
New Haven	62,882	29	12	20.70	6.90	6.90	6.90	—
Nashville	54,400	24	7	37.44	16.64	—	8 32	—
Charleston	52,286	37	14	2.70	8.10	—	—	—
Lowell	71,447	24	4	24.96	12.48	4.16	16.64	—
Worcester	69,442	20	6	25.00	10.00	—	25.00	—
Fall River	62,674	22	13	40.95	13.65	—	9.10	4.55
Cambridge	60,995	18	8	11.11	22.22	—	—	5.55
Lawrence	45,516	10	5	20.00	—	—	10 00	10.00
Lynn	44,895	18	3	16.66	22.22	5.55	5.55	—
Springfield	38,090	12	4	33.33	8.33	8.33	25.00	—
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	10	2	40.00	30.00	20.00	10.00	—
New Bedford	30,144	12	4	8.33	16.66	—	8.33	—
Salem	29,503	7	0	—	14.28	—	—	—
Chelsea	24,347	8	1	12.50	37.50	—	—	—
Taunton	22,693	13	2	61.52	7.69	15.38	39.45	—
Gloucester	21,400	—	—	—	—	—	—	—
Haverhill	20,905	5	1	20.00	20.00	—	20.00	—
Newton	19,421	3	1	66 66	—	—	—	—
Brockton	18,323	4	0	25.00	50.00	25.00	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	0	—	50.00	—	—	—
Fitchburg	13,433	5	2	20.00	—	—	—	—
Massachusetts towns	—	60	9	8.20	6.56	—	6.56	—

Deaths reported 2492: under five years of age, 838; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 596, consumption 386, lung diseases 311, diphtheria and croup 256, typhoid fever 71, scarlet fever 60, diarrhœal diseases 58, malarial fevers 37, measles 34, whooping-cough 29, cerebro-spinal meningitis 14, erysipelas nine, puerperal fever seven, yellow fever one. From *diarrhœal diseases*, New York 22, St. Louis eight, Brooklyn, Chicago, and Boston five each, Cincinnati four, Nashville three, Baltimore and Fall River two each, New Haven and Chelsea one each. From *malarial fevers*, St. Louis 10, New York and Brooklyn seven each, Baltimore five, Chicago three, District of Columbia two, Philadelphia, Nashville, and Charleston one each. From *measles*, New York 16, Cincinnati nine, Brooklyn, Chicago, and Fall River two each, Fitchburg and Boston one each. From *whooping-cough*, New York 12, Philadelphia, Chicago, and Baltimore three each, Brooklyn two, Boston, Cincinnati, District of Columbia, New Haven, Lynn, and Newton one each. From *cerebro-spinal meningitis*, New York six, Chicago three, Philadelphia, Boston, Lowell, Holyoke, and Taunton one each. From *erysipelas*, Philadelphia and Fall River two each, New York, Boston, Baltimore, Cincinnati, and Nashville one each. From *puerperal fever*, New York and St. Louis two each, Brooklyn, Chicago, and Boston one each. From *yellow fever*, New York one.

In 111 cities and towns of Massachusetts, with an estimated population of 1,386,654 (estimated population of the State 1,955,104), the total death-rate for the week was 15.60 against 18.08 and 22.66 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending November 8th, the death-rate was 21.3. Deaths reported 3569: infants under one year of age 899; acute diseases of the respiratory organs (London) 357, scarlet fever 82, measles 79, diarrhœa 73, fever 60, whooping-cough 49, diphtheria 26, small-pox 23. The death-rates ranged from 16.6 in Birkenhead to 31.5 in Preston; Birmingham 18.3; Bradford 21.2; Leeds 25.2; Blackburn 19.8; Leicester 20.8; Liverpool 26.0; London 19.7; Manchester 25.4; Nottingham 25.7; Sheffield 22.4; Sunderland 20.8. In Edinburgh 17.6; Glasgow 25.6; Dublin 25.3.

For the week ending November 1st, in the Swiss cities, there were 17 deaths from consumption, diarrhœal diseases 14, lung diseases 11, diphtheria and croup five, small-pox two, typhoid fever three, measles one, whooping-cough one. The death-rates were, at Geneva 12.2; Zurich 7.9; Basle 12.4; Berne 23.3.

For the week ending November 8th, in the Swiss cities, there were 21 deaths from consumption, lung diseases 14, diarrhœal diseases nine, diphtheria and croup five, whooping-cough five, puerperal fever two, measles one, scarlet fever one. The death-rates were, at Geneva 10.2; Zurich 3.9; Basle 12.4; Berne 31.1.

The meteorological record for the week ending November 22d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Nov., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount, in Inches.
Sun., 16	30.026	44	55.6	33	98	61	83	81	SW	S	SW	4	7	4	F	O	C	—	—
Mon., 17	29.800	47	52	40	86	79	78	81	NW	NE	N	4	2	18	O	C	C	—	—
Tues., 18	30.265	30	47	25	76	37	71	61	NW	N	N	19	8	12	O	F	O	—	—
Wed., 19	30.280	30	36	25	94	92	90	92	N	E	N	12	28	26	Lt. Sn.	Lt. Sn.	Lt. Sn.	—	—
Thurs., 20	30.031	32	37	26	82	81	87	83	N	NW	W	20	8	16	T	O	C	—	—
Fri., 21	30.257	37	46	29	93	90	71	85	SW	SW	W	8	19	12	G	C	C	—	—
Sat., 22	30.454	42	50	35	78	78	78	78	W	E	S	4	6	10	O	C	C	—	—
Mean, the Week.	30.159	37.3	55.6	25.1				80.1										27.00	0.35

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM NOVEMBER 22, 1884, TO NOVEMBER 28, 1884.

McKee, James C., major and surgeon. Leave of absence extended one month. S. O. 273, A. G. O., November 20, 1884.

Goddard, C. E., major and surgeon. Assigned to duty at Fort Yates, D. T. S. O. 138, Department of Dakota, November 15, 1884.

Loring, L. Y., captain and assistant surgeon. Assigned to duty, as post surgeon, San Diego Barracks, San Diego. Cal. S. O. 135, Department of California, November 19, 1884.

Taylor, A. W., first lieutenant and assistant surgeon. Relieved from duty at Fort Omaha, Neb., and ordered for duty at Fort D. A. Russell, Wyo. Ter. S. O. 101, Department of the Platte, November 19, 1884.

Wilson, George F., first lieutenant and assistant surgeon. Granted one month's leave of absence from November 20th (Vancouver Barracks, W. T.). S. O. 180, Department of Colorado, November 18, 1884.

Wales, Philip G., first lieutenant and assistant surgeon. Now at Fort Cœur d'Alene, Idaho Ter., ordered for temporary duty at Vancouver Barracks, W. T. S. O. 179, Department of Colorado, November 17, 1884.

OBITUARY.

Dr. Harvey L. Byrd died in Baltimore, Md., November 29th, at an advanced age. Dr. Byrd was a native of Georgia. For many years he was a professor in the Medical College of Mobile, but at the breaking out of hostilities in 1861 he joined the Confederate army, and was attached as surgeon to Rylander's battalion of Georgia troops. He served in the army of Northern Virginia, and was thence transferred as post surgeon at Mobile, where he remained until the close of the war. After the war he came to Baltimore, and was one of the originators of the College of Physicians and Surgeons. Subsequently he helped in the organization of the Baltimore Medical College.

Suffolk District Medical Society. *Section for Clinical Medicine, Pathology, and Hygiene.* — There will be a meeting of this Section at 19 Boylston Place, on Wednesday, December 10, 1884, at 7.45 P. M. Papers by Dr. J. J. Putnam, Illustrations of Certain Developmental Diseases of the Nervous System, and Dr. P. C. Knapp, Observations on the Cutaneous and Deep Reflexes.

Robert T. Edes, M. D., *Chairman.*

Gynæcological Society of Boston. — The regular meeting of the Society will be held at the Medical Library Rooms, No. 19 Boylston Place, on the second Thursday of December, at four o'clock, P. M. Papers will be read as follows: Dr. Charles E. Whitcomb, on Cancer of the Uterus, and Dr. M. L. Brown, on The Pathology of Uterine Fibro-Myomata.

H. J. Harriman, M. D., *Assistant Secretary.*

Books and Pamphlets Received. — A Contribution to the Clinical Study of Rötheln or German Measles. By W. A. Edwards, M. D. (Reprint from the American Journal of the Medical Sciences, October, 1884.)

Contributions to Surgery and Medicine. Part I. Intestinal Disease and Obstruction. London: K. K. Lewis & Co.

Leçons de Clinique Chirurgicale Faites à l'Hôpital Necker par le Dr. Charles Monod. Paris: Publications du Progrès Médical.

A Handbook of Ophthalmic Science and Practice. By Henry E. Juler, F. R. C. S., Ophthalmic Surgeon to St. Mary's Hospital. With 125 Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1884.

Coryza Vasomotoria Periodica ("Hay Asthma") in the Negro, with some Remarks on the Ætiology of the Disease. By John N. Mackenzie, M. D., of Baltimore. (Reprint from Medical Record, October 18, 1884.)

Transactions of the Academy of Medicine in Ireland. Vol. II. Edited by Wm. Thomson, M. A., F. R. C. S., General Secretary. Dublin: Fannin & Co. 1884.

Transactions of the Medical Society of the State of New York. For the Year 1884. Published by the Society.

On Diseases of the Rectum and Anus. Including a Portion of the Jacksonian Prize Essay on Cancer. By Harrison Cripps, F. R. C. S. Philadelphia: P. Blakiston, Son & Co. 1884.

Dental Caries, a Critical Summary, and the Prevention of Dental Caries. A Series of Papers read before the British Dental Association. By Henry Sewill, M. R. C. S. and L. D. S. Eng. London. 1884.

Annual Report of the National Board of Health. 1883. Washington: Government Printing Office. 1884.

Transactions of the Texas State Medical Association. Sixteenth Annual Session. Held at Belton, Texas, April 22–25, 1884. Fort Worth, Texas. 1884.

Malarial Fever in Parturient Women. By Philip C. Williams, M. D. (Reprint from Transactions of the Medical and Chirurgical Faculty of Maryland.) 1883.

Club Foot. Is Excision of the Tarsus necessary in Children? By De Forest Willard, M. D., Lecturer on Orthopædic Surgery, University of Pennsylvania, etc. (Reprint from Transactions of State Medical Society for 1884.) Philadelphia. 1884.

Prostatic Hypertrophy and Urinary Obstructions. Its Treatment without Catheterism. Delivered at the Annual Meeting of the Michigan State Medical Society, held at Grand Rapids, June 11 and 12, 1884. By A. B. Palmer, M. D., LL. D., Ann Arbor.

Conférences Thérapeutiques et Cliniques sur les Maladies des Enfants. Par le Dr. Jules Simon. Tome II. Publications du Progrès Médical.

Annual Report of the Board of Regents of the Smithsonian Institution, showing the Operations, Expenditures, and Condition of the Institution for the Year 1882. Washington. 1884.

The National Dispensatory. Third Edition. By Alfred Stillé, M. D., LL. D., and John M. Maisch, Phar. D. Philadelphia: Henry C. Lea's Son & Co. 1884.

Address.

CONSERVATIVE PROGRESS.[1]

FIRST ANNUAL ADDRESS TO THE NEW YORK STATE MEDICAL ASSOCIATION, DELIVERED IN NEW YORK, NOVEMBER 18, 1884.

BY HENRY D. DIDAMA, M. D., SYRACUSE, PRESIDENT.

Is not this platform broad enough to afford standing and working room for every one who seeks to know and practice truth?

It is fashionable in certain quarters to decry the medical schools of our country; to censure their practice of so oiling their portals that the grossest ignorance can find an easy and welcome admission; to inveigh against their methods of teaching; and to condemn the facile, if not farcical, examinations which permit incompetence to seize a title and go forth to prey upon community.

Indiscriminate and unmixed reprobation is not only unjust; it defeats its purpose. For whatever may be the deficiencies of our great schools, however far they fall short of what they can and should be, they have excellencies which should not be ignored. They have given to the profession men renowned throughout the world for their wisdom and skill. In their corps of teachers are many whose aptness and industry and ability are unsurpassed. They afford clinical opportunities so rich and varied as to leave nothing to be desired.

If their requirements for entrance and exit have been too low, is it not because the profession have not demanded higher? If the terms have been too short, and the years required too few, and the methods unnatural and deficient, is it not because the profession have given little practical encouragement to the hearty, even if too speedily abandoned, attempts which some of the schools have made to secure needful reform?

Can it be doubted that the accomplished and devoted teachers in the schools are always ready and willing to respond to any earnest call of the profession for a higher standard?

Shall this call be made? Will those who make the demand prove their sincerity by pledging their influence, their aid and comfort, to those schools which, at whatever labor and expense, shall eliminate the faults of the present system and bring it into harmony with the teaching in all institutions of learning, and with the law of mental evolution and growth?

That brilliant results have been achieved under the prevailing system of medical teaching has not been, and cannot be, denied. Would they not have been still more brilliant and satisfactory under a better system?

The native Ceylonese, with instruments which would hardly be tolerated in an American blacksmith's shop, sits on the ground and patiently fabricates jewelry and filigree which are marvels of exquisite delicacy and beauty. Retaining his present artistic taste and skill how much more and better work could he do with the perfected instruments of his civilized brother?

The superiority of the graded system of medical training is not universally acknowledged. At least one prominent teacher and one good medical journal openly profess not simply a contentment with the present unnatural system, but an admiration for it, and a desire to have it conserved. The attempts to reduce chaotic elements to order they denounce as impracticable, and they kindly predict and counsel their early abandonment.

Proposed reforms always provoke some opposition. The attempt to introduce into Mexican farming such modern implements as the steel plow, the cradle, the reaper, and thresher, is earnestly combated by many of the native workers. They not only adhere to the sickle and to the old one-handled Palestine plow, — an iron-shod stick which barely scratches the soil, — and to the threshing floor, where oxen and mules tread out the grain, but they insist that this clumsy system is the better. They hill their corn as our own farmers did fifty years ago. They use a hoe in the operation. But the hoe has no handle, and the native partly creeps and partly jumps, like a kangaroo, from hill to hill, as he goes through the field. Still he loves and reveres the old ancestral implement. He denounces the handle as a device to promote laziness. And he asserts that with a primitive hoe in each hand he can do more and superior work. It was only by compulsion that these earnest Mexican conservatives could be brought to use wheelbarrows on the public works. They preferred to carry their loads of stone and dirt on their backs and heads. And such was their devotion to their ancient method that at first they actually shouldered wheelbarrow, dirt, and all, and then vociferously condemned the new notion as a fraud and nuisance.

Honest differences of opinion should be treated with respect and tenderness. And since these differences exist regarding medical education it may not be unprofitable briefly to compare and contrast the antique system with the modern.

Most of you know from personal experience that in the large majority of medical schools in this country the student, at the very outset, is expected and required to hear lectures on all the branches taught — the most advanced as well as the elementary — every day. Although not usual, the occurrences to be described are by no means impossible. An ingenuous youth, full of zeal, industrious, ambitious, but with scant knowledge of the elements of the most moderate education, is received without question at the grand old conservative college. He matriculates. He attends a lecture on anatomy, — the first he ever heard of this important subject. He is delighted. He enters the laboratory and listens with pleasure and profit to the professor of chemistry. Truly, he says to himself, the ways of wisdom are ways of pleasantness, and all her paths are flowery walks of peace.

He hastens into the surgical department. The lecture is introductory. But in a few days, and while his knowledge of anatomy is still limited to an awful admiration for the suspended skeleton and for the tray of disarticulated bones on the table, the subject of the lecture is aneurism. The bright description, the lucid explanation make the whole subject interesting and satisfactory. The eloquent professor describes the operation for ligating the radial artery in its lower third: "Hold the hand supine; make an incision two inches long on the radial side of the *flexor carpi radialis.* The integument and aponeurosis being laid open the artery is at once brought into view." This is all clear enough to you, learned Fellows, because you have received sufficient anatomical instruction. But the fresh pupil whom we are considering, — one of us perhaps, — whose hopes but a few days ago were radiant and towering, becomes perplexed and disheartened, if not disgusted, because he has no knowledge of what radial may mean, whether aponeurosis is an animal or vegetable, or whether the *flexor carpi radialis* be a bone, nerve, or sinew, situated on the crown of the head or sole of the foot.

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[1] Concluded from page 531.

After the wearisome — wearisome because incomprehensible — incomprehensible because the student has not been prepared to understand it — lecture on surgery is ended, the still plucky pupil ventures into the room where the professor of the art of medicine is showing how insufficiency of the tricuspid valve, by obstructing the onward flow of blood in the *vena cava*, may cause congestion of the portal system, and then gastric catarrh, hæmorrhage, and albuminuria. He does not doubt the truth of the demonstration. But it loses all its beauty and force because the poor fellow has not the slightest notion of what tricuspid, or any other valve, may be, or where the *vena cava* or portal system is located.

In the obstetric department the same failure to comprehend the lecturer results from the same want of preparation. But the rules of the school require attendance on all the lectures. And so, hour after hour every day is wasted, by an earnest and ambitious student, in listening to what he cannot understand, and so neglecting the studies which are prerequisite.

The short winter course is passed, and the student emerges in the early spring with a head full of jumbled and meaningless words, with muddled ideas of medicine, obstetrics, and surgery, and with insufficient knowledge of anatomy, physiology, and chemistry, *because* the time which should have been devoted to these fundamental studies has been frittered away in a dazed attendance on lectures he had never been prepared to understand. The next winter he goes through exactly the same course, but he is now better able to comprehend the teaching.

In *building a dwelling-house* you prepare a plan, — first consulting the good wife regarding the fitness of things, — and then you go ahead decently and in order. You lay the foundations deep and broad and strong. You carry up the superstructure carefully and gradually, so that no cracks nor flaws shall afterwards appear. You put on the roof; finish the rooms honestly, without veneer or graining, and wait a sufficient time before you move in with your family. You do not jumble all together, working an hour on the turret, another on the trench for the cellar walls, and still another on window sills and hard finish and joists and rafters.

If you were to *train for an athlete* you would not unwisely overstrain your sinews the first day by doing work beyond your ability. You would begin with light weights and moderate walks, increasing the labor each day as the muscles became developed and strong.

If it should be proposed to *evolve a mathematician* out of raw material we would not ask the candidate the first day to solve the problem of the hare and hounds, nor to listen to a demonstration of the twelfth Proposition of Euclid. We would begin with the simplest examples in addition and subtraction, and then advance through the higher and still higher departments, till at length, like Verrier, the fully-developed candidate could discover and locate a planet by pure mathematical calculation.

In *training a child* to be a *linguist* we begin with the simplest form of speech and lead him on, by precept and example, till he can speak with the tongues of men and of angels, and have charity besides. It would be unnatural, and therefore unwise, to allow him to waste time at the start in listening to the sounding brass of Cicero's orations, or the tinkling cymbals of Xenophon's fables.

If in every other department of human industry the natural development plan is pursued without opposition or question, why should medical education be the marked exception? Why, if we wish, as we ought, to *utilize* to the utmost *the time and talents* of a *medical student*, should we not take him step by step — for that is what the graded course means — through Anatomy and Physiology, Histology and Chemistry up to Surgery and Practice and Obstetrics? Why should we have him fritter away the scant but precious hours of his first course of lectures in listening to what he cannot by any possibility fully comprehend? Would not this be doing what ought not to be done, and leaving undone what ought be done?

The natural system of medical education is no longer a beautiful and dreamy speculation. It has been fairly tested, and it has been found efficient. Those who know it best give it the heartiest approval. The requirements for matriculation are, or should be, more and more exacting every year. The written and oral examinations are frequent and thorough. The yearly and final ordeals are very trying and severe; but the students who have brains, application, and faithfulness always come through triumphantly. Even those whose natural capacity is not the greatest succeed remarkably. Under a natural system their mental growth is rapid and astonishing. At the last they seldom fail because their time has been husbanded and properly employed; because their studies have been interesting and delightful inasmuch as they have been thoroughly comprehended and mastered every step of the way.

Here are two pictures. Do they not represent the prominent differences in requirements and results between the ancient, but still prevailing system, and the modern one?

In one case: No preliminary examination; only two short courses of lectures required, the second identical with the first; the novice required to attend lectures on every subject every day, neglecting preliminary work because the time which might have been devoted to it has been worse than wasted in hearing learned talk which he was not prepared to understand; valuable clinical and laboratory opportunities; no examinations to advance to higher grades, for there are no grades; a final examination which is so superficial in many instances as to be little better than a farce, and whose meshes are large enough to let mediocrity and inferiority, as well as the superiority, which is always present, pass through with greatest ease.

In the other case: Preliminary examinations which require a certain, even if insufficient, preparation; three years of training at the college, the novice beginning at the beginning; all his time employed in hearing and doing what he can and should understand; his capability and progress tested by frequent oral and written examinations; his advance from grade to grade checked if his fitness be not established; valuable clinical and laboratory opportunities; searching yearly examinations; and a final examination, which, although of great severity, does not, except in rare instances, result in rejection, because the student has been educated in a way which accords with nature and does not violate it.

And yet the difference between the old system and the new is greatly one of arrangement. A change from one to the other can be effected with as little commotion as was noticed when twenty discordant and puzzling computations were consolidated into the present admirable system of standard time.

No more teachers would be required; no better lectures could be delivered, or would be needed. The labors of the professors would be considerably increased because the total length of the lecture season would be more than doubled, but they would hardly be conscious that a radical change, amounting to a revolution, had taken place. But the students, who are to be the physicians of the future, and the confiding patients of these physicians, would derive incalculable benefit.

Would not the adoption, by all the schools of this country, certainly by those of this State, and especially by the three prominent ones in this medical metropolis, of the natural system, with the honest and vigorous enforcements of its entire demands, secure a practical elevation of the medical standard, so much yearned for, deserve the support of the profession, and restore a confidence which has been seriously impaired? Would not this adoption protect the community to the greatest extent possible from incompetence, and render unnecessary, so far as legitimate medicine is concerned, — the only medicine about which we have any solicitude, — the proposed State Board of incongruous Medical Examiners?

Original Articles.

NOTES ON NASSAU AS A WINTER RESORT.

BY HAMILTON OSGOOD, M. D.

Physicians of our Northern States are frequently puzzled as to where to send such patients as are unable to bear a northern winter. Many of the winter resorts in our Southern States are situated upon our Atlantic seaboard, or at any rate are exposed to sudden fall of temperature, and therefore are not entirely suitable for the very delicate. But we have one spot which is free from the latter objection. The town of Nassau, on New Providence Island, one of the Bahamas, has a climate whose temperature in winter is marvelously steady, and for such cases as may be safely sent there Nassau possesses advantages which can be found nowhere else in the vicinity of our country, and very rarely, and perhaps with only two or three exceptions, in the Eastern hemisphere.

Moreover, Nassau lies near at hand. One of the swift sailing steamers — the Cienfuegos and the Santiago — leaves Pier 16 or 17, East River, New York, every other Thursday during the winter. The agents of this line of steamers, J. E. Ward & Co., 113 Wall Street, are prompt and courteous. Leve & Alden, Washington Street, near the Old South Church, are their Boston agents.

These steamers are luxurious in every respect. The Cunard line never gave its passengers such a bill of fare, nor food so excellently prepared, as may be found on these Nassau steamers, and whoever falls into the hands of Chief Steward Petersen of the Cienfuegos will discover a steward who is kind to his passengers, especially invalids, not because he expects a fee (he is a *rara avis*, inasmuch as he refuses fees) but because he *will* make them comfortable, and if a lady desires a quail on toast or broiled oysters at nine P. M. she can have either. I emphasize this matter because it is important. Those who go to Nassau are usually delicate, and the physicians who send them will be glad to know that the ocean trip will be as comfortable as luxuries can make it. Moreover, such is the gentlemanly care extended to passengers by the stewards, that if a lady were left safely on board one of these steamers in New York, I should deem it perfectly feasible for her to make the trip alone if necessity urged it.

The fare to Nassau is fifty dollars. The trip occupies sixty to seventy hours. You leave New York deep in snow and ice on Thursday P. M. On Sunday you are looking upon the luxuriant tropical verdure of Nassau and are eager to exchange winter garments for a summer dress. At this season the passage commonly is quiet and free from severe weather. The hurricanes and dangerous storms to which the Southern Atlantic Islands are often subjected confine themselves to the months between April and October.

Reaching Nassau, the passenger encounters the one disagreeable feature of the trip. It is impossible for the steamers of the Ward line to cross the bar into the harbor. Passengers, therefore, are transferred outside of Hog Island (a long, low, green breakwater which nearly incloses the lovely sheet of water lying between itself and Nassau proper) into a filthy schooner, reeking with the smell of bilge water, and too well known as the Dart. If she were called the Dirt, there would be a satisfactory fitness in the name. It is no joke for a delicate lady to walk down a steeply inclined plank into this tender, which, probably, is flying up and down in a chop sea. Once on board, however, the trip to land is made within thirty minutes. *But*, — and this is truly a terrible alternative, — *but*, if the wind blow strongly from the north, no such transfer can be made at this anchorage. The steamer proceeds to South West Bay, on the other side of the island, and there in quiet waters removes her passengers to the dirty Dart, which is obliged to beat all the way to Nassau, sometimes occupying ten hours before reaching the town. The effect of this prolonged transfer upon invalids, without food or shelter, need not be described. When I left Nassau the steamer agent at that place had just begun to send carriages across the island to meet passengers whenever the steamer was forced to go to South West Bay. In that case they were set ashore in row boats. Still, this method involves a drive of about sixteen miles, and sometimes it must be taken after dark. It would be well in writing for rooms by a preceding steamer to request Mr. Morton of the hotel to send a carriage to meet the steamer in case she be obliged to go to South West Bay. A passenger could in any case be set ashore in a row boat in order to take the carriage.

When I left Nassau something was being done in the direction of cutting a channel across the bar in order to allow vessels drawing over fifteen feet to enter the harbor. If America owned Nassau this would have been done years ago. But Nassau, in so far as improvements are concerned, is the quintessence of Sleepy Hollow, and its rulers are mostly sleepy fellows.

Once in sight of the place, you see a town straggling picturesquely along a low shore, made tropical by groups of banana and cocoa-nut, almond, palm, and other trees of the latitude, and climbing gradually away from the harbor until it reaches a height of 230 feet, and there it stops, for the island goes no higher. Landing at the wharf you may walk in five minutes to the hotel if you choose, taking your left along Bay Street to Parliament Street and so up to the gates of the Royal Victoria Hotel, a large building of limestone, set in an outer frame-work of balconies and large posts — the house being white, the wood-work red. This is a surprisingly well-kept house, and Mr. Morton, the obliging and courteous host, understands his business. When one considers that all meats and ice, oysters and game, and wines, and many vegetables must come from New York, the table, which is well served and liberally supplied, seems remarkable. The house is absolutely clean. Scrubbing never ceases. Rates of living vary from $1.50 to $3 per day, according to location. Well water in Nassau is unsafe for drinking purposes. The water used for drinking at the hotel is rain water stored in a cistern, and seemed perfectly pure. There are no water-closets or fixed wash-basins in the hotel proper. The outlook from the northern side over quaint houses and profuse verdure upon the beautiful harbor is very charming. The favorite rooms are upon this side of the house, but inasmuch as the sun never touches this front, I should advise invalids to choose southern rooms. They are a little warmer during the day, but they have the medicinal benefit of sunshine. Inmates can occupy the balconies on the northern front during the day if so inclined. Write for rooms in the eastern and southeastern end of the house. Rooms facing directly south are a little noisy in early morning hours. Attached to the hotel is an old building formerly used, and now known as a "College Building." In this house the three rooms on the upper and *western* side are the best and quietest of all.

The dews of Nassau are phenomenally heavy. This is another reason for choosing southern rooms. The northern apartments are much damper. It is not safe for invalids to be out of doors after five o'clock P. M., and nine o'clock in the morning is quite early enough for out-of-door plans. During the winter rains are infrequent and the sun an almost constant companion. When one first experiences Nassau weather it seems oppressively warm, and the temptation is to leave windows open at night. It is safer, however, to close all windows at six P. M., and wait until equilibrium between the temperature of the earth and air has become somewhat established before opening them again, and then only one should be raised, and that merely a few inches. The dampness of the night air in Nassau is often a serious matter to patients who are subject to rheumatism or neuralgia. It disappears quickly after sunrise, for the island is composed of very porous limestone, and together with the heat of the sun very soon disposes of moisture. After four P. M. invalids will do wrong to *sit* out of doors. They may walk until five o'clock on sunny days.

As to amusements: There are delightful walks and drives in various directions. The roads are smooth and solid. Saddle ponies at seventy-five cents the hour are numerous, and one may ride daily at even lower rates. For driving, a carriage and man may be engaged for two hours daily at a cost of six to eight dollars per week. The horses are small but able. Space will not permit a description of the very beautiful though quiet scenery of the island and of its objects of interest. For those who are able shooting repays all trouble. Fish are remarkably plenty, and of such great variety that they have never been classified. Fishing, therefore, is a favorite sport, and by sailing a few miles out you may catch noble sea-bass and be seriously plagued at the same time by sharks. The lesser fish have received most comical names. At breakfast you eat "Hamlet," "Dauphin," "Cock-eye," "Grunt," "Nurse," "Pilot," "Miss Nix," or "Schoolmaster." To eat a *filet* of *fried schoolmaster*, by the bye, gives one a sense of compensative justice, even though school days *be* far in the dim past. Sailing is another enjoyment, and there was never more perfect opportunity nor finer waters. There are several good and fast boats managed by negroes who are thoroughly competent. Engage Capt. Billy Major, and you will have his new boat and a most companionable skipper. The "Sea-Gardens," the "Sea-Windows," the "Coral Reefs," and the islands are the favorite objects of a water trip. The exquisite sea-fans, coral, "Angel," and "Rainbow" fish are vividly seen at the Gardens, and a black fellow will bring up any fan or coral or sponge you may point out.

Near the hotel, in an octagonal building, once used as a prison, and formerly occupied many a time by private prisoners (for Nassau was once the favorite rendezvous of the notorious Blackbeard), is a well-chosen circulating library of 6000 volumes. Fifty cents per month allows one to take out five volumes daily. There is a sightly church devoted to the English service. Churches of every denomination are numerous among the blacks, who are steady church-goers. Shops are plenty. There is one good apothecary shop, the "Nassau Dispensary." In another I asked the proprietor where he obtained his alkaloids. A look of blank stupidity was the reply I received. He had never before heard the word. There are 16,000 inhabitants, of which, perhaps, 300 are whites, the remainder, naturally, are negroes, and mostly of the happy-go-lucky order, who think themselves equal, if not superior, to the whites. The men and boys beg for coppers on all occasions, and for no reason. Women and girls never do. But all are civil and good-natured. The soldiers of the garrison are black, their officers white.

It is claimed that the climate of Nassau is not debilitating. This is untrue. Many over-enthusiastic articles upon Nassau have been and will continue to be written. Many individuals, the greater number of visitors, indeed, find the air debilitating, especially during the early days of their stay. Ocean breezes are very nearly constant, but they are warm and moist. The temperature is remarkably uniform. I saw the mercury at 65° F. I saw it once only at 80° F. But during nine days out of ten, between December and March, it varies between 70° F. and 75° F., until one begins to disbelieve the thermometer. During my stay of two months I kept careful record of the thermometer, the average being, at nine A. M., $71\frac{9}{10}$° F.; at 1.30 P. M., $73\frac{1}{2}$° F.; at 6.30 P. M., 71[illegible]° F. Barometer averages a pressure of 30′ throughout the winter.

Observation convinced me that phthisis in the early stages will improve in this climate *if*, let it be noted, patients are careful in regard to their hours out of doors. It is claimed that this disease rarely or never originates in Nassau, excepting among the blacks, and they average only four cases in 1000. I think it would be as unfair and as hopeless to send a patient in the advanced stages of consumption to Nassau as to send him elsewhere. Heart disease ought to improve here.

Neuralgic and rheumatic patients who were at Nassau last winter cursed the day of their coming and their doctors for sending them there. On the contrary, I met others who, notwithstanding they suffered last winter, had been there every winter for years, and will continue to go. Of course every case, whether of rheumatism or consumption, is largely a law unto itself, and this explains why one case thrives and another does not. Much depends upon a clear understanding of his patient's peculiarities before a physician sends him to this or any other winter resort. According to Dr. Kirkwood, a resident physician of forty years' observation, "consumption invariably finds relief in Nassau." A few grains of salt were well applied to this statement. Incipient phthisis would, probably, improve or be arrested. Likewise, but with less certainty, phthisis in the second stage. Consideration, however, should be given to the ability of a given case to live in sea air which is more or less charged with moisture. Invalids have strong idiosyncrasies in regard to sea air. It stimulates some; others are depressed by it. Here, again, the physician should know whether his patient can bear such an atmosphere. Bronchial catarrh, according to my experience, improves in salt air, and, therefore, at Nassau. Still it must be remembered that Nassau debilitates a large percentage of invalids who go there. But after leaving the island they find they have gained in strength. The climate continues its good effects weeks after it has been left behind. Syphilis, even of the slightest degree, does very badly in this climate, and progresses rapidly. In one case which I treated while there the disease, supposed to have disappeared fifteen years before, made its appearance in the long bones. Hip-joint cases and rachitis improve in Nassau.

Malaria and remittent fever abound during the summer, and in some localities during the winter, especially if the wind blow from the south. The latter is sometimes so intense that it suggests yellow fever, a few cases of which sometimes occur in summer. Leprosy exists, and there is a special hospital for lepers.

Cases of nervous prostration find the Nassau climate extremely favorable, far more so than any of our American winter resorts.

Liver affections do fairly well, and I observed steady improvement in a serious case of nephritis.

Visitors must not expect to be able to keep up their milk diet in Nassau. Milk is very scarce and very poor when obtained. I discovered that several physicians had ordered patients who were in Nassau to live on milk. This simply shows what, unfortunately, I observed in many instances during my stay here and elsewhere, that physicians send their patients away from home without being properly familiar with the details of the places to which they send them. This, confessedly, is a two-edged sword which cuts both ways. It injures the physician. It infuriates the patient. A physician can easily procure all details from resident physicians in any resort. But, naturally, the reports given by such resident medical men are apt to present the golden side of the shield. This must not be forgotten. *Cum grano salis* these reports are useful. Frederick Corbett, a colored man who lives at Mackie's Corner, will supply a limited amount of honest milk at twenty cents per quart. He is not generally known, and should be engaged *sub rosa*. Cow's milk at the hotel is an extra at twenty-five cents per quart, and is poor. Condensed milk is used at table. Gentlemen have been known to send cows to Nassau for the use of wife or daughter. This is useless. There is no pasturage on the island.

The best resident physician in Nassau is Dr. W. G. Maclure. His house overlooks the hotel grounds. Educated in the University of Pennsylvania, in Dublin, and in London, he is able, and familiar with all the modern means of diagnosis and treatment. Moreover, he is a very agreeable gentleman. Dr. Kirkwood has retired from practice.

Visitors may carry with them a letter of credit, American paper or gold, or their check-book. Mr. Morton requires American currency in payment of hotel bills. American drafts are worth a premium at Mr. Lord's banking-house, next the post office. Request him to provide you with American gold, and give him three days' notice and for your check or a draft on your letter of credit he will pay the face value in American gold, and give you two or three per cent. premium besides. You lose this percentage at the hotel. The currency in use at Nassau is English silver and copper. English gold is never seen.

I had nearly forgotten to suggest that invalids who visit Nassau will improve more rapidly if they are advised to remain *indoors* for two or three days after their arrival; venture upon the balcony for only an hour or two during the next three days, and thus gradually become acclimated. Invalids should be made to understand that their first two weeks in Nassau climate may disappoint and discourage them, for the debilitating effects of the atmosphere are very exhausting at first. They should be patient and wait until they have become accustomed to the climate. From that moment they begin to improve.

There are three or four boarding-houses in Nassau. The largest, near the hotel, is said to be satisfactory. The rooms in the hotel on the third floor are much quieter than those on the story below, and more favorable for chest cases, because farther from the ground, which is always damp at night. Delicate cases should wear thin undergarments at night. There are no sudden changes of temperature, but the sensitive feel the effect of dews, which are far more profuse than one would easily believe until he had seen them.

Once or twice during the month of March, in case a sufficient number of passengers wish to go that way, Ward & Co. are willing to run their steamers, on the homeward trip, into Savannah. The fare is then the same as if one went on to New York. Otherwise visitors are obliged to reach the States by the way of Cuba, and occupy two weeks in doing so. Of course no invalid would think of going directly to New York in March, which is the month of exodus from Nassau. In my own case, not wishing my invalids to go through Cuba, I chartered a new three-masted schooner which came into the port, provided the necessary eggs, chickens, milk, beef, and fruit, and not only enjoyed a delightful run to Key West, where we were taken off by a pilot boat, but I saved at least one half the ordinary cost of going *viâ* Cuba. The captain gave up his cabin to my party, and took us across in forty-eight hours for $150. I then paid the pilot boat twenty dollars for setting us ashore. In making this arrangement it is necessary to be sure of having a *clean* schooner. Beware of old coasting vessels.

I trust my notes will be of use to physicians. They might be much more extended, but I think I have given all the necessary points, many of which would have been valuable to me if I could have obtained them before I went to Nassau. Invalids usually begin to go to this resort in December, the majority setting out after the 15th of the month. The hotel is closed by April 30th. Invalids begin to leave the port on the 1st of March. It is well to engage rooms by the mail preceding the departure of visitors. Address Mr. Morton, Royal Victoria Hotel, Nassau, N. P., Bahamas. He is very obliging in making any change of rooms which may be desired by his guests. No telegraphic communication exists between Nassau and the main land. Mails arrive and depart twice monthly.

CASE OF HYSTERICAL HEMIANÆSTHESIA, CONVULSIONS, AND MOTOR PARALYSIS, BROUGHT ON BY A FALL.[1]

BY G. L. WALTON, M. D.

Assistant to the Department for Diseases of the Nervous System, Massachusetts General Hospital.

IT has been long known that hysteria may be brought on by trauma both in persons predisposed to functional nervous disease, and in those possessing no such tendency. The subject has acquired a special interest of late through its medico-legal bearing, and many cases are on record in which this variety of nervous disturbance has formed the basis of claims for damages after railway accident.

Attention has been recently called[2] to the importance of searching carefully for hemianæsthesia in cases of vague nervous injury following railway collision or other shock, in that this symptom is apt to persist after others have passed away, and because when found it furnishes a sign of real functional cerebral disorder whose simulation in all its details would be extremely improbable as well as difficult. This point is of the greatest practical value on account of the peculiar difficulties surrounding the investigation of this class of cases. Even in a case of simple hysteria, without apparent ground for deception, the difficulties are often great in the way of deciding just how much of the clinical picture before us is genuine, and how much is due to conscious or unconscious simulation. How much harder must this question become when thousands of dollars hang in the balance. This factor should put us especially on our guard, but on the other hand it should not be allowed to lead our skepticism too far and cause us to include in our suspicions the innocent with the guilty. The chief value of such cases as the following lies in the fact that no claim for damages exists, so that the chances for malingering pure and simple are greatly reduced, and we have an opportunity to see how a severe and lasting functional disorder may be brought on in one person by an accident which in another might give rise only to passing mechanical injuries. Our patient possesses evidently by inheritance a marked neurotic tendency. Enough cases of traumatic hysterical hemianæsthesia have been published occurring in persons possessing no such taint to show that this is by no means a necessary factor.

The name *hysterical* is perhaps unfortunate as applied to these cases, inasmuch as a certain degree of opprobrium is suggested by the word hysteria, which these cases hardly deserve, where there is a real cerebral disturbance, the exact nature of which, to be sure, we do not yet understand, but whose existence we cannot doubt, and whose symptoms we can study and classify with as much accuracy as those of any other disease. The word *functional* is perhaps preferable, in that it expresses the condition without carrying with it misleading associations.

CASE. The patient, Miss H., American, aged twenty-nine years, has been under treatment in the Nervous Out-Patient Department of the Massachusetts General Hospital for about nine months, having entered with the following history: She belongs to a family of neurotic tendency. Her mother is an extremely nervous woman. Her brother suffers from chronic rheumatic disease, affecting at present the vertebral articulations. Her father is said to have suffered from a similar complaint. There is no history of insanity in the family. She herself was always well and strong, with the exception of general nervousness and recurring sick headaches, until six years ago, when she fell down the cellar stairs, receiving severe bruises upon the back and abdomen. The accident was followed by unconsciousness lasting one week, and by confinement to bed for four and a half years. During this time she suffered from continuous pains in the back and right side, including the head, trunk, and extremities, for which she inhaled ether for some months, and afterwards took much morphia. For varying periods during this time she lost all power of motion on the right side. Sensation on the right side was wanting most of the time. Cramps, convulsions, and vomiting were frequent. The general condition gradually improved, and the motor paralysis lessened, becoming complete only at intervals. Pain in the back persisted, together with pain in the hypogastric region and difficulty in passing urine.

Physical examination on admission. Patient is a well-nourished woman, of fair intelligence and emotional tendency. All movements are slow and somewhat awkward on account, the patient says, of pain in the back. The tendon reflex is greatly exaggerated, the lightest tap causing a twitch of the whole body. The pupils are alike and react normally to light. There is great sensitiveness to pressure over the lower cervical and middle dorsal vertebræ, also at various spots on the scalp. Considerable loss of power exists in all muscles of the right side, and there is diminution of all varieties of sensation on the right side to the median line. Only heavy pressure is perceived at all on this side, and neither pricking, pinching, nor the strong faradic current causes pain. The prick of a pin draws no blood on the right. The patient is unable to distinguish movements of the elbow, wrist, or shoulder-joints with the eyes shut.

There is entire loss of *hearing* by the bone on the right, and the hearing through the air is greatly impaired, the medium voice being heard only in the immediate vicinity. High tones (tested by Blake's method) are heard up to 30,000 vibrations on the right, to 35,000 on the left. The hearing on the left is normal by bone and air. There is entire loss of the senses of *smell* and *taste* on the right. *Vision* is normal on the left. On the right all responses are slow, the visual field is retracted almost to central, amblyopia exists even for central vision, and colors are distinguished with difficulty. Long-continued effort on the part of the patient brings the vision of the right eye gradually up to normal (a fact which alone establishes the functional nature of the anæsthesia). The optic disks are normal. No abnormality is found in the organs of reproduction.

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[1] Read before the Suffolk District Medical Society, October 25, 1884.

[2] Putnam, Boston Medical and Surgical Journal, September 6, 1883.

On three different occasions within the first month of treatment at the hospital the patient presented herself with a history that no urine had been passed for two days. The catheter was passed each time, once with no result, once drawing about an ounce of rather high-colored urine, once drawing sixteen to twenty ounces of pale, clear urine of 1006 specific gravity. The patient complained each time of distressing desire to micturate but inability to do so. On another occasion the catheter, though urgently requested by the patient, was refused, external examination showing no marked distention of the bladder. The refusal was reported to have been followed by persistent vomiting, and the patient was from this time allowed catheterization whenever desired, the operation being, however, always performed by a female nurse. The difficulty persisting, the patient was taught to pass the catheter herself, which she does still several times a week.

On one visit a fairly strong faradic current was applied with one electrode in the bladder and the other on the hand. This brought on a state of tonic rigidity lasting an hour, and was therefore given up, although the patient reported a decided relief of bladder symptoms for some days after.

The convulsion produced by this operation has been many times repeated at the hospital, and is said to be of frequent occurrence at home, being brought on sometimes by mental or physical shock, but generally occurring spontaneously. At the hospital the convulsions have followed catheterization (whether performed by a doctor or by a female nurse), as well as the application of electricity, and have also come on with no apparent stimulus, mental or physical. In these attacks the patient grows gradually rigid, sometimes inclining to the right until extreme pleurothotonos is reached, and again passing in the same way into equally extreme opisthotonos. At times the patient passes gradually from one of these positions to the other. No clonic spasms or emotional attitudes appear. There is no sign of consciousness, and between the attacks the patient says that she knows nothing about them excepting that she feels their approach, and that she is very lame and sore afterwards, especially on the right side. The duration of the rigidity varies from half an hour to several hours. The inhalation of ether has only a temporary effect. The subcutaneous injection of apomorphia (one twentieth of a grain) produced on one occasion relaxation of the spasm with nausea and retching; on a second trial the same dose proved inefficacious. Pressure over the ovarian region on the right side during the convulsions is generally followed by relaxation of the spasm.

On two occasions the patient has presented herself with œdematous swelling of the right ankle and wrist, without redness, sensitiveness, or special discomfort on motion. No evidence of cardiac or renal trouble was found, and the swelling passed off each time in a few days without treatment.

About five months after her first appearance she suddenly lost the use of the right arm completely, and the paralysis has persisted up to the present time.

The patient being encouraged to attempt rhythmic movements of both wrists, concentrating the will upon the right while restraining the excursion of the left, gradually regains mobility of the paralyzed member, another demonstration, hardly needed, of the functional character of the paralysis.

The patient's general condition has gradually improved, the pains are now less severe without morphia than they formerly were with it, although the drug was not given up without a hard struggle. The bladder symptoms are less distressing, the patient looks brighter and feels better. The hemianæsthesia persists. The convulsive attacks are much less frequent.

DOUBLE INGUINAL HERNIA IN A MALE INFANT THIRTY-EIGHT DAYS OLD — STRANGULATION ON THE LEFT SIDE — HERNIOTOMY.[1]

BY L. W. STEINBACH, M. D.,

Adjunct Professor of Anatomy and Surgery in the Philadelphia Polyclinic.

The subject of my remarks, a male infant, was born on September 2d of the present year, at the beginning of the ninth month of utero-gestation. During six weeks preceding labor the mother was confined to her bed or room on account of hæmorrhages, due to partial placenta prævia. The infant was feeble and bore evidence of premature birth by its general debility, rather than by any specific sign of incomplete development. I estimated its weight at about five pounds. Within two days the child became jaundiced, but his condition otherwise, as well as that of the mother, was sufficiently favorable for me to cease paying regular visits after the tenth day.

On the morning of October 11th the father called and requested me to see the child, because it had been unusually restless during the night, and because the mother had noticed a swelling in the groin the previous evening.

Thinking that this swelling, as described to me by the father, might be a rupture, I visited the child without delay, and on rapid inspection found a deeply jaundiced little patient, not markedly increased in size since birth, with a tumor in each inguinal region, so that the pubic region resembled a mons veneris, with the adipose tissue well developed. As this, however, was not likely to be the case in so poorly nourished an infant, I continued my examination by manual palpation, and felt on each side a firm swelling, which reached up to the respective external inguinal ring, and extended obliquely downwards and inwards into the scrotum to the extent of more than two inches. The tumors were hard, and only slightly elastic, but in neither one could I locate the testicle or separate it from the rest of the tumor.

It will appear that the diagnosis must have been easily arrived at, because there are but few pathological conditions likely to be found in an infant that would resemble this, other than hernia, or perhaps hydrocele. Yet, fearing to exert pressure upon such tender structures in order to satisfactorily outline the testicles, I entertained some doubt whether I was really dealing with a case of double inguinal hernia, for which there existed the speculative causes of congenital debility, a patulous canal, and above these an impediment to the easy evacuation of the bladder in the existence of phymosis.

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[1] Read before the Philadelphia County Medical Society, November 19, 1884.

I informed the parents that I believed the child to be suffering with a double hernia, and that I would make an attempt to reduce it.

The amount of manipulation which I considered to be safe not having lessened the size of either tumor, and there being no urgent symptoms, I left with the promise to return towards evening of the same day, with instructions to the mother to note carefully whether the child urinated or had a fæcal evacuation. At my evening visit I learned that the child had had no passage since the preceding day, that it passed but a small amount of urine, and was disinclined to nurse. I now renewed my attempts at reduction, and succeeded in returning the protrusion on the right side into the abdominal cavity, the testicle remaining in the scrotum. Only at this juncture did I become positive of my diagnosis. My exertions to reduce the tumor on the left side proved unavailing. In order to ascertain whether I could induce an evacuation of the bowels without endangering the child's condition I inserted a small cone of soap into the rectun. This met with prompt response from that organ, and together with the soap a small amount of inspissated mucus, intermixed with or, rather, discolored by fæcal matter, was expelled. This convinced me that a constriction existed somewhere in the intestinal tract. Placing a small compress over the right external inguinal ring, and securing it by a bandage, in order, if possible, to prevent a recurrence of hernia on that side by straining in the act of micturition, I left my patient.

In the morning and again towards evening of the following day attempts made at taxis were unsuccessful. Constipation, scanty urination, and refusal to take the breast continued until the third day, when I consulted with Dr. John B. Roberts, who concurred in the diagnosis of strangulated hernia.

After some manipulation, which somewhat reduced the tumor in size and seemed to relieve the symptoms, it was agreed to postpone operative procedure until more urgently required. Towards evening of the same day the vomiting which had existed before became more pronounced, and the copiously-emitted substance in its consistency, color, and odor resembled fæcal matter.

About noon of October 14th, and therefore the fifth day after the symptoms of hernia were first noticed, and when the child was just six weeks old, an anæsthetic (ether) was administered, and the last, but unsuccessful, attempt at reduction having been made, I proceeded, with the material aid of Drs. Roberts, O'Hara, and other gentlemen, to perform herniotomy.

Making an extensive incision through the tegumentary structures and subsequently dividing two additional layers of investment to the hernia, a sac was reached, which was hard to the touch, and distended by fluid contents. A puncture of this sac and evacuation of its sero-sanguinolent contents by means of a hypodermic syringe caused its partial collapse, and a trial was made to return the protrusion into the abdominal cavity. This attempt proving ineffectual the hernial sac was incised. This laid open to view a coil of small intestine of a purplish-red hue, and below it the testicle and the epididymis. This last peritoneal investment was the tunica vaginalis testis, and consequently formed the true hernial sac.

Even now an obstacle to the return of the intestine presented itself at the constricted neck of the sac. The tender age of the patient and the delicate and small structures involved necessitated the employment of the ophthalmic surgeon's canaliculus knife, in place of a Cooper's hernia bistoury, whilst a small grooved director served the purpose of a hernia director until an incision enlarged the opening to a sufficient extent to permit of the insertion of Levis's hernia director. The hernia was of the oblique variety, and after extensive enlargement of the external inguinal ring over Levis's director the intestine was returned into the abdominal cavity.

The interrupted wire suture was now employed; the first and second stitches penetrating all structures from without into the abdominal cavity, approximated the edges of the external abdominal ring. A strip of rubber tubing was inserted, to favor drainage. The loss of blood was insignificant in amount. Antiseptic precautions were observed, by using a solution of corrosive sublimate for the hands, sponges, and towels, whilst the instruments were kept immersed in carbolized water. An existing phymosis, which was regarded a factor in the production of the herniæ, was corrected at the same time.

A few hours after the operation the child had a normal passage; the urine which was voided contained a dark-green sediment, which remained as stains on the napkin. The child took the breast readily, and appeared in no way to be disturbed by the operation. Primary union took place throughout the extent of the wound, and the drainage-tube was removed on the third day, after which the small orifice thus left also closed. No symptoms of peritonitis, or inflammation elsewhere, appeared; the pulse was better than before the herniotomy; the excretions continued regular, and everything gave promise of a favorable result except that the babe did not gain strength, and the jaundice became rather more pronounced. On the fifth day after the operation the child died, and I have good reason to believe the cause of death lay elsewhere than in the the herniæ.

Not the rarity of the affection induces me to present this case to your attention, but rather my belief in the propriety of performing the operation even in so young an infant. I am not conversant with the literature of the subject, and do not know whether a few or many cases are recorded, but my observations of this one case causes me to make the deduction that the operation should be performed unhesitatingly whenever indications for it exist; and I believe that the more rapid reparative process existing in infancy gives an even more favorable prognosis than the same operation performed on the adult.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

C. M. GREEN, M. D., SECRETARY.

October 25, 1884. The President, Dr. James C. White, in the chair.

Dr. Amory read a paper on

THE MANUFACTURE OF OIL OF CADE,

and in this paper mentioned the fact that Dioscorides used this medicinal agent in his time. Since then its periods of use have been inconstant, until Hebra revived its use about the year 1865. Dr. Amory visited the sections in Southern France where it is chiefly manufactured, and stated that the oil of cade is a mixed tarry product from the distillation *per descensum* from the roasting in crude earth ovens of all parts, but chiefly the dry wood, of the *Juniperus oxycedrus*, which grows in the Department of the Var among the hills and distant from the towns and cities of Southern France, namely, Toulon, Marseilles, and Nîmes. The oil or tar is sold just as it is delivered by the peasants, and without purification. Its chief distributing depot is Nîmes, near which place it has been used for years as a sheep wash to get rid of sheep itch (La Gâle); it does not injure the sheep or their wool, and cures this troublesome cutaneous disease in that animal. Its adulteration is hardly probable in view of the cheapness of manufacture and the consequent want of encouragement in the substitution of other tars. Samples were exhibited of the oil of cade sold in Vienna, in New York, and directly from a firm in Nîmes, M. Sagnier et Fils. The physical appearances of these specimens hardly differed from each other. Another sample of oil of beech (Oleum Betulæ) was also exhibited, whose physical appearance was distinctly different, and could hardly be mistaken for the commercial oil of cade. Since there is no known test for the purity of such a homogeneous mixed tarry product as the oil of cade there could be no advantage in putting this substance of indefinite and unknown chemical character in the official list of the United States Pharmacopœia, and hence its omission from that official work. A specimen of oil of tar which has a definite character, and is recognized in that Pharmacopœia by tests of its specific gravity and chemical reaction, was also exhibited for comparison with the unofficial oil of cade. The amount of oil of cade manufactured and sold at Nîmes is not very considerable.

Dr. Amory asked if oil of tar possessed the same value as oil of cade as a parasiticide.

Dr. White had never used oil of tar.

Dr. Greenough believed that oil of cade possessed no special advantage over oil of tar, except in not having so bad a smell: he had never used oil of tar.

Dr. G. L. Walton reported

A CASE OF HYSTERICAL HEMIANÆSTHESIA, CONVULSIONS, AND MOTOR PARALYSIS, BROUGHT ON BY A FALL.[1]

In reply to a question by Dr. E. W. Cushing, Dr. Walton said that there was no displacement of the uterus or other evidence of local injury which could give rise to reflex symptoms.

AMPUTATION AT THE HIP-JOINT.

Dr. Bradford showed a boy on whom the operation of amputation at the hip-joint had been performed a year before for extensive disease of the hip-joint and pelvis; some sinuses remained still discharging from the caries of the ilium, but the boy had doubled in weight since the operation, and was now in excellent condition.

Dr. A. T. Cabot said that the firm condition of this stump was of interest apropos of a case reported by Mr. Shuter to the London Clinical Society,[2] in which he had performed subperiosteal amputation with the production of a long stump with a hard core, presumably of bone. This patient could wear an artificial leg comfortably, and could walk a considerable distance upon it without much fatigue.

This result is of great interest when we consider that of all the cases of successful hip amputation in our late civil war not a single patient has been able to wear with comfort a prothetic apparatus.

Dr. H. C. Haven reported a Probable Case of Pernicious Anæmia in a Child: the paper was reserved for publication.

CONGENITAL ARREST OF DEVELOPMENT.

Dr. J. P. Reynolds alluded to a case of congenital arrest of development he had recently seen in a newborn infant. The child was well developed, except in the median line of the face: there was depression of the superior maxillary bone, double cleavage of the roof of the mouth, strabismus of both eyes, and constant trismus. The infant seemed likely not to survive long.

ENCEPHALOID KIDNEY.

Dr. A. P. Weeks exhibited an encephaloid kidney, weighing nearly four pounds, which he had removed post mortem from a woman sixty-two years of age. There had been progressive failure of strength and, for the past few months, inability to retain food: there was no pain. Examination of the urine gave negative results, there being no blood and no albumen. No tumor had been discovered before death: consciousness was lost only at the last. The autopsy revealed the encephaloid mass, which was not adherent, and might have been removed by operation; the other kidney was healthy.

Dr. C. P. Putnam alluded to a case of scirrhous kidney, lasting two years, in which there was no albumen in the urine, but sometimes sugar. A tumor of almost the same shape and size with that exhibited by Dr. Weeks could be easily felt extending one inch across the median line. There was also some disease at the apex of the right lung, and atheroma of the aorta.

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BOSTON MEDICO-PSYCHOLOGICAL SOCIETY.

WALTER CHANNING, M. D., SECRETARY.

The Society held its twenty-third regular meeting on the evening of November 20th at the house of Dr. Jelly, Dr. Fisher occupying the chair.

Dr. J. B. Ayer read the regular paper of the evening, entitled

A CASE OF CEREBRAL EXHAUSTION (IN THE EARLY AND RECOVERABLE STAGE) FOLLOWING NEURALGIA AND OVERWORK,

of which the following is a summary: —

The patient, now thirty years of age, has been a hard-working business man during the past ten years. He has never been robust, but there is no hereditary tendency to nervous or other forms of disease. Although he has suffered from neuralgia of the scalp, with accompanying dull feelings in the head, during the past seven years of our acquaintance, he has always been able to attend to business up to last February, when he was prostrated by an attack of influenza of a fortnight's duration.

In April he suffered severe pain from an attack of herpes zoster, and in July from neuralgia of the forehead.

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[1] See page 558 of this number of the Journal.

[2] British Medical Journal, February 17, 1883.

During the preceding year his responsibilities had worn upon him, but he had been benefited by business trips.

He gradually regained strength after the attacks of influenza and herpes zoster, but the neuralgic attack of July was followed by physical prostration and the symptoms of a *tired brain.*

On the seventeenth day from the commencement of the neuralgic attack he was able to go to the sea-shore, and soon found that he could sleep a few hours without sedatives. He no longer complained of pain, but of a "dull, tired feeling," generally referred to the top of the head. Conversation, and all forms of exercise, tired him; the night sweats were debilitating.

Gradually the "gloomy, indescribable feelings" troubled him less and less. At times he would have a good day and feel badly in the evening.

The dull feelings came suddenly and went suddenly. He was quite depressed during their continuance, but the moment they disappeared he was again in good spirits and feeling well. The mind was always clear, and there was little heat of the head. In sailing he found the best diversion.

Ten weeks from the commencement of the neuralgic attack found him still troubled two or three hours of the twenty-four with the "dull, depressed feelings," but he was able to read, write, and converse without exhaustion.

He went on two occasions to his office, and found that he could attend to business and to complicated figures for an hour or two, but was very tired afterward.

Now that his physical condition had improved he worried about the slowness of the mental recovery, for formerly he had rallied quickly after an attack of neuralgia. Dr. Jelly at this time saw him with me, and assured him that the disease was functional, the slow recuperation of the brain-cells in the present attack being explained by extreme debility following overwork and three recent acute attacks of disease.

He tried a sea trip, and returned in five weeks much improved in every particular. Still he complained of disagreeable feelings in the head, — sometimes of distention, but generally of a dull feeling which he could not describe satisfactorily.

As his physical condition was excellent I felt that I ought not to advise him to remain idle, as I knew that he would worry about himself unless his mind were kept occupied.

At the end of fifteen weeks from the commencement of the neuralgic attack he began to attend again to his business duties, promising to favor himself, and to spend several hours daily in recreation. He is now recovering satisfactorily, and will, I trust, in a few months be well.

In remarking upon the case Dr. Ayer said: "Cerebral hyperæmia does not seem to me to explain this condition of the brain. I would agree with the review of Dr. Hammond's work in the *British Medical Journal* for 1880. —

"Hyperæmia may be *one* of the conditions present, this we have long looked upon as probable, but we are inclined to think that the main factor in these cases is impaired nutrition of the brain through exhaustion of the nervous elements."

Radcliffe says "there is no good reason for thinking that any one symptom points to cerebral congestion. I can find no better name for this disease than brain-exhaustion."

As Fothergill says: "Man has a reserve of force like the balance of a prudent firm at its bankers. If this is too far drawn upon a sudden demand becomes a very serious matter." He is also correct when he says, "A mind at once powerful and coarse of fibre has a great advantage as regards sheer endurance over another mind of finer fabric."

Dr. Ayer raised the question whether brain exhaustion was specially induced by cranial neuralgia, and stated that he believed that *functional* brain disease could be favored by the intense fears and worries of a patient with an aching scalp.

The responsibility of the physician was dwelt upon. He must win the patient's confidence, and, remembering that a neurasthenic patient always looks upon the gloomy side, he must constantly cheer him, and encourage him to make light of his gloomy, depressed feelings. "Every man," says Fothergill, "should strive with all his might to maintain the supremacy of the will over his volitional and emotional conditions. He must resist with what power and energy he possesses the demon force which is striving to enslave him if he wish to remain a freeman. Whenever bodily disease shall have enervated the mental powers or palsied their energies, then subjected morbid ideas will rise in active revolt, reinvigorated and inspired by the hope of success. A clear comprehension of this matter will give confidence and inspire hope in every one who has fought the battles of these emotional civil wars." The physician cannot too thoroughly understand that his patient's recovery may depend upon his words of encouragement.

As to the resumption of business duties, it may be necessary, if the patient is tired of travel and of idleness, to allow him to gradually resume work before he has fully recovered, provided he is physically strong; otherwise the morbid feelings may succeed in securing control over him.

In the discussion which followed the reading of Dr. Ayer's paper **Dr. Webber** said that he thought that Dr. Ayer had not laid quite stress enough on the pain accompanying neuralgia. It is not the neuralgia in the head alone, but pain from neuralgia in any part of the body which is exhausting in its effects.

In these cases of nervous exhaustion one of the most difficult problems to solve is when the patient is in condition to return to work. Patients may get hypochondriacal when they have nothing to do but watch themselves, yet they may not be in condition to bear much mental strain. Foreign travel is often too great a strain, accompanied as it usually is with too much variety and change of scene, and patients easily overdo themselves. He usually tried to discover any tastes outside of their routine business they might possess, and in moderation to gratify these tastes. He had found that unless patients were very much broken down it was hard for them to do nothing.

Dr. Whittemore had found travel of very considerable benefit in two recent cases he had had. In the first case the patient had not been out of Boston for eighteen years. He slept little, and was depressed. After much difficulty he was made to leave Boston first for a short time, and then for a longer period, and he had gradually recovered. The second case owed his recovery to a journey to Europe.

Dr. Whittemore thought it well to encourage young men to go hunting and fishing, as nothing was better to establish health than an out-door life. Young women, he thought, were also often benefited by a similar life.

Dr. Tuttle asked if such a case as Dr. Ayer had described might not degenerate into a case of melancholia if not recognized early.

Dr. Fisher said that as far as his experience went cases of nervous exhaustion were not apt to end in melancholia though they remained for a long time in a threatening condition. In the city lunatic asylum he had several patients under his charge who were in a condition which might be regarded as the extreme type of nervous exhaustion, sometimes called *struporous* insanity. Most of the males were masturbators; one was a case of katatonia. Of the females two suffered from dysmenorrhœa, and in these cases pain seemed to exert an important influence as a causal element.

Dr. Channing said that he agreed with Dr. Fisher that nervous exhaustion was rarely followed by melancholia. The former seemed to be a slowly arrived at change, essentially chronic, while the latter followed disease or some moral shock.

Dr. Webber said that he remembered only two cases of melancholia supervening on nervous exhaustion. In both of these cases grief seemed to be the cause of the depressed condition.

Dr. Whittemore asked if the asylum physicians present were in the habit of feeding their patients on large quantities of food.

Dr. Stedman said that he had given a patient twelve eggs a day, after the plan of Dr. Clouston.

Dr. Channing had given fifteen eggs with two gallons of milk.

Dr. Whittemore said that a male patient at the Massachusetts General Hospital, with abscesses of the legs, had taken thirty-seven eggs in addition to a liberal general diet.

Dr. Jelly said that he had noticed that patients taking large quantities of milk had unusually large fæcal discharges.

Dr. Whittemore and others had noticed the same thing.

Dr. Webber said that he had tried experimentally to ascertain how much milk was required to sustain life while performing its regular duties, and he had found that he could do his own work on five quarts of milk a day.

Dr. Fisher stated that he had lived for three months on milk and crackers.

Dr. Webber, in answer to a question of Dr. Channing, said that he rarely put cases of nervous exhaustion to bed, and fatted them on milk. A modified plan of this treatment he had confidence in.

FACIAL NEURALGIA.

Dr. Ayer asked if the gentlemen present had used menthol in cases of facial neuralgia. He had had satisfactory results with a mixture of one part of menthol to ten of alcohol.

Dr. Whittemore spoke of a successful case in which the essential oil of peppermint had been used.

Dr. Jelly had had partial success.

Dr. Webber spoke of a proprietary remedy for neuralgia which was only menthol.

CAUSE AND TREATMENT OF APOPLEXY.

Dr. Jelly asked the opinion of the Society in reference to a patient he had lately seen. This patient, a male of about fifty, has recently had a light attack of apoplexy, of which the chief indications now are slight impediment in speech, exaggerated patellar reflex, and slight mental weakening. Could a chancre which the patient had thirty years ago be responsible for these symptoms? Would antisyphilitic treatment be desirable?

The Society doubted as to the answer to the first question, but agreed that antisyphilitic treatment was entirely justifiable.

Dr. Fisher described the case of a lady of sixty-five, who, a year or two ago, had a slight apoplectic seizure followed by one-sided facial paralysis. Within two months another attack occurred in which the facial muscles were drawn to the other side of the face. A month ago there was a third seizure, affecting the muscles of deglutition. The patient was unable to swallow solid or liquid food, and when Dr. Fisher saw her she had taken no food by the mouth for ten days. A few rectal injections had been given her. He was able to introduce liquid nourishment with the nasal tube, and at the end of a week she was able to take food herself, and continues to do so.

The question of location of the lesion was interesting in this case. At first he thought it might be bulbar paralysis, but he had lately seen a somewhat similar case ascribed to a bilateral lesion of the lenticular nucleus.

SEVENTH, EIGHTH, AND NINTH ANNUAL REPORTS MADE TO THE BOSTON MEDICAL LIBRARY ASSOCIATION ON OCTOBER 7, 1884.

BY JAMES R. CHADWICK, M. D., LIBRARIAN.

It gives me pleasure to announce the uninterrupted prosperity of the library and building committed to my charge.

In the three years which have elapsed since my last printed report (sixth) the total number of volumes has increased from 10,123 to 14,699 volumes, being at the rate of 1588 volumes a year. The number of pamphlets has increased from 5678 to 12,289.

I would call your attention to the amount and value of the work that has been done to render your collection most serviceable to those who consult it. The task of collating and classifying the books and pamphlets, which has been most thoroughly done by Mrs. Collins, was completed in 1883. The expense of this great undertaking was defrayed by the late Dr. Calvin Ellis, whose total donation on this account amounted to more than a thousand dollars. The cross-references in the catalogue have been revised by Drs. J. W. Farlow, E. H. Bradford, A. Post, E. G. Cutler, J. B. Ayer, G. B. Shattuck, A. N. Blodgett, and myself. During the past year Mrs. Collins has, by direction of the Executive Committee, collated and catalogued the accessions to the library, so that the whole collection is now available for consultation. Dr. F. H. Brown has voluntarily undertaken to arrange and classify the large collection of catalogues of medical schools, annual reports of hospitals, dispensaries, etc., etc., which have hitherto been in a chaotic state. To him and to the other coadjutors mentioned are due the warm recognition of the Association.

A special department of the library in which your librarian has taken much interest of late is the collection of autographs. This originated in the very choice lot of medical letters addressed to Gov. John Winthrop, Jr.; it has since been enlarged by several hundred letters from the correspondence of your librarian; by nearly two thousand autograph letters given by Dr. Edward Jarvis, which had been received by him during the sixty years of his professional activity; by some very interesting letters relating to the discovery of surgical anæsthesia from Dr. Benjamin Cushing; and, finally, by 128 letters from many distinguished physicians presented by the Hon. Nahum Capen, LL. D. Further contributions of documents, letters, etc., of medical interest are earnestly solicited.

Many hundreds of these papers have been cleaned, pressed, and mounted, free of expense to us, by Dr. and Mrs. J. H. S. Fogg, of South Boston. The remainder are being mounted gratuitously by patients of your librarian, an occupation which has proved of great therapeutic value to the persons thus engaged.

Without attempting to specify the source from which has been derived all our accessions, several donations call for mention. In the three years covered by my report we have received by bequest of the late Dr. Thomas B. Curtis his library of over 500 volumes and a large number of pamphlets, a collection specially rich in standard works and monographs, chiefly French, relating to surgery and genito-urinary diseases; from his widow, Mrs. H. Regina Gray, the library of the late Dr. F. H. Gray, consisting of 85 volumes; from his widow, the library of 194 volumes which belonged to the late Dr. James Morrison, of Quincy; from the publishers, William Wood & Co., of New York, their Standard Medical Library for four years, amounting to 48 volumes; from Miss L. Prince, 129 volumes from the library of her brother, the late Dr. W. H. Prince, of Newton; from his widow, the library of the late Dr. A. B. Bancroft, of Boston, numbering 279 volumes; finally, from his sister, Miss Lucy Ellis, carrying out his often-expressed intention, the library of the late Prof. Calvin Ellis, of Boston, consisting of 698 volumes, and constituting one of the most valuable lots of books that our library has received.

The expense of binding all the unbound books in the library of Dr. T. B. Curtis was defrayed by his brother, Mr. Lewis Curtis; and of those in the library of Dr. Calvin Ellis by his sister, Miss Lucy Ellis.

By an arrangement recently made by your librarian with the Faculty of the Harvard Medical School we have received all its collection of periodicals and a great portion of its general library, with the understanding that the Faculty of the School has the privilege of taking in exchange from our present accumulation of duplicates such books as the School wants to fill up its special libraries to be maintained for the use of its several laboratories. By this exchange we have been able to complete many files of the older periodicals, and add several hundred volumes of old standard works to our shelves.

By frequent visits to the medical libraries of other cities your librarian has been able to effect many exchanges, by which our files of periodicals have been largely augmented and in many sets completed. We are especially indebted to Dr. J. S. Billings, of the Surgeon-General's Library in Washington, for liberality in sending very many numbers of journals, all wanted in our files, upon exchange account, and to Dr. F. H. Sheppard, librarian of the Medical Department of McGill University in Montreal, for a like liberality in giving us nearly a thousand numbers of journals without immediate return. This wise and generous spirit is in marked contrast with the narrow policy of a few of the medical libraries who hoard their stores of duplicate periodicals on the mistaken idea that they have, or will come to have, a market value. My plan has been to practice the utmost liberality in the matter of exchanges, which has, I believe, inured to the ultimate benefit of our library.

The collection of medical portraits in our Hall has received several notable additions. A fine portrait by Vinton of the late Dr. T. B. Curtis has been intrusted to our safe-keeping by its owner, the Society for Medical Improvement. A bust, in plaster, of Dr. Benjamin Waterhouse, by Jackson, has been presented to us by Dr. H. P. Bowditch. A bust, in bronze, of the late Dr. J. Marion Sims, by Dubois, has been offered us through your librarian by an anonymous patient and friend, which will be received within a week. From his widow we have been the recipients of a large, handsomely-framed photograph of the late Dr. Samuel L. Bigelow, late of Paris, France, formerly of Boston.

The increase in the income of the Association during the past year has enabled the Executive Committee to authorize the expenditure of a larger sum of money than heretofore for its varied purposes. Twelve hundred and seven volumes have been bound. The drains of the house have been put in thorough repair at a cost of about $400. The system of heating and ventilation, which had proved defective in the past, has been overhauled and modified during the past summer under the direction of Prof. S. H. Woodbridge, of the Massachusetts Institute of Technology, whose system for heating and ventilating the new building of the Institute has proved such a marked success. To Mr. Thomas Windsor, formerly librarian of the Medical Library of Manchester, England, we are under many obligations for purchasing for us, at very low cost, the volumes which were needed to complete our sets of the Reports of the London Hospitals, full sets of the Transactions of the Pathological Society and of the Clinical Society of London. These accessions fill a gap that was often felt. The same increase in available funds has made possible the purchase of many recent publications, which have been assigned to a newly created department of our library, the Circulating Department, which has been organized by Dr. W. L. Richardson, as a sub-committee of the Executive Committee, to whom the Association is indebted for the gift of a revolving book-case for its accommodation.

By the plan adopted, all new books, bought for the library, may be taken out by members of the Association at the rate of five cents a day. Fifty-one volumes have been added to this Department between January 24, 1883, and October 1, 1884. Ninety-six volumes have been loaned to forty-two readers. By this scheme the convenience of readers has been met, and a portion of the cost of purchasing the books has been returned to the library.

The subjoined report of Dr. F. C. Shattuck, chairman of the Committee on the Directory for Nurses, displays most strikingly the admirable features and efficient management of that department of our institution.

Finally I have to assure you of the efficient coöperation of all your officers to promote the usefulness of your library to its members, to the profession, and to the public.

Subjoined will be found a statistical report of the present condition of your library prepared in conformity with the previous reports by Dr. E. H. Brigham, assistant librarian.

Periodicals.	Sixth Annual Report, 1880-81. Volumes.	Ninth Annual Report, 1883-84. Volumes.	Increase, Volumes.
American	1992	3677	1685
English	1344	1681	337
French	532	1035	503
German	532	1038	506
Canadian	69	88	19
Other foreign	102	197	95
Periodicals	4571	7716	3145
Encyclopedias	532	371[1]	
Books	4391	6012	1621
	9494	14,099	
Vital Statistics of Library of the Statistical Society	629	700	
Total in Reference Library	10.123	15 499	5376
Pamphlets	5678	12,289	6611

[1] Duplicates excluded.

The duplicate library of books and periodicals for home reading has been reduced by greater discrimination from 2266 volumes in 1880–1881 to 430 volumes in 1883–1884.

Journals and Transactions received regularly.	Sixth Annual Report, 1880-81.	Ninth Annual Report, 1883-84.	Increase.
American	173	192	19
Canadian	5	4	–
Australian	1	2	1
English	23	31	8
French	28	34	6
German	36	45	9
Other foreign	20	20	–
	286	328	42

BINDING.	Volumes.
Library, 1882	5
Library, 1883	174
Library, 1884	657
	830
Observation Society, 1882	47
Observation Society, 1883	44
Observation Society, 1884	41
	132
Curtis Library, 1882	215
Ellis Library, 1884	30
Total number of volumes bound in three years	1207

REPORT ON THE DIRECTORY FOR NURSES, 1883–1884.

The work of the Directory has gone on smoothly during the year, and it is gratifying to note that the number of calls from beyond the limits of Boston is increasing as the merits of the Directory become more widely known. Physicians find that it is much easier to telegraph to us for a nurse than to hunt one up at home.

The whole number of nurses registered since the Directory was opened is	621
Died or dropped	14
Now registered	607

They are classified as follows: —

Female nurses, non-graduates of training schools	380
Female nurses, graduates of training schools	155
Masseuses	9
Male nurses	60
Masseurs	3
	607
Number of nurses furnished during the year	1143

Fredk. C. Shattuck, M. D.
Chairman of Sub-Committee on Directory for Nurses.

Recent Literature.

Diseases of the Nose. By Clinton Wagner, M. D., Professor of the Diseases of the Nose and Throat in the New York Post-Graduate Medical School, Senior Surgeon Metropolitan Throat Hospital, Fellow of the American Laryngological Association, etc. With Illustrations of Instruments and Pathological Conditions. New York: Bermingham & Co. 1884. Price $2.50.

Notwithstanding the fact that this book is based upon an experience of fourteen years devoted exclusively to diseases of the throat and nose, we meet with not a few statements among the good things contained in it which we think will not be accepted by all workers in the same field. Speaking of rhinoscopy in the preface, the author surprises us by saying that any one competent to make examinations properly by the present known methods, and who has a fair knowledge of the anatomy of the parts, requires no special skill or training for performing the operations on the nose daily undertaken by specialists; and on page 47 we learn for the first time that the examination of the posterior nares is one of the most difficult manipulations known to surgery. Hitherto we had supposed that any one of average ability could be taught in a few minutes how to examine the posterior nares (the correct interpretation of what one sees is quite a different matter), while the operations on the nose, we believed, *did* require special training, and could be performed as they ought only by the experienced specialist. We commend, in the main, the portions of this volume which relate to the treatment of the various diseases found in the nasal cavities, and they show that the author is a careful and good practitioner; but the work as a whole, we regret to say, is so carelessly put together and so shockingly illustrated that it will wound the feelings of every one who has any respect for the nose. Never before have we seen so many wretchedly-executed wood-cuts collected together in a single volume. We doubt if Boston's champion pugilist could more effectually pound a nose beyond all hope of recognition than is the curious picture (presumably of that organ) on page 12. Figs. 1, 3, and 5 are almost equally incomprehensible. Nearly an entire page (136) is devoted to a cheap wood-cut which means absolutely nothing, nor is it a likeness, we are sure, of anything that is in heaven above, or in the earth beneath, or in the water under the earth. The typographical errors, moreover, are simply inexcusable. Professor Schiff figures in the text (page 29) as *Shift.* Our old teacher Zuckerkandl and his classical work are referred to (page 25) as Zùcherkarel, E. — Zùr Anatomie ùnd Pathologie der Nasenhöhle, Wien, 1880; really this is too bad. We find these little accents scattered through the book in the most unexpected places, and they impress us as if some one had taken them between the thumb and forefinger and snapped them in anywhere, regardless of their signification. The volume ends with a Bibliography, and here again errors of omission and commission follow each other with such startling rapidity that it must be thoroughly revised to prove of any value. The following is one of many puzzles which occur on page 239: Bushch, Behandlung der Sogenanten Ozæna. Litzungst. d nied rhein — a bold abbreviation, indeed, of "Sitzungsberichte der niederrheinischen gesellschaft für Natur und Heilkunde zu Bonn," to say nothing of the misspelling of the proper name, and the absence of any date or number of volume. But we are glad to be able to part with this volume with a word of praise. It has a very neat and attractive cover. We gain encouragement, also, from the motto — *Ne tentes, aut perfice* — which we find on the title-page, and we earnestly hope that advantage will be taken of the rich opportunity which this book affords for its practical application, so that a future edition may come somewhere near being worth the price asked for it. F. H. H.

The Atlas of Female Pelvic Anatomy. By D. Berry Hart, M. D., F. R. C. P. E. Lecturer on Midwifery at the School of Medicine, Edinburgh. New York: D. Appleton & Co. 1884. (With a Preface to the American edition by Dr. Alexander Skene.)

We regret our delay in noticing this work, which both from the originality of its design and the success of its execution will occupy a high place. It appears to have been Dr. Hart's intention to present a series of pictures that should show so clearly the points at issue that any long description or discussion would be superfluous. In this he has been very successful. He has had the advantages of study in Germany and familiarity with German methods which he turns to good account. The work is, however, not without faults. One of them is its division into curiously arbitrary sections. The first, comprising seventeen plates, is called Descriptive; the second, Dissectional; the third, Sectional and Topographical; the fourth, Structural and Genu-pectoral Anatomy; the fifth, The Cervical Canal during Pregnancy and Parturition; the sixth, Microscopical Anatomy. Excepting the last two all these divisions seem entirely artificial. The plates are in part original, in part taken from various authorities always with due acknowledgment. We are inclined to consider that Dr. Hart has been rather too free in his selection, reproducing several that add little to the value of the work.

We will now pass quickly in review the chief features of the work. Plate I. presents the bones and ligaments of the pelvis, and we must own that we are rather surprised at Poupart's ligament in Figure 2, which seems to us to include a good deal of the aponeurosis of the external oblique.

In the description of Plate II. we find that, following Henle rather than English anatomists, Dr. Hart describes the nymphæ as covered with skin instead of mucous membrane.

Plate III., representing various forms of the hymen, is poorly executed.

In Plate IV. Dr. Hart reproduces, if we mistake not, one of his own plates showing the vagina as a slit and not as a tube as it is frequently represented. He gives the posterior length as three and one half inches and the anterior one inch less.

Plate V. has a figure from Pirogoff showing a frozen section of a distended bladder and rectum. The following plates contain figures from the works of Rudinger, Bourgery, Jacob, Hyrtl, and others, showing many of the less well known points of the anatomy of the pelvic organs. The views indicating their immense blood supply are particularly instructive. We regret that among them is a figure from Polk showing a cylindrical vagina in direct contradiction to the author's teaching, and a similar monstrosity by Schultze occurs later. We cannot see why a plate showing lymphatic enlargement in malignant disease should appear in this section or indeed in the work.

In the third section there are admirable frozen sections demonstrating the relations of the pelvic peritonæum in various conditions.

With regard to the disputed question of the position of the uterus and the annexa, Dr. Hart declares one might as well attempt to give the position of a pendulum in motion. As for the ovaries he simply says that they lie behind the broad ligaments at the level of the pelvic brim with their long axes varying in direction. We may mention that our author has declared in an earlier part of the work that the idea of the fimbriated extremity of the tube grasping the ovary during menstruation is imaginative.

Hart divides the floor of the pelvis into the movable and immovable portions; the former extends from in front to the anterior border of the rectum and as far out as the edge of the levator ani; the fixed portion is the remainder. "Neither the perineum, nor the perineal body, nor the posterior vaginal wall alone support the uterus and abdominal viscera. They do so only as parts of the entire fixed portion of the pelvic floor. Thus the uterus, abdominal viscera, and the entire displaceable part of the pelvic floor rest on the entire fixed portion, that is, do not rest on the perineum or perineal body alone."

The effect of the genu-pectoral position is discussed and illustrated by two frozen sections of the body from the top of the head down.

Dr. Hart's views on the contraction of the bladder are rather curious. He had already shown by frozen sections of his own and from those of others that the female bladder may be found empty in either of two positions. One is such that a median section shows the cavity of the bladder and urethra in the shape of a Y, the upper vesical wall resting within the lower. In the other form the anterior and posterior walls are in contact, but a great difference is that in the latter case the walls are very thick and in the former they are thin. From this Dr. Hart concludes that as the bladder contracts it assumes the latter form and subsequently relaxes into the former, which he rather unnecessarily, to our thinking, compares to a systole and diastole.

The author quotes American as well as European writers — Dr. Chadwick on the rectum and Dr. Ranney on the pelvic fasciæ.

The book is a large quarto, very finely printed, and the plates are excellent, with perhaps one or two exceptions. It will add to the author's reputation, and rank among the standard works on the subject.

T. D.

Pathologie und Therapie der Frauen-Krankheiten nach den in den Ferienkursen Gehaltenen Vortragen. Bearbeitet von Dr. August Martin, Docent für Gynakologie an der Universitat Berlin. Wien und Leipzig: Urban & Schwarzenberg. 1885.

This book of 400 odd pages embodies the lectures delivered by Dr. Martin, of Berlin, in the vacation courses which are more especially intended for practitioners. It is, therefore, not adapted for students for two reasons. In the first place it omits much that is essential for the beginner, the A B C of gynæcology, and in the second place it largely treats of operative procedures which none but the specialist should undertake. It is condensed, except, perhaps, his descriptions of operations, which are given with all the fullness of detail which mark the enthusiastic surgeon. In fact, in this respect it is the best book we have seen since the Operative Gynæcology of Hegar and Kaltenbach appeared.

As the book practically consists of what Dr. Martin has given in lectures to physicians, and is not intended to be a manual for students, the author has wisely confined himself to his own views and methods. We have, therefore, a book marked by personality and originality, and hence a readable book.

His chapter on Anatomy is short but good. We are glad to see that the position of the ureters is spoken of. As the extirpation of the uterus becomes more common their anatomical relations should be well understood.

The bimanual examination he justly considers by far the most important method. He, however, very strangely falls into the error of supposing that in this country it is made in Sims's position.

He devotes only a short chapter to Menstruation and its Disorders. He inclines to the opinion that ovulation and menstruation are not entirely independent functions. Intermenstrual pain he considers physiological, but does not pretend to give any satisfactory explanation of its occurrence.

The chapter on Malpositions of the Uterus is in general very good. The caution which he displays everywhere through the book with regard to even the simplest treatment is especially marked here. He is inclined to limit the number of displacements which require treatment, first, by striking many cases of anteversion and flexion out as being merely physiological, and, second, by considering displacements with adhesions as peri- or parametritis, with dislocation of the anteor retroflexed uterus. This may be pathologically correct in a certain proportion of cases, depending, of course, upon which was the first factor, the displacement or the inflammatory process; but therapeutically it is not, for the treatment which is of most avail in these cases is directed primarily to the displacement.

What is generally considered congenital anteflexion of the neck, with elongation, he says is not congenital, but the result of cervical catarrh. He lays great emphasis on the rôle that pregnancy and parturition play in producing displacements of the uterus, especially the backward forms, which he claims are rarely found in women who have not either borne children or suffered from a miscarriage. This is certainly contrary to our experience here.

For complete prolapse of the uterus he wisely recommends a plastic operation, and after describing several methods practiced by different German surgeons (he makes not the slightest reference to Americans), he describes his own operation, which, though thorough, and one that ought to secure the desired result, yet seems formidable if all the steps are to be taken at once, as he recommends. He begins by amputating the neck of the uterus, then narrows the anterior wall, then the posterior, and finally stitches up the perinæum. It is no wonder that he keeps his patients absolutely quiet for three weeks after such a series of operations, and only removes the uppermost stitches after two or three months.

The chapter on Diseases of the Mucous Membranes of the Uterus is especially good as regards the pathology, and his treatment of laceration of the cervix leaves nothing to be desired. So, too, his treatment of stubborn cervical and corporeal catarrhs. He is at his best when describing the operations of amputation or removal of the uterus for fibroids or malignant disease, both by the abdominal and vaginal methods. These operations have in his hands shown good results. His rule of operative procedure in cases of cancer of the cervix is, when the diagnosis has been made sure microscopically, to proceed at once to the extirpation of the uterus. We cannot but feel that if more care were bestowed on less radical measures the results would repay. Such, at least, has been the experience not only here but in Europe.

The section on Diseases of the Tubes is well up to the present state of our knowledge of them, and he even includes tubal pregnancy, though strangely enough he omits any mention of electricity as a means of cure.

Taken as a whole the book is an exceedingly good and valuable one, and one which we can recommend to all gynæcologists who are familiar with German. The wood-cuts, of which there are one hundred and sixty-four, are most admirably done, and many of them are especially prepared to illustrate the points discussed. We have yet a long stride to make before we can equal in execution or originality the work of the Germans in this respect. The text is clear and the paper good.

Diseases of the Heart and Thoracic Aorta. By Byrom Bramwell, M. D., F. R. C. P. E., etc. With 317 Illustrations. 783 pages. New York: D. Appleton & Co. 1884.

In a foot-note to the preface it is written, "the subject-matter of the work was delivered almost exactly as it stands in the form of lectures to the author's class in the beginning of the winter session 1883–1884," a statement which awakes reflection in the mind of any one with some experience in medical instruction. The obligatory course of study at the University of Edinburgh is a year longer than with us, but, making full allowance for the extra year, we find it difficult to understand how the teachers can administer and the students digest such large quantities of mental food in the time if all the more important branches and subjects of medicine are treated with the fullness which characterizes these lectures. In spite of the well-known remarkable vigor of the Scotch race we are fain to believe that the mere end of instruction of students would have been better served had the lectures been condensed. Twenty-eight consecutive pages are devoted to the sphygmograph. The cardiograph has an appendix of twenty pages. Forty-five pages are given to the anatomy and physiology of the heart. Twenty more pages are occupied by an elaborate discussion of the theories advanced to explain the mechanism of functional murmurs. The author agrees with Balfour in thinking that in many cases of advanced chlorosis the systolic apex murmur is due to mitral regurgitation, but, contrary to Balfour, believes that this murmur is distinct from that heard at the base. The latter authority maintains that both alike indicate imperfect closure of the mitral orifice, though in varying degree. Russell's theory that the basic murmur is due to constriction of the pulmonary artery by pressure of the dilated left auricle is also rejected, the author thinking that the weight of evidence favors the view according to which the murmur is produced by "the *sudden* propulsion of a *large* blood wave of *abnormal* composition[1] into the vessel, which is, probably, in some cases at least, dilated."

This very completeness, which is carried out in almost all parts of the book, and which if it be an error as regards the relation of a teacher to his pupils is, at all events, an error in the right direction, becomes an unqualified merit as regards the relation of an able and competent physician of large experience toward his professional brothers. Looking at Dr. Bramwell's book from this latter point of view we can scarcely use a word that is not of praise. The only fault we have to find is that the work is, we fear, too expensive to secure the large sale which it deserves. The beautiful plates in which it abounds do not add to the value in the same proportion that they add to the cost. At page 300 are four full-page, natural-size lithographs illustrating pericarditis and our criticism alike. There are few who would be likely to buy the book or profit from it when bought who have not seen inflamed pericardia, still fewer who have not seen inflamed pleuræ, and it is a pity that the many should pay — or lose more by not paying — for the neglect or want of educational advantages on the part of this fraction of the profession. This criticism, which sounds rather ungrateful from a reviewer, springs really from appreciation of Dr. Bramwell's labors.

One passage we cannot refrain from quoting *in extenso:* "The advisability of communicating to or withholding from the patient the knowledge that the heart is diseased is a question which always requires careful consideration. In most cases it is, in my opinion, highly desirable to deal frankly, though, of course, the very reverse of abruptly, with the patient; for unless he realizes the fact that his heart is organically diseased he cannot intelligently carry out our instructions as to treatment, and he does not guard himself so carefully as he otherwise would do against many things, such as over-exertion, exposure to cold, etc., which aggravate the disease or induce complication. In some cases the communication should be made in a very guarded manner, and in the case of very nervous and easily depressed people it is occasionally, though rarely, desirable to withhold the information altogether. In cases of this description the physician should take care to protect himself against accidents by communicating the exact condition of the patient to some judicious relative, for should this communication not be made, and the fact that the heart is affected be subsequently discovered (by some other physician, for example, or by the death of the patient) it may be supposed that the cardiac lesion was not recognized. In all cases of mitral regurgitation in which the patient is informed of his condition he should be impressed with the fact that the lesion has little or no tendency to result in sudden death."

This is a practical point which is too often neglected by authors, and Dr. Bramwell's statement accords so thoroughly with our own preaching and practice, and is at the same time so clear that we cordially indorse it to the full. Let the physician only be careful to be sure of his diagnosis, remembering that time may be an important factor in distinguishing between organic murmurs and those which are merely functional.

In conclusion we can heartily recommend the book, especially to those who do not cease to be students though they have taken their degrees. F. C. S.

On Sclerosis of the Spinal Cord: including Locomotor Ataxy, Spastic Spinal Paralysis, and other System-Diseases of the Spinal Cord: their Pathology, Symptoms, Diagnosis, and Treatment. By JULIUS ALTHAUS, M. D., M. R. C. P. New York: G. P. Putnam's Sons. 1885. Pages xii., 394.

A very simple yet true remark begins the book: "There is no pathological term which is nowadays so freely and somewhat loosely used in speaking and writing about the diseases of the nervous system as the word sclerosis. . . . In practice any obscure and chronic case of nervous disease is now often spoken of as 'a case of sclerosis,' which is supposed to explain everything, and it cannot be denied that there is a good deal of confusion in the professional mind about what sclerosis really means and comprehends."

This book clearly describes the morbid anatomy and symptoms of the diseases of which it treats. The arrangement is a little different from most works on these diseases. After a brief anatomical introduction, the pathological anatomy of the different forms of sclerosis, — tabes spinalis, lateral sclerosis, secondary sclerosis of the pyramidal strands, of the cerebellar strands, of Goll's columns, amyotrophic lateral sclerosis, disseminated sclerosis in patches — are minutely described. A chapter is then devoted to the ætiology of all these, and finally their symptoms are given, and the treatment of each.

About a third of the book is given to locomotor ataxia, or, as Althaus prefers to name it, tabes spinalis, and this is much the more important of the diseases considered. The account of its symptoms is full, satisfactory.

In the chapter on Diagnosis the author refers to the value of absence of tendon reflex as a pathognomonic symptom, and an important aid in distinguishing tabes from other affections. He gives this symptom its proper place, and justly emphasizes its importance. By the way, he expresses the opinion that the knee phenomenon is a true reflex. The importance of Argyll-Robertson's symptom, when present, is also mentioned.

No mention is made of Déjérine's observation, in which multiple neuritis so closely simulated tabes that the diagnosis was not made until after death the microscope showed that the disease was confined to the nerves.

In speaking of the morbid anatomy and nature of tabes the author says that the first change "affects the axis cylinder of the central nerve fibre." While this probably does not express exactly what he means the idea one would gain is true. A review of all that has been written on this subject seems to have left an uncertainty and unsatisfaction in his mind, as he says, as if in despair of bringing order out of the chaos of opinions, "On reviewing the whole of the morbid changes which are found to take place in tabes they appear to us of an extremely complex character."

On page 4 he says: "All forms of primary sclerosis are symmetrical, and only exceptionally confined to one half of the organ." The patches of insular or disseminated sclerosis are not symmetrical.

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[1] The italics are Dr. Bramwell's.

Such expressions as "higher up," "later on," "lower down" are not uncommon.

We commend the book to any one who desires a not too long description of sclerosis of the spinal cord.

Medical and Surgical Journal.

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N. B. After January 1, 1885, the Journal will be published by Cupples, Upham & Co., *283 Washington Street, Boston.*

AN AMERICAN SOCIETY OF PUBLIC ANALYSTS.

A call was issued in November last to all those holding official appointments under Boards of Health as analysts, inspectors, and health officers to attend a conference to be held upon the 24th of that month at the office of the Brooklyn Health Department. This meeting was well attended by representatives from the Middle and adjoining States. A constitution and bylaws were adopted, and the meeting adjourned to the regular day of meeting agreed upon, the second Monday of the next month, that is, to December 8th, when the officers for the next year were to be elected.

The name of the Society is to be "The American Society of Public Analysts." Its object is, by the holding of frequent meetings for the reading and personal discussion of original papers upon these subjects, to improve the processes of inspection and of the miscropic and chemical detection and estimation of adulterations in food or drugs, to secure uniformity in the statement of the results, and also to provide for a sanitary control of the food supply.

The proceedings and papers read will, probably, be published in *The Analyst*, the organ of the British society of the same name. The place of meeting may be at any of the different cities in which any of the members reside, although it is likely to be most frequently in New York. Membership is divided into active and honorary; active members to be only those holding official appointments as analysts and inspectors; any person interested in the objects of the Society may become an honorary member.

By the frequent meetings it is proposed to hold each member will be kept well informed as to what has been learned by all the others in the way of new adulterations, and the readiest means for their detection, as well as to the newest and most reliable means of defense in cases of legal prosecution. They will thus work together to expose all crookedness in regard to food or drugs, and follow up offenders as they move on from place to place.

By this concerted action it is expected that very much more can be accomplished than could possibly be brought about in any other way. It was for this that the similar British society was formed in 1874, and there the results have justified these expectations.

The British Society holds monthly meetings, and its proceedings are published in the *Analyst*, a semi-official monthly organ of the Society, though having a distinct editorial management.

Legislatures can be roused to spasmodic action by eager individuals, but they can only be held to sustain laws opposed to the selfish interests of trade by such collective presentation of technical knowledge and indisputable facts as the association together of men with a special training can furnish.

Men engaged in practical medicine find much personal benefit from conference and association, and those engaged in State medicine will find no less profit in them. What a Medico-Legal Society is to medical examiners, that a Society of Public Analysts will be to the analysts and inspectors attached to Boards of Health.

Much has still to be learned and taught as to the best methods of preventing adulterations of food and drugs, as to the best ways of detecting, prosecuting, and punishing offenders. Some of our States already have good laws and are making honest and vigorous efforts to enforce them, but even there mistakes arise, and in many States there are either no systematic laws or else they have been allowed to become a dead letter.

The preservation of the purity and quality of the one item of milk has proved almost as difficult a problem to many wise heads as that of perpetual motion or squaring the circle.

ORGANIZATION OF THE NINTH INTERNATIONAL MEDICAL CONGRESS.

The Committee on Organization of the Ninth International Medical Congress, to be held in Washington in 1887, have issued a preliminary notice, received too late for insertion last week, which will be found in another column. We abstain from giving publicity to any other particulars which may have reached us until they are officially announced. The arrangements and appointment of officers thus far made public seem very judicious.

It seems to be positively decided that the Congress is to meet in Washington, and, as we understand it, in the month of September. There are, no doubt, many weighty reasons why the Meeting should be held in Washington, and, perhaps, every reason why no better month than September can be selected. We fear, however, that the choice of time and place will seriously interfere with the success and enjoyment of the occasion. The experience of the British Association for the Advancement of Science this past summer, when transferring itself from Montreal to Philadelphia, is a warning of what is quite likely to happen again. Even abstract science grows limp with the Fahrenheit thermometer in the eighties or nineties and removed from even the temporary refreshment of sea or mountain air.

If sure of escaping malaria one might seek relief upon the Potomac of an evening, but there is too much danger of an unwelcome intermittent chill; and sufficient hotel accommodations, interesting national museums, a really beautiful city — not at its best in September, — and an arrangement with the Signal Service Bureau must be the alternatives under the apparently unavoidable conditions.

PLEURO-PNEUMONIA AND HOG CHOLERA AT NEW YORK AND LONG ISLAND.

At a recent conference at New York at which Prof. C. F. Chandler, late President of the Board of Health, Health Commissioner Raymond, of Brooklyn, and other authorities in sanitary matters were present, the inspectors appointed last spring as agents of the new Bureau of Animal Industry of the Department of Agriculture, made their first report to Dr. Loring, the Commissioner of Agriculture.

The inspections made by them were for the purpose of learning the condition of cattle brought to the vicinity for slaughter, or to be kept for dairy uses, with special reference to the amount of contagious pleuro-pneumonia that was being harbored there. In 758 stables in New York City, containing 3318 cows, there were found twenty-six infected with the disease. On Long Island, 1416 stables were inspected, and among the 10,072 cows contained in them there were 325 cases. In the Staten Island stables there were found twelve cases, and in thirteen stables inspected in New Jersey eight cases. In the Jersey City Abattoir thirty-nine visits discovered thirteen affected animals, and at the New York offal dock out of sixty-three post-mortem examinations twenty of the cases were found to be pleuro-pneumonia. The report states that the result of the investigation has been to give a definite idea of the extent of the disease, and to secure great improvement in the condition of the stables.

The contagiousness of the disease has been proved by experiments made on Barren Island, in which healthy cattle, imported expressly for the purpose from Canada, were placed in company with diseased animals, and the report goes on to say: "We are confident that further investigation in this direction will enable us to decide upon the virulence of the disease as found in America, the time of incubation here, and the possibility of controlling it in those sections in which it may unexpectedly appear." Commissioner Loring expressed himself gratified with what had been accomplished, and Professor Chandler said that this was the first bold move in the right direction.

Dr. Raymond, of the Brooklyn Board of Health, and Dr. J. Blake White, of the New York Board, now propose, with the help of the inspectors, to investigate in what manner pleuro-pneumonia affects the milk of cows suffering from the disease.

Within the past week or two hog cholera has broken out in a very virulent form among the extensive piggeries at Flatbush, Long Island, and the animals are said to have been dying at the rate of fifty or sixty a day. The Brooklyn Health Department has been given notice that certain New York and Brooklyn butchers have bought a number of the dead hogs from the poorer owners, and carted them away at night. There are also reports of isolated cases of hog cholera on farms in the vicinity, and there is great fear among the farmers of the county that the disease will spread among pigs generally in that region. The disease is so infectious, contagious, and rebellious to treatment, that it is considered necessary by the best authorities to kill the animals at once and burn them and their sties, with the troughs, pails, litter, and all utensils used by them.

THE DISPENSARY DOCTOR AS SAINT STEPHEN.

One of the district physicians of the Boston Dispensary was stoned last week by a set of young hoodlums whilst discharging his beneficent duties in the relief of suffering. The part of the city where this occurred, Silver Street, South Boston, has gained an unenviable and increasing reputation for lawlessness of late years. This is thought to be due, not to the inefficiency of the police, who are said to be willing and able to discharge their duties, but to the apparent unwillingness of the local police court to pass sentence on offenders when brought before it. The court's usual practice of putting disturbers of the peace on probation seems to foment rather than to check disorder.

In the present instance the court gave an exhibition of vigor towards the visiting doctor which would be well bestowed at times upon the resident hoodlums. The doctor, in defending himself against the fate of St. Stephen, was unlucky enough to hit one of the smaller of the gang in the street over the head with his umbrella. Although in such bad company this lad immediately became an innocent victim besides being the son of a local politician. As the outcome of the matter criminal and civil suits against the medical agent of the Dispensary, which were not likely to thrive in the local legal atmosphere, have been settled for $125, and this seems now to be the established price in Boston for assaulting a tailor or for being stoned as a doctor.

The Dispensary has promptly abolished this South Boston District, and the physician will no longer be sent to exchange diet orders and medical advice for stones. The inhabitants of Gold and Silver Streets will have an opportunity to find out that the patient, sympathetic care and attention freely given them all these years is the result of individual private charity, and not their part of the spoils from a tax-rate of $17 on a thousand.

No charitable institution in Boston or in any other large city does a more gracious or much blessed work among the poor and suffering, or does it more unostentatiously and skillfully, than does the Boston Dispensary. Its ministrations have been continued so many years that the classes of the community for whom they are designed regard their continuance with the same assured confidence as that they can have air to breathe and water to drink — should they desire such. On the other hand it is only fair to say that, hitherto, the Dispensary doctor — and most of us have borne the title — has been a privileged character. He has been able to go into the worst slums and must dangerous haunts at all hours of the day or night, and it has been the rarest thing where anything except courtesy and respect has been shown him. It seems to be reserved for South Boston to manifest a spirit which the North End or the South Cove would be ashamed of.

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MEDICAL NOTES.

— The *Medical Record* tells the following story of the celebrated Oppolzer. Shortly after his arrival in Vienna he was consulted by an invalid, whom he advised, after a somewhat hasty examination, to go to Pistyan, in Hungary, and take the waters. After several months the man, whom the professor had forgotten, again presented himself with an aggravation of all his symptoms, and said he had just returned from a course of the Pistyan waters. The professor examined him, this time rather more carefully, and then, with some wrath, asked him what confounded ass had advised him to go there, as it was the worst thing he could possibly have done. Moral: Always speak well of your neighbor.

— On the 1st instant a law went into effect in Germany amounting to compulsory insurance. A certain premium is collected by law, as we understand it, from all persons. The benefits to be derived by the sick or disabled workman are gratuitous medical attendances, medicines, and appliances, and, after the third day, a money-allowance equal to half the daily wages, so long as it does not exceed seventy-five cents a day, for thirteen weeks. In case of death, a burial allowance will be made, amounting to twenty times the daily average wage of the locality. The details of the system have not as yet come to hand, but the principle, that of compulsory insurance, is settled, and its results will be looked for with interest.

PORTLAND, MAINE.

— The Cumberland County Medical Society held its annual meeting on the 26th of November. Dr. Stephen H. Weeks delivered the address, taking for his subject The Tendencies of Modern Surgery. After recounting some of the principal triumphs of surgery of late years, and instituting a comparison between the resources of the surgeon formerly and now, he proceeded to draw the inferences that the surgery of the present day tends, first, towards conservatism; second, to specialization; third, to the demand for a higher education; and fourth, to a better social position. Each of these points was carefully elaborated, and supported by argument and illustration; and the address gave great satisfaction to the audience.

For the first thirteen years of the Society's existence the meetings were held in the day-time, but in 1880 a change was made to the evening. One result of this alteration has been a great decrease in the attendance of the members residing in the country towns, as they find it inconvenient and difficult to get to their homes after ten o'clock at night. At this meeting the city men, desirous of having the out-of-town members enjoy the privileges of the Society, proposed and unanimously agreed to have the sessions in the future in the forenoon. The day of meeting, also, was changed to the last Thursday of each month. It is hoped that the new plan will secure a very large attendance.

The following officers were chosen for the coming year: President, A. K. P. Meserve, of Portland; Vice-President, J. L. Horr, of Saccarappa; Secretary, S. P. Warren, of Portland; Treasurer, J. A. Spalding, of Portland; Orator, A. H. Burbank, of Yarmouth.

— There are three private medical associations in this city: the Portland Medical Club, the Clinical Society, and the Practitioners' Club, named in the order of their establishment. The first has more than twenty members, and meets fortnightly; the others have a smaller membership, and hold monthly meetings, in which the social element is prominent. All three are in a very prosperous condition.

— The capacity of the Maine General Hospital has been greatly taxed of late, applications for beds being much in excess of the accommodations. The pressure will be removed, however, as soon as the new addition and amphitheatre are completed; for then apartments which it has been necessary to use for operations, students' waiting rooms, and servants' quarters will be vacated, and can be devoted to the immediate service of patients. The operating amphitheatre is nearly finished, and will probably be dedicated in a few weeks. A full description of the building will be given at that time.

— On the first of January next a training school for nurses will be established at the hospital. The need of such an institution has long been felt, but it has not been practicable to utilize the hospital for this purpose hitherto. The value of this service to the community can hardly be overestimated, and will doubtless be highly appreciated.

— The Portland School for Medical Instruction is especially prosperous this year. More than fifty per cent. of the students are college graduates — a fact largely attributable to the strictness of the entrance examinations.

— Another effort is to be made this winter to obtain a State Board of Health in Maine. The result is, of course, extremely doubtful, as the sentiment of the people is not well educated in sanitary matters. Under the stress of fear, occasional spasmodic displays of interest in public hygiene are made, but, as soon as the threatened danger seems to be past or the epidemic has committed its ravages, the former apathy settles down on the people, and they are deaf to the warnings of intelligent sanitarians. For instance, five years ago the citizens of Portland were vastly agitated by reason of certain bad odors, which were thought to be due to the foul condition of our Back Cove. The newspapers were inundated with communications from alarmed and exasperated tax-payers, and the municipal authorities were sufficiently aroused to appoint a commission of physicians to investigate the causes of the difficulty. After a prolonged and careful study of the problem the commissioners reported, pointing out numerous sources of the nuisance, and advising certain procedures which would put the city in a safe and comfortable condition. But of all the recommendations only one was practically adopted, and that was of far less importance than a number of others. Very little further was said about the general causes of disease in the city until this summer, when, complaints becoming loud again, the City Council thought it well to bestir itself anew. Ignoring the fact that it already had a report on the subject from some medical men of its own choice, who were presumably competent to advise in the premises, it advertised a public hearing, at which all citizens who wished to attend were invited to give their opinions of the origin of the trouble and the best methods for its abatement. Thomas, Richard, and Henry were there, each with an explanation and a remedy different from all the others. Fortunately, as it then appeared, the Council adopted the suggestion of a wise man who had paid a great deal of attention to such matters, and employed an expert engineer to make a plan for an intercepting sewer which should receive the sewage from the northern slope of the city, and thus prevent its discharge into the Cove. The engineer came, made his survey, and reported; but, with a short-sightedness which has become characteristic, the admirable plan proposed was utterly rejected, and a make-shift sewer was ordered which will never do the needed work, and will probably tend to aggravate the present difficulty. Some years hence the work will have to be undone, and the city will be put to the expense of a new sewer, constructed on a scientific method. This bit of history is given merely as an illustration of the lack of intelligence in sanitary matters which prevails throughout the State. If a State Board of Health is established, its chief function for a long time must be the creation of an enlightened public sentiment on the subject of the preservation of health.

NEW YORK.

— At the last meeting of the State Board of Health Mr. James T. Gardner, Director of State Survey, called attention to the unsanitary condition of the flats at Albany, particularly the basin owned by the State, which is skirted by all the principal hotels and business houses, and into which the principal sewers of the city empty. The State is compelled by law to maintain a depth of seven feet at low tide, but long-continued deposits of sewage have filled up the basin. In addition the water used in Albany is pumped from the Hudson River, at a point near the channel where the water from this polluted basin flows into it, and thus the health and lives of many people are endangered. Mr. Gardner recommended that the city of Albany should be restrained from emptying its sewage into this basin, and that an appropriation be made to dredge it to the required depth.

— During the latter part of last month Mayor Edson, in company with General Shaler and a number of other officials of the Health Department, and Engineer Church, of the Aqueduct Commission, made an excursion for the purpose of examining the condition of the Croton water-shed. On their return it was stated that no fault could be found with the reservoirs or the bed of the streams from which the water comes, but at the villages along the course of the Croton and its tributaries they found evidence that sewage found its way into the water so as to slightly contaminate it. The distance from the points of the contamination to New York is so great, however, that the water is purified before it enters the city mains, though as the villages increase in size trouble may arise from this source.

Correspondence.

THE ASPIRATOR IN PLEURAL EFFUSION.

Boston, *November* 29, 1884.

Mr. Editor, — In the record of the First Annual Meeting of the New York State Medical Association (*Boston Medical and Surgical Journal*, November 27, 1884) I find that Dr. E. D. Ferguson, of Rensselaer County, presented a paper on the Use of the Aspirator in Hydrothorax. He laid down the following propositions: —

"First. Owing to the dangerous and often fatal results which he had seen produced by the aspirator by causing pyothorax, he now never resorted to it except when dyspnœa or other serious symptoms supervened."

"Second. Dr. Bowditch had maintained that the aspiration should be continued until the patient complained of pain in the epigastrium or dyspnœa, but he (Dr. Ferguson) thought that it was much better that it should be stopped before this point was reached, as the occurrence of these signs indicated a more or less grave condition already.

"Third. He would advise that more than a pint of fluid, at the outside, should never be withdrawn at one time.

"Fourth. In the pelvic cavity much evil had resulted also from the too free use of the aspirator, and, on the whole, he thought the instrument had, perhaps, been productive of more harm than good."

Permit me to take issue upon these points, which, from the report in the Journal, were all that Dr. Ferguson presented in his paper.

First. Since 1850, when I first began to operate with Dr. Wyman's fine trocar and suction pump, I have had under my care two hundred and fifty-three patients with pleuritic effusions which required operations to remove the fluid. Three hundred and ninety-five operations were done. The vast majority of these operations have been that of suction, as above named. In a certain number a permanent opening became necessary. In one, Estlander's operation of removal of portions of two ribs was performed with perfect success and complete restoration to health after four years of suffering from a fistulous opening into the chest

During this period of thirty-four years I have never met with "dangerous or fatal results consequent on the operation of suction." I have seen a case under the care of another in which a permanent opening was made *under etherization.* In this case the pulse failed twice during the operation; but full recovery to health was the final result. I believe the patient would have died if the opening had not been made.

Second. Doubtless I should have met often "with dangerous and fatal results" if I had pursued the course which Dr. Ferguson says that I recommend. Unfortunately Dr. F.'s assertion is incorrect. I do not maintain that we must draw until pain or dyspnœa occur but precisely the reverse, as my patients and students would admit. My method is as follows: I use, as at first, the finest trocar to which I have applied a suction pump. I prefer this apparatus to any "aspirator" with vacuum previously arranged, as in Dieulafoy's or any other method. I think I can by the pump, which I hold in my hand, more easily judge of the amount of force needed to extract the fluid, and can if I wish *instantly* stop all traction, whereas that knowledge is not given by the "vacuum" instruments.

Having pierced the thorax and arranged the suction, I say to the patient, "Tell me if you feel the *least* discomfort in any way, either pain or stricture or desire to cough. Tell me instantly;" and then I either wait a few moments and perhaps cautiously draw anew or I remove the trocar from the chest. I impress strongly upon the patient's mind that it is for his good to let me know the first moment of the *least discomfort.* During the operation I frequently repeat the question. By proceeding thus prudently and slowly I *never allow severe pain or dyspnœa to ensue*, and I do not recollect to have ever had "dangerous symptoms" occur.

Third. Dr. Ferguson would never take more than a pint of fluid at an operation. He would also wait before tapping "until dyspnœa or other serious symptoms" occur. Pray what would he advise in cases of *latent* effusions, when one side of the chest may be full of fluid, and the physical signs alone indicate the condition of things? His rule of delay till dangerous symptoms set in might lead either to sudden death from obstruction of the heart or to long disease, terminating fatally. Such cases I saw repeatedly before 1850. I begged medical men to operate in the cases under their charge, and they would not, leaving death as the result.

In case I find now a chest full or nearly full of fluid, even if there be no severe dyspnœa, if the patient has been ill a month or six weeks I advise tapping as the *first* remedy. I afterwards use the common remedies, internal and external, for pleurisy. Having commenced the operation I draw from one to four, or once even five, pints, always watching, especially after two pints have been drawn, the condition of the patient, as above named. It would seem to me wrong to limit myself to one pint when I could by care draw more, and thus save a second operation.

Fourth. Dr. Ferguson said also that the instrument had been used much too freely in the pelvic cavity, and has done much evil there. I am not sure that I understand aright when I say that his words seem to intimate that "on the whole" the aspirator as generally used has done "more harm than good" wherever used. If he means that assertion as applicable to the thorax, I deny it wholly. It has been of infinite service to mankind, and will ever continue to be such. It will eventually save lives which, without it, will be lost. All that is required is that due care govern the use of it.

Respectfully yours,

Henry I. Bowditch, M. D.

HYDROCHLORATE OF COCAINE SUBCUTANEOUSLY.

Mr. Editor, — As the medical journals of the country are now filled with reports of the use of the new anæsthetic, hydrochlorate of cocaine, and as the use has been more generally restricted to its application to mucous surfaces, I have thought it might be interesting to record its trial in the following case: —

Thomas H., aged fifty-five, farmer, came under observation two weeks ago. He had a peculiar ragged, ulcerated-looking patch on right cheek just below the malar bone, which was diagnosticated an epithelioma, and an immediate operation advised. As he was strongly opposed to the use of either chloroform or ether, the new anæsthetic was employed, and the operation was performed December 2d.

A four per cent. solution of the drug, a foreign preparation, obtained through the kindness of Carter, Harris, & Hawley, of Boston, was used, and the solution injected hypodermically.

The injections were conducted by Dr. J. C. How, of this city. The needle of an ordinary hypodermic syringe was passed through the skin on either side and above the growth. Four minims were employed at each injection, with an interval of from three to five minutes between each. A few minims were also rubbed over the growth with the finger. The pulse at the first injection was 88 per minute, but in five minutes after went up to 98. No change in the respiration was observed. The first injection was noticed to be quite painful, but after the second the patient remarked that the parts began to feel "numb" and "*tingled slightly.*" Immediately after the third injection the cutting began. Two incisions, two inches long, were made on either side of the growth. Mr. H. remarked that the first incision hurt him no more than the ordinary scratch of a pin. The second incision was made without the slightest feeling of pain being manifested, nor was there any complaint of pain during the dissection of the growth from the muscles, which occupied from five to ten minutes, owing to delay in twisting some superficial blood-vessels. The wound was closed with hare-lip pins and the twisted and figure-of-eight sutures. Repeated questionings during this part of the operation elicited the response that he "suffered no pain." After the operation the pulse indicated 110. No headache followed, nor was there any feeling of drowsiness. An hour after the operation he complained of very severe pain about the wound, probably due to the tension of the sutures. There was no doubt in the minds of both Dr. How and myself that the injection of the cocaine rendered the operation a comparatively painless one, and was deserving of further trial and investigation.

J. F. Croston, M. D.

58 Emerson St., Haverhill, Mass.

— A child is reported as having recently died at Rye, England, from shock to the nervous system, caused by fright at seeing a boy wearing a mask. She lost her reason the first day after the occurrence.

Miscellany.

COMMITTEE ON ORGANIZATION OF THE NINTH INTERNATIONAL MEDICAL CONGRESS TO BE HELD IN WASHINGTON, D. C., IN 1887.

PRELIMINARY NOTICE.

The Committee on Organization of the Ninth International Medical Congress, to be held in the United States in 1887, met in Washington, D. C., on November 29, 1884, for the determination of the general plan of the Congress, the election of officers of the committee, who will be nominated to fill the same offices in the Congress, and the consideration of questions of finance.

The following rules were adopted: —

(1.) The Congress will be composed of members of the regular medical profession who shall have inscribed their names on the register of the Congress, and shall have taken out their tickets of admission. As regards foreign members, the above conditions are the only ones which it seems at present expedient to impose.

The American members of the Congress shall be appointed by the American Medical Association, by regularly organized State and local medical societies, and also by such general organizations relating to special departments and purposes, as the American Academy of Medicine, the American Surgical Association, the American Gynecological, Ophthalmological, Otological, Laryngological, Neurological, and Dermatological Societies, and the American Public Health Association, each of the foregoing Societies being entitled to appoint one delegate for every ten of their membership.

The members of all special and subordinate committees appointed by the General Committee shall also be entitled to membership in the Congress, together with such other persons as may be specially designated by the Executive Committee.

All Societies entitled to representation are requested to elect their delegates at their last regular meeting preceding the meeting of the Congress, and to furnish the Secretary-General with a certified list of the delegates so appointed.

(2.) The work of the Congress is divided into eighteen Sections, as follows, namely: —

(1.) Medical Education, Legislation, and Registration, including methods of teaching; and buildings, apparatus, etc., connected therewith. (2.) Anatomy. (3.) Physiology. (4.) Pathology. (5.) Medicine. (6.) Surgery. (7.) Obstetrics. (8.) Gynæcology. (9.) Ophthalmology. (10.) Otology. (11.) Dermatology and Syphilis. (12.) Nervous Diseases and Psychiatry. (13.) Laryngology. (14.) Public and International Hygiene. (15.) Collective Investigation, Nomenclature, and Vital Statistics. (16.) Military and Naval Surgery and Medicine. (17.) Experimental Therapeutics and Pharmacology. (18.) Diseases of Children.

(3.) The General Meetings will be reserved for the transaction of the general business of the Congress and for addresses or communications of scientific interest more general than those given in the Sections.

(4.) Questions which have been agreed upon for discussion in the Sections shall be introduced by members previously nominated by the officers of the Section. The members who open discussions shall present a statement of the conclusions which they have formed as a basis for debate.

(5.) Notices of papers to be read in any one of the Sections, together with abstracts of the same, must be sent to the Secretary of that Section before April 30, 1887. These abstracts will be regarded as strictly confidential communications, and will not be published until the meeting of the Congress. Papers relating to questions not included in the list of subjects suggested by the officers of the various Sections will be received. Any member, after April 30th, wishing to bring forward a subject not upon the programme must give notice of his intention to the Secretary-General at least twenty-one days before the opening of the Congress. The officers of each Section shall decide as to the acceptance of any communication offered to their Section, and shall fix the time of its presentation. No communication will be received which has been already published or read before a society.

(6.) All addresses and papers, read either at General Meetings or in the Sections, are to be immediately handed to the Secretaries. The Executive Committee, after the conclusion of the Congress, shall proceed with the publication of the Transactions, and shall have full power to decide which papers shall be published, and whether in whole or in part.

(7.) The official languages are English, French, and German.

No speaker shall be allowed more than ten minutes, with the exception of readers of papers and those who introduce debates, who may occupy twenty minutes.

(8.) The rules, programmes, and abstracts of papers will be published in English, French, and German.

Each paper or address will appear in the Transactions in the language in which it was delivered by the author. The debates will be printed in English.

(9.) The officers of the General Committee on Organization are a president, three (3) vice-presidents, a secretary-general, and a treasurer, and those elected to these positions will be nominated by the General Committee to hold the same offices in the Congress. All vacancies in these offices shall be filled by election.

(10.) There shall be an Executive Committee, to be composed of the President, Secretary-General, and Treasurer of the General Committee, and of four other members, to be elected by the General Committee. The duties of the Executive Committee shall be to carry out the directions of the General Committee; to authorize such expenditures as may be necessary, and to act for the General Committee during the intervals of its sessions, reporting such action at the next meeting of the General Committee.

(11.) There shall be a Standing Committee on Finance, composed of five members, to be appointed by the President, subject to the approval of the Executive Committee.

(12.) Those who are elected as chairmen of the several Sections shall be thereby constituted members of the General Committee.

The officers elected are as follows: —

President, Dr. Austin Flint, Sr., of New York.

Vice-Presidents, Dr. Alfred Stillé, of Philadelphia; Dr. Henry I. Bowditch, of Boston; Dr. R. P. Howard, of Montreal, Canada.

Secretary-General, Dr. J. S. Billings, U. S. Army.

Treasurer, Dr. J. M. Browne, U. S. Navy.

Members of the Executive Committee (in addition to the President, Secretary-General, and Treasurer), Dr. I. Minis Hays, of Philadelphia; Dr. A. Jacobi, of New York; Dr. Christopher Johnston, of Baltimore; Dr. S. C. Busey, of Washington.

The Executive Committee will proceed at once to complete the work of organization.

J. S. Billings, *Secretary-General.*

Washington, D. C., *December* 1, 1884.

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SUBNORMAL TEMPERATURES IN PARALYTICS.

In an article on this subject by Professor Hitzig (*Berlin klin. Wochenschr.*, 34, 1884), the writer says that excessive drops in temperature take place most frequently in paralysis and the various forms of disease allied to it, especially senile psychoses. An increased giving off of heat is not necessarily present in such cases, but is always indicated if the subnormal temperature is found in other forms of mental disturbance. Not seldom there is a peculiar relation of this symptom to the paralytic affections. The lowering of temperature may precede them by hours or days, and in such cases may be considered as in a certain degree a precursor of them. In one series of cases the temperature does not come up again during the attack to the normal point; in another series it rises with greater or less oscillations to a higher or lower point, then either to return to the normal, or to remain high till death, or to sink anew. But great oscillations in temperature may come without convulsions or paralytic attacks. Such a variation occurred in the last weeks of a decrepit paralytic, between 31.6° and 37.2° C. A satisfactory explanation of these phenomena cannot as yet be given from the material at hand. In one class of cases cardiac weakness plays a leading part, but proof is yet wanting that that condition is not oftener the result of the refrigeration. The assumption of a primary excessive elimination of heat is inadequate because in two of the observations recorded and illustrated with temperature curves, intercurrent elevations of temperature took place. Under these circumstances we cannot lose sight of the possibility of a causal affection of the heat regulating centre, even if we must also admit that palpable anatomical alterations of the central nervous system, which might be reasonably advanced in explanation, have not as yet been established by any one. The experimental studies on the influence of the cerebrum upon heat production are as yet insufficient to throw light upon these questions.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 29, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Lung Diseases.	Diarrhœal Diseases.	Typhoid Fever.	Diphtheria and Croup.
New York	1,340,114	701	253	20.44	18.34	2.94	2.10	3.02
Philadelphia	927,995	372	120	25.11	6.21	.81	5.40	15.12
Brooklyn	644,526	246	94	17.10	12.15	2.25	1.35	8.55
Chicago	632,100	231	110	29.42	11.61	1.72	1.72	15 05
Boston	423,800	197	73	9.18	15.98	1.36	2.04	4.08
Baltimore	408,520	130	44	16.17	8.47	1.54	2.31	9.24
St. Louis	400,000	153	64	22.75	18.20	1.95	3.90	9.10
Cincinnati	272,400	124	54	15.39	11.34	6.48	3.24	3.24
New Orleans	234,000	128	39	21.84	5.46	4.68	—	5 46
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	52	16	15.26	15.26	—	—	1.92
New Haven	62,882	23	7	17.40	8.70	—	8.70	8.70
Nashville	54,400	16	6	25.00	—	—	6.25	12.50
Charleston	52,286	34	9	8.82	8.82	—	—	5.88
Lowell	71,447	23	3	4.35	8.70	—	—	—
Worcester	69,442	35	11	40.00	28 57	2.86	2.86	28.57
Fall River	62,674	—	—	—	—	—	—	—
Cambridge	60,995	21	3	14.28	28.57	—	4.76	4.76
Lawrence	45,516	16	6	6.25	6.25	—	—	—
Lynn	44,895	13	1	7.69	15.38	7.69	—	—
Springfield	38,090	16	6	25.00	31.25	6 25	—	6.25
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	15	8	20.00	13.33	—	—	6.66
New Bedford	30,144	8	2	25.00	—	—	12.50	12.50
Salem	29,503	13	0	7.69	—	—	7.69	—
Chelsea	24,347	—	—	—	—	—	—	—
Taunton	22,693	8	2	25.00	—	—	12.50	12.50
Gloucester	21,400	16	7	12.50	12.50	—	—	—
Haverhill	20,905	9	1	—	11.11	—	—	—
Newton	19,421	5	1	—	20.00	—	—	—
Brockton	18,323	5	1	—	20.00	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	3	0	—	66.66	—	—	—
Fitchburg	13,433	5	1	—	—	—	—	—
Eighty-eight Massachusetts towns	314,875	49	13	6.12	30.60	—	4.08	2.04

Deaths reported 2667: under five years of age, 945; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 515, lung diseases 407, consumption 381, diphtheria and croup 234, typhoid fever 70, diarrhœal diseases 59, scarlet fever 44, malarial fevers 30, measles 35, whooping-cough 27, cerebro-spinal meningitis 14, erysipelas 10, puerperal fever seven, typhus fever three. From *malarial fevers*, New York 16, New Orleans seven, Chicago six, St. Louis five, Brooklyn and Baltimore two each, Philadelphia one. From *measles*, New York 24, Chicago four, Philadelphia and Cincinnati two each, Brooklyn, New Bedford, and Gloucester one each. From *scarlet fever*, New York 15, Chicago seven, St. Louis six, Philadelphia four, Providence three, Brooklyn, Boston, and Baltimore two each, Cambridge, Lawrence, and Holyoke one each. From *whooping-cough*, New York seven, Philadelphia, Chicago, and New Orleans four each, Providence three, Brooklyn and Boston two each, Gloucester one. From *erysipelas*, Brooklyn three, New Orleans two, New York, Philadelphia, Chicago, Boston, and Providence one each. From *puerperal fever*, New York and Brooklyn two each, Cincinnati, Worcester, and Holyoke one each. From *typhus fever*, New Orleans two, Charleston one.

Cases reported in Boston: scarlet fever 57, diphtheria 36, typhoid fever 24, and measles 22.

In 104 cities and towns of Massachusetts, with an estimated population of 1,274,063 (estimated population of the State 1,955,104), the total death-rate for the week was 18.92 against 15.60 and 18.08 for the previous two weeks.

For the week ending November 15th, in the Swiss cities, there were 21 deaths from lung diseases, consumption, 19, diarrhœal diseases 13, diphtheria and croup four, scarlet fever two, whooping-cough two, typhoid fever two, erysipelas one. The death-rates were, at Geneva 16.3; Zurich 19.7; Basle 6.2; Berne 18.9.

The meteorological record for the week ending November 29th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Nov., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 23	29.932	57	65.1	41	93	71	100	88	S	S	S	8	32	37	F	O	R	—	—
Mon., 24	29.708	37	64	26	60	37	82	60	W	W	W	17	21	18	F	C	C	—	—
Tues., 25	29.977	32	40	21.5	66	71	77	71	SW	SW	SW	15	12	12	C	O	O	—	—
Wed., 26	29.666	38	46	30	83	68	82	78	SW	NW	W	5	10	13	O	O	C	—	—
Thurs., 27	29.954	33	36	26	77	50	73	67	W	W	S	8	16	6	C	F	O	—	—
Fri., 28	29.746	47	54	35	53	74	66	89	S	S	NE	8	5	4	O	R	R	—	—
Sat., 29	29.710	39	47	34	94	48	70	71	N	NW	W	8	20	14	R	C	C	—	—
Mean, the Week.	29.813	40.3	65.1	21.5														27.00	2.13

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM NOVEMBER 29, 1884, TO DECEMBER 5, 1884.

Gray, Chas. C., major and surgeon (retired), died at Geneva N. Y., November 26, 1884.

Kneedler, Wm. L., first lieutenant and assistant surgeon. Relieved from duty at Fort A. Lincoln, D. T., and ordered to Camp Poplar River, M. T. S. O. 140, Department of Dakota, November 25, 1884.

McCaw, W. D., first lieutenant and assistant surgeon. Relieved from duty at Fort Wingate, N. M., and ordered to Fort Lyon, Col. S. O. 228, Department of Missouri, November 26, 1884.

Pilcher, James E., first lieutenant and assistant surgeon. To be relieved from duty at Camp Poplar River, M. T., and ordered to Fort A. Lincoln, D. T. S. O. 140, Department of Dakota, November 25, 1884.

DEATH.

Died at Roxbury (Boston), Mass., December 7, 1884, Henry Austin Martin, M. D., M. M. S. S., aged sixty years, five months.

Suffolk District Medical Society. *Obstetric and Gynæcological Section.* — There will be a meeting of this Section at the Large Medical Library Room, 19 Boylston Place, on Wednesday evening, December 17th, at 7.45 o'clock. Communications: Dr. Z. B. Adams, of Framingham, will, by invitation, read a paper entitled Objections to the Routine Practice of the Vaginal Douche after Normal Labor, following which Dr. W. S. Brown, of Stoneham, also by invitation, will read a paper entitled Forty Years' Experience in Obstetrics, including a criticism of Modern Methods, Anæsthetics, Instrumental Labors, etc. All members of the Massachusetts Medical Society will be welcome at the meetings of this Section, and are invited to take part in the discussions.
James R. Chadwick, M. D., *Chairman.*
Robert B. Dixon, M. D., *Secretary.*

Books and Pamphlets Received. — Fifth Annual Report of the Associated Charities of Boston. November, 1884.

International Health Exhibition Lectures. The Rearing of Hand-Fed Infants. A Lecture delivered in the Lecture Room of the Exhibition, August 1, 1884. By Edmund Owen, M. B., F. R. C. S., Surgeon to the Hospital for Sick Children, Great Ormond Street. With an Introduction by Charles West, M. D., F. R. C. P. (Founder of the Hospital for Sick Children.) Printed and Published for the Executive Council of the International Health Exhibition and for the Council of the Society of Arts, by William Clowes & Sons, Limited.

The Physician's Visiting List for 1885. Philadelphia: P. Blakiston, Son & Co. 1885.

Hypodermic Injection of Ergot in Post-Partum Hæmorrhage. By P. C. Williams, M. D. Read before the Medical and Chirurgical Faculty of Maryland, April, 1874.

A Handbook of the Diseases of the Eye and their Treatment. By Henry R. Swanzy, M. B., F. R. C. S. I. With Illustrations. New York: D. Appleton & Co. 1884.

The Relation of Micro-Organisms to Surgical Lesions. By Henry O. Marcy, A. M., M. D., of Boston. (Reprint from Journal of American Medical Association.) Chicago. 1884.

Transactions of the Michigan State Medical Society for the Year 1884. No. IV. Vol. VIII. Lansing. 1884.

Pyuria, or Pus in the Urine, and its Treatment, comprising the Diagnosis and Treatment of Acute and Chronic Urethritis, Prostatitis, Cystitis, and Pyelitis, with especial Reference to their Local Treatment. By Dr. Robert Ultzmann, Professor of Genito-Urinary Diseases in the Vienna Polyclinic. Translated, by permission, by Dr. Walter B. Platt, F. R. C. S. (England), Demonstrator of Surgery in the University of Maryland. New York: D. Appleton & Co. 1884.

Original Articles.

APPARENT AND REAL AMAUROSIS.[1]

BY HENRY W. WILLIAMS, A. M., M. D.,

Professor of Ophthalmology in Harvard University.

The importance of distinguishing between certain forms of supposed, and cases of genuine amaurosis, may excuse my offering to the Society a few brief illustrations of conditions in which amaurotic symptoms may either be feigned, or where, being actually temporarily present, they depend on disturbances of circulation or nutrition in the retina or optic nerve, arising from various causes, and allowing hope of recovery; as contrasted with cases of absolute amaurosis in which structural changes, resulting from direct or indirect injury or from antecedent disease of the cerebro-spinal system, render treatment useless.

Case I. Mrs. ——, aged thirty, was brought to me by her physician in December, 1874, with a report that four months previously she had become suddenly blind, and had since then been unable to distinguish day from night; and that, moreover, she had constant intense photophobia and mydriasis.

Her eyes were closely covered with thick black bandages, and she strongly resisted all attempts to open them; but with much effort her physician was able to keep the lids raised sufficiently to allow of my making an ophthalmoscopic examination, which disclosed no morbid appearances. Nor could any abnormal conditions be discovered by external inspection. No dilatation of the pupils was observable, and they contracted readily under the stimulus of light. Although the lady professed to be utterly blind, I thought I detected at some instants a watching and furtive following of my movements. Her physician told me that she had had severe headaches, especially at the menstrual periods, which sometimes terminated in fits amounting almost to insanity, and requiring that she should be held. These fits sometimes passed off almost instantaneously.

The opinion I gave was, that the symptoms were hysterical manifestations; the asserted blindness not being indicated by any existing appearances, and the photophobia being perhaps at first feigned, and afterwards very possibly created by artificially induced mydriasis, and increased by voluntary and long-continued seclusion from light.

Tonics and antispasmodics, with insignificant mild local treatment, together with gradual habituation to more and more light, were advised; and an encouraging prognosis was given.

Seven years later I again saw her physician, who informed me that at the consultation he had considered me mistaken in my diagnosis; but this had proved accurate, and complete recovery of the patient had gradually taken place.

Case II. In another similar case, seen in consultation with a physician in a neighboring town, sudden and absolute blindness was said to have occurred in a young lady. Her pupils were found to act sluggishly, but no external or internal evidence of disease of the eyes or brain was perceptible. Her simulation was, however, so perfect that we were unable during the examination to gain evidence of her perception of objects: but abundant proof of this was obtained later in the case, and whilst she pretended to be unable to distinguish day from night. Under tonic and expectant treatment the predicted gradual recovery ensued; but the hysterical temperament was marked, and the same game of imposition was repeated some time afterward at another place of residence.

Case III. Miss ——, aged fifteen, consulted me on November 28th on account of a decline in vision occurring three weeks previously after a copious epistaxis followed by headache. A second hæmorrhage of less amount took place some days later. As she said, all objects appeared indistinct, and she had vision of only $\frac{1}{200}$ for reading; yet she could tell time by a clock at some distance. Vision was not improved by glasses. The visual field was limited towards the left side in both eyes. Color perception good. Action of pupils normal. No abnormal changes were discoverable with the ophthalmoscope. There was less than the usual amount of choroidal pigmentation; so that the vasa vorticosa were clearly visible. The general condition of the patient seemed to be good, but she had grown with extraordinary rapidity during the past year, which fact, with the considerable loss of blood, might allow of a diagnosis of anæmic amblyopia, as the cause of the lessened visual power apparently existing.

Case IV. In May, 1884, Miss ——, after copious menorrhagia, lost the power of perceiving a gas flame with one eye, although still able to distinguish objects in the periphery of the visual field. No obvious changes in the retinal circulation, or other morbid appearances, were seen with the ophthalmoscope. Some degree of anæmia was probably present in the region of the macula lutea, causing the loss of central vision, which was entirely regained as the tone of the system was improved.

Case V. Miss ——, aged thirty-six, was referred to me by her physician as a case of glaucoma. She gave me the following history: Nine months previously she had pain in the head and eyes, continuing two days. Belladonna was used to overcome contraction of the left pupil, but she thought its use increased the pain, and gave it up. Three weeks before I saw her, without known cause, as she says, her left pupil dilated, and has continued so. I found, however, that she could read with this eye with a glass of +4.5 dioptrics. No apparent changes could be seen with the ophthalmoscope at the fundus of either eye. The pupil contracted under the effect of myotics. The tension of globe was normal. The patient asserted that the field of vision was limited, but I was not satisfied that this was the fact. Both eyes had hypermetropia of +1. dioptric.

Tonics and moderate use of the eyes, with the application of a solution of eserine to contract the pupil, were advised. The patient continued under observation from time to time for several months; the focal power of glasses required for reading with the left eye varying at successive visits, and similar refractive conditions sometimes coexisting temporarily in the other eye. The observed symptoms might arise from mydriasis and paralysis of the ciliary muscle; but in this instance were probably induced by the stealthy use of atropia. Their factitious character was rendered probable by the entire absence of any discoverable cause of ciliary paralysis, and, especially, by the occasional temporary manifestation of similar phenomena in the other eye, as well as by the general demeanor of the patient.

Case VI. Mr. ——, aged twenty-seven, had excellent sight until five weeks before he consulted me in February, 1877, when the upper part, and a week later the lower part, of objects became blurred, and vision was soon after entirely lost in the right eye. About this time he had an abscess in the throat which discharged and healed. Four days before I saw him the same symptoms came on in the left eye, and at the time of his visit he only saw clearly objects held directly in front or to the nasal side of this eye. No history of specific disease was obtained. He smoked from three to six pipes of strong tobacco daily. The ophthalmoscope showed a paler optic disk and retinal arteries a little smaller than normal in the right eye; the left fundus had a normal aspect. Iodide of potassium with abstinence from tobacco were prescribed.

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[1] Read before the Boston Society for Medical Improvement, December 8, 1884.

On March 2d his wife wrote that he had nearly lost the sight of left eye.

I saw him again May 21st. The right optic disk had a pale look, as of commencing atrophy. He could distinguish objects towards the nasal but not towards the temporal side. In the left eye there was some fullness of the retinal veins, the field of vision was not limited, and he could distinguish letters half an inch in height when held close to the eye, but had almost no distant vision.

He was directed to continue the previously prescribed treatment, and I did not again see him. A year from the time of his attack his wife told me that his vision with one eye was perfect, with the other nearly so.

The rapid onset and progress of the symptoms in this case would allow of the supposition that the abscess of the throat might have had some ætiological influence; the existence of specific causes might also be suspected; and, lastly, the symptoms might be attributed to the effects of tobacco.

Case VII. Mr. ——, of Iowa, consulted me February 2, 1882, on account of failure of vision which began two weeks previously. He now sees at distance $\frac{20}{30}$, but cannot read with the right eye, and sees no objects with the left eye. Has suffered much from malaria. The optic disk and retinal vessels, especially of the left eye, had a rather anæmic look. I ordered Fowler's solution, tonics, change of air, and cheerful society. Six weeks later I saw him a second time, and found distant vision normal in both eyes, with an improvement in the retinal vascularity and in the aspect of the optic disks.

June 1st his vision was normal with the aid of a glass of +0.75 dioptrics for reading fine print.

In this case there appeared to be some doubt whether the loss of visual power and the threatening appearances of the optic disk and of the retinal circulation of the left eye were to be ascribed to malarial influences alone, or perhaps, in part at least, to the effect of large doses of quinia.

Case VIII. Mr. ——, aged thirty, consulted me on 26th of last January. Three weeks previously he had noticed dimness of vision in the left eye, and for a few hours could not see even a bright gas light. Three days later the symptoms had disappeared. His visual field and perceptive acuteness are now normal in this eye, and no changes can be observed at the fundus with the ophthalmoscope unless possibly a slight want of fulness in the retinal circulation.

A week before I saw him he had a similar attack in the right eye, with much pain in and around the eye, so that he was kept awake for two nights. He has now no pain around the eye, but a dull pain in the globe itself, which is increased by pressure. The tension seems to be slightly above the normal. He cannot count fingers at one foot distance with this eye, except with hesitation, and only within a small space at the upper part of the field. The pupil is sluggish and inclined to dilatation. The ophthalmoscope shows slight haziness of outline of the optic disk and marked fullness and tortuousness of the retinal veins. Iodide and bromide of potass., with ergot, were ordered. On the 4th of February he could count fingers with the right eye at all parts of the field, and the aspect of the disk was improved. April 19th he had vision of $\frac{20}{40}$ for distance, and could read No. 1 of my test-type with his right eye. The optic disk, the field of vision, and the tension of the globe had become normal, and he felt better in all respects.

There seemed to be no reason in this case to suspect that the amaurotic symptoms reported as having existed in the left eye were imaginary. The patient was an active business man, and not at all inclined to permit himself to be disabled from work. A temporary embolism of the retinal artery might be a sufficient, but would be an entirely improbable, explanation of the sudden accession of these symptoms and of their prompt relief without any treatment. The rapid recovery from the unmistakable neuritis of the right eye is noteworthy; the recuperative powers being evidently good.

Case IX. Mrs. ——, aged twenty-eight, consulted me on October 31st last. She had always lived in a warm climate, but came to a Northern State fourteen months since. During the following winter she suffered greatly from cold, and had almost daily epistaxis, which was frequently copious. On one occasion she was carried home, after having fallen in the street and lost a large amount of blood in one of these hæmorrhages. The epistaxis still continues frequent. Since the birth of her son, three years since, her menstruation has been scanty. Last March she had a sudden attack of blindness, with only a perception of light, which was attended with severe pain in the region of the frontal sinus and in the forehead. The blindness continued for two weeks, and vision was afterwards gradually recovered. No morbid appearances can now be seen with the ophthalmoscope, and vision is normal for large objects. Her range of accommodation is slightly lessened, and she has some insufficiency of the internal recti muscles, and reads better with a convex glass of one dioptric. The exhausting hæmorrhages seem to be the only explanation of the temporary loss of vision.

In this connection it may be interesting to quote from the proceedings of the Ophthalmological Society of Great Britain at two meetings in July last, as published in the *British Medical Journal:* "Mr. Spencer Watson reported the case of a man who, after a fall of forty feet, was taken up unconscious. After swelling of the eyelids had passed off he was found to be absolutely blind, and ophthalmoscopic examination revealed engorgement of the optic disks. Loss of smell was also noticed. In a few days the sight improved, and at the end of six weeks was quite restored. The probable cause of these losses of sensory activity was a hæmorrhage in the middle and anterior fossæ."

"Mr. Nettleship read a paper on some cases in which acute inflammation seemed to take place in some small part of the optic nerve. They were characterized by a failure of sight in one eye, often accompanied by neuralgic pain in the temple and orbit, and pain on moving the eye. The disk often becomes more or less atrophic in a few weeks. The result was variable, from complete recovery to total blindness. The failure of sight was usually at its worst in three days, except in the most severe cases; recovery when complete usually required about six weeks. Changes in the disk were by no means constant even in the worst cases. These cases had to be distinguished from embolism of the central artery of the retina, from progressive atrophy where one disk was affected before the other, and from uniocular neuritis due to disease of the corresponding lobe of the brain. In some of the cases the symptoms might be explained by a periostitis of the optic canal; in others the mischief could not have been so far back; in some a rheumatic origin seemed probable. The majority of the patients were between twenty-five and thirty. At least five of the twenty-four had had syphilis, and there was a good probability of it in six others. In four cases the affected eye became permanently blind; in eight, more or less damage was done; twelve, exactly one half, recovered."

"The president, Mr. Hutchinson, had seen one case of this class, a young lady with a marked arthritic history. One eye only was affected, and became quite blind. Subsequently there was a slight papilitis. The patient ultimately recovered almost completely. Three years later she had a threatening of the same condition in the other eye, but recovered completely."

I will not cite here in detail the not unfrequent cases where amaurotic symptoms are present, often in a high degree, in tobacco consumers, but quote a brief extract from the *British Medical Journal* for June 21st, which contains a report, by Dr. Charles Shears, of "forty cases of men suffering from loss of vision, which was, probably, due to the abuse of tobacco, who were treated at the Liverpool Eye and Ear Infirmary during ten months." "Of the forty cases fourteen recovered completely; fourteen improved greatly; of nine the subsequent history could not be traced because of non-attendance. In the three remaining cases no improvement took place after attending the hospital a reasonable time. Of these three cases two would not diminish their smoking; the third was a confirmed drunkard, and was afterward attacked with alcoholic paraplegia. In twenty of the cases no ophthalmoscopic appearances were found; in eighteen the disks were pale; in two they were hyperæmic. The failure of vision is usually rapid and very marked. This leads the patients to seek early advice, which may, possibly, explain why so few cases of genuine atrophy have been reported. In many instances the state of the disk greatly resembled that met with in tabes dorsalis.

It is usually the practice to give strychnia internally. This was done in twenty-eight cases, but patients seemed to make an equally good recovery where smoking was diminished alone.

As in cases of tobacco-poisoning, so also we find that the amaurosis produced by the prolonged administration of quinia in large doses is sometimes followed by atrophy of the optic disk and occlusion of the retinal vessels, whilst that arising from malarial poisoning tends rather to induce similar changes to those observed in the eye as an accompaniment of Bright's disease. Yet in all these conditions we hope, by removal or neutralization of the pernicious agencies before the structural alterations have gone too far, to obtain a favorable termination. Instances of temporary loss of vision accompanying diabetes or coexistent with albuminuria during the puerperal state, or occurring after flooding, will, naturally, suggest themselves to the practitioner as also tending to a fortunate result without local treatment being required. I reported in May, 1875, a remarkable instance of amaurosis with nystagmus, in a girl of eight years, occasioned by the presence of tape-worm in the digestive organs, which was relieved, after having continued several weeks, upon the expulsion of a large amount of tenia, which was effected by the use of anthelmintics.

We have seen that the retina and optic nerve have this resemblance to the brain, that they may be the seat of intermissions of function depending on disturbances of circulation or nutrition without the establishment of serious pathological alterations. Many of these cases of disorder of function have a special interest for the general practitioner, possessing, as they so often do, a diagnostic value in relation to conditions of the general system which have given rise to them, and requiring tonic, alterative, specific, or antimalarial treatment for their relief. Quite different are those other conditions of true amaurosis with atrophy of the optic nerve, resulting either directly from injury, from embolism of the retinal artery, from obliteration of the retinal vessels caused by phlegmonous retro-bulbar inflammation within the orbital cavity, or from disease of the cerebro-spinal system, where absolute structural changes render the prognosis entirely unfavorable and all treatment ineffective. Here much harm may be done by the use of too active remedial means.

Althaus, in his new work on Sclerosis of the Spinal Cord, says, "As I have found the general effects of strychnia injurious in tabes I would strongly dissuade practitioners from resorting to this drug whether for optic atrophy or other symptoms." Michel, of Wurzburg, testifies to the same effect: "The formerly highly recommended injections of strychnia have proved to be useless." He has a similar opinion as to the value of local depletion, of which he says, "The still very popular abstraction of blood from the temples by means of artificial leeches are to be regarded as useless, especially in inflammations of the iris and the ciliary body. If improvement of vision is observed soon after the depletion it is to be attributed either to the quiet of mind and body together with staying in a darkened room, which are usually advised after the abstraction of the blood, or the improvement depended on the nature of the disease." And again, in speaking of the treatment of myopia complicated with posterior staphyloma, he says, "Depletion from the temporal region is still frequently recommended, but I have been unable to convince myself of its value."

How a seemingly trifling lesion may cause loss of vision and subsequent atrophy from compression of the optic nerve will appear from the following case, which I will cite as an example of its class: —

A boy, ten years old, was brought to me on the 19th of September last. Three days previously he fell three or four feet from a fence, and, as he thinks, struck a projecting twig of a hedge, causing a small wound of lower lid near the inner canthus. There was a small ecchymosis of the ocular conjunctiva behind the situation of the wound of the skin of the eyelid, and a slight ecchymosis beneath the skin of both the upper and lower eyelids near the outer canthus. No other change was observable in the eyeball either upon external inspection or ophthalmoscopic examination, but there was no perception of light with the injured eye.

After the fall he went into the house where he was passing the afternoon, complained of faintness, said he thought he had lost his eye, vomited his dinner, and then went to sleep for an hour at least. At about five o'clock he rode a mile and a half to his home, and went at once to bed without eating. At the end of an hour he woke and complained of his head, as he had done when he first reached home. During the night he woke several times and said he had headache. He was in bed the whole of the next day, and seemed rather dull and heavy. The following day he was in bed, with the exception of two hours, but ate a fair amount of light food. When brought to me, after a twenty miles' journey, he seemed in good health and spirits. His pupil had been dilated by atropia by his physician. Bromide of potassium and quiet were advised. A week later the wound of lid was healed, and the ecchymoses had disappeared. On October 4th a small scar of the lower lid was the only obvious trace of the injury; a slight divergence of the eye observed at the first visit was scarcely noticeable. The movements of the pupil were sluggish, but there was no mydriasis. There was no evident change at the fundus of the eye, but the absence of light perception continued. A small fracture of the wall of the orbit or of the parietes of the optic foramen may have caused pressure of a bony fragment upon the nerve, but thus far no visible change had taken place in the circulation in the retinal vessels which penetrate the nerve within the orbital cavity, nor did the nerve itself show signs of the compression which had abolished its function of conveying impressions to the brain.

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SOME POINTS REGARDING PUERPERAL CONVULSIONS, ILLUSTRATED BY TWO CASES.

BY CHARLES F. WITHINGTON, M. D.

That the unexpected is what happens in the matter of puerperal convulsions is a fact that must have presented itself to most practitioners. Eclampsia sometimes occurs when least looked for, and again when all rules teach us to expect it, it fails to appear. The following two cases seem to the writer of interest as bearing upon our means for predicting convulsions. To be forewarned is to be forearmed, and where so much depends upon prompt action it is obviously of great importance to be able to recognize every danger signal which nature puts up. When in spite of the danger signal the catastrophe does not occur, it does not necessarily show that the signal was a lying one, but rather that there has been some compensatory action of nature opposing and countervailing a danger which in itself was nevertheless real, and of which the sign we saw was no false witness.

Case I. Mrs. B., age thirty-six, quintipara. The patient is a blonde, of plethoric habit, and of nervous temperament. Previous labors rapid and easy. When five months pregnant with her last child she had scarlet fever, one of her children at the same time dying of the disease. There was some dropsy following. As she lived at the time in another city the condition of the urine is unknown to the writer. This labor occurred some four or five years ago. The child was healthy, but died at the age of about ten months of a diarrhœal disease. In January, 1883, and following, the patient was under my care for debility, accompanied by severe cephalalgia. The pain sometimes appeared to be neuralgic and again was evidently intracranial. Neuralgic attacks in other parts of the body, notably the ovaries, were observed during the winter, which she said she had suffered from before. Examination of urine showed it to be normal. Her condition gradually improved, and she spent the summer of 1883 in Europe with benefit. Conception took place at about the time of her return in the fall.

Throughout the pregnancy the patient was miserable. Most of the time the lips were markedly purple. Dyspnœa and palpitation occurred on slight exertion. In the early months nausea and vomiting were rather troublesome, but stopped at the usual time. There was excessive œdema of the feet, also moderate œdema of hands and face. The left hand in particular felt numb, and partially devoid of sensation. Cyanosis under the nails. Headaches and flitting neuralgic pains were frequent. A sharp attack of sciatica at one time prevented her from walking. The bowels tended to constipation, but were kept regular by daily use of Hunyadi water. Appetite poor. Patient says she never felt nearly as bad in any previous pregnancy. Weeps easily and is depressed. The heart was examined two or three times and nothing abnormal detected. The urine, which was good in quantity and normal in density, contained no albumen until May 30th, when a very faint trace was discovered. But nothing abnormal appeared in the sediment at that time.

The expected date of confinement was June 26th. On May 30th there was an attack of epigastric pain, quite severe, and the urine was examined with the result given above. For the next ten days the patient continued to be on her feet somewhat, as she had been before, though for several weeks she had hardly been out of doors, feeling quite unable to walk from weakness and dyspnœa. Several endeavors to administer iron failed on account of its disagreeing. The same ill-success attended attempts to employ digitalis.

. June 11th there was another exacerbation of symptoms; headache, and epigastric pain very severe. Nausea, no appetite, great lassitude, and some but not excessive mental depression. Sight unaffected. Considerable œdema of hands and feet. The urine, which was learned to have been diminished for the last few days, was measured and found to be twenty-two ounces for the twenty-four hours. Micturition rather frequent. Color high. Albumen one fourth per cent. Sediment uric acid crystals, a little blood, free renal epithelium and pavement epithelium, hyaline casts, some of which had whole renal cells adherent. From this time on the patient was kept constantly recumbent, and was given diuretics, dry cups over the kidneys, etc.

June 12th. The amount of albumen was much increased, amounting to about one per cent. The sediment as yesterday, but all the abnormal constituents, especially the hyaline and granular casts, were more abundant. Dr. W. L. Richardson saw the patient with me to-day in consultation with reference to the induction of premature labor, in view of the seeming danger of convulsions. Meantime the amount of urine for twenty-four hours had increased to thirty ounces. Although the cephalic and epigastric pain continued to be severe, yet in the absence of other imminent symptoms it was considered advisable to maintain an attitude of armed expectancy rather than to terminate the pregnancy, on the ground that should convulsions occur, the same proceeding which was now under contemplation could be resorted to, with an assurance, then, that it was necessary and was not itself the cause of the convulsions, as might possibly be suspected if labor were induced now. Moreover in the remaining two weeks a constant maintenance of the recumbent posture might, by relaxing the tension on the renal vessels, effect such an improvement in the condition of the kidneys that the risk of convulsions would be materially diminished by the time labor set in. The last diminution in the amount of urine having occurred while the patient was taking digitalis, it was considered unadvisable to resume this. She was given chloride of iron in the form of a pill (Rabuteau's), with granular extract of malt, and special attention to feeding. The citrate of potash, which was given yesterday, was continued, as also the dry cups daily.

Our anticipations were realized. The urine increased daily for the following week, reaching fifty ounces and over. The albumen diminished greatly, and the casts became less frequent, though they were still present. The epigastric pain diminished, and she was quite comfortable when the labor came on a week later (June 19th). The only abnormality about the labor was a low attachment of the placenta which gave rise to quite sharp hæmorrhage during the stage of dilatation; so much so that the patient fainted and the pains died away. Considerable anxiety was felt, but after turning out three handfuls of clots from the vagina, a Barnes's bag (largest size) introduced into the os checked the bleeding and brought back the pains. As the head came past the edge of the placenta the hæmorrhage stopped while the bag was expelled. With the placenta after the birth came away a clot as big as the fist, which doubtless was formed *ante partum.*

The convalescence was favorable, but on the second day another severe attack of gastralgia occurred. The urine remained abundant, and an examination of it soon after the ceasing of the lochial discharge showed but a faint trace of albumen and no abnormal renal elements. Later, the albumen disappeared.

The questions of interest in this case are these: How imminent was the danger of convulsions at the time when the renal disturbance was at its maximum? What circumstances, if any, would have precipitated an eclamptic attack? What would have been the effect of an operation for the induction of premature labor at that juncture? What effect, if any, was produced upon the risk of convulsions by the free hæmorrhage which occurred during the first stage of the labor? What was the significance of the symptom of epigastric pain?

The answer to most of these inquiries can, of course, only be conjectural, as must be the case with all questions having reference to conditions that were not fulfilled. Regarding the actuality of the danger, we can only say that those renal conditions were undoubtedly present, which are generally admitted to be the prodromata of the great majority of cases of convulsions. We do not at present concern ourselves with the different theories of the pathology of this affection. But whether the convulsions are due to uræmia, hydræmia, or cerebral anæmia, the renal conditions indicated by albuminuria and casts undoubtedly do favor the occurrence of eclampsia. Braun found that sixty per cent. of the cases of acute and chronic nephritis together developed convulsions. Hofmeier reports 104 cases of convulsions in 137 of nephritis. Moreover the acute forms of renal disease are more likely to give rise to eclampsia than the chronic.

It seems reasonable to suppose that inasmuch as the renal trouble and the significant symptoms had developed progressively during the time while the patient had been on her feet, and as after she was put to bed the improvement began, it was at least as much owing to recumbency as to medication, and that had she kept about the house an attack might have been precipitated. Moreover, as we know that sixty per cent. of the whole number of convulsions occur during labor itself, it seems not improbable that had labor come on either naturally or artificially during that period when the kidneys were most disturbed in their action convulsions might have occurred.

Whatever may be the effect of venesection in eclampsia, the same probably would be that of a free uterine hæmorrhage. I believe that in this case with the mitigation of the symptoms the immediate danger of convulsions had largely passed away at the time labor occurred. But the persistence of a moderate albuminuria and the fact that the supposed cause of the renal disturbance, namely, the pregnancy, still existed make it possible that there was still some danger. Testimony is tolerably unanimous that at least the primary effect of venesection is favorable in eclamptic cases by reducing the blood pressure. Even though the pressure should soon come up again with an additional degree of hydræmia from the bleeding, yet something would have been gained temporarily, which, with the subsequent removal of the exciting cause, might leave a definite gain to the credit of the venesection. All this may equally be said of a hæmorrhage, accidental or unavoidable. It may be of interest in this connection to remember that post-partum hæmorrhage is an especially frequent occurrence in conjunction with eclampsia.[1] Whether this is to be taken as a natural attempt at therapeusis we venture no opinion.

In a paper by Dr. Goss, read before the Boston Society for Medical Improvement,[2] special attention is called to severe epigastric pain as a precursor of eclampsia. In the discussion that ensued several instances of this symptom were referred to both with and without convulsions. In the latter case the urine was albuminous and contained casts. In Leishman's System of Midwifery epigastric pain is given as one of the three cardinal symptoms of impending convulsions. Now in my patient, although the attack of June 11th was by far the severest one she ever had had, yet gastralgia, in no way differing, except in degree, from that attack, had, in common with other neuralgic manifestations, occurred to her from time to time before, and has once or twice since the labor, having a marked connection with fatigue and worry. So that I do not feel sure that this pain had any distinctive relation to her albuminuric condition. As a marked instance of such a relation, however, I will cite the following: —

CASE II. Mrs. D., aged twenty-eight, secundipara, brunette, of full habit. Kindly referred to me by Dr. Sumner. The date of confinement was uncertain. Catamenia last November 5, 1883, but patient says in her previous pregnancy she menstruated once or twice after conception, and she is confident from personal data that in this instance pregnancy could not have begun later than the end of September. Condition good during the early part of pregnancy. At about April a swelling of the veins of the left labium began, which increased gradually to the size of a hen's egg, disappearing when she was recumbent. She expected her confinement about July 4th, and had her nurse in the house from that time on. From that date she became considerably worried, thinking she was going so much over her time, from which opinion she could not be persuaded. She had first felt motion about March 13th, and my estimate of her time of labor was from the 11th to the 15th of August. After the beginning of June she remained indoors almost altogether, avoiding walking on account of the varix as well as of swelling of the feet and hands, which was considerable. Says also that her face is much altered, though no well-marked œdema is observed there. The discomfort was no greater than was to be expected from her advanced pregnancy. August 14th, the œdema being considerable, I examined the urine and found it abundant in quantity, with a questionable trace of albumen, but no casts.

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[1] Lusk's Science and Art of Midwifery, p. 528.

[2] Boston Medical and Surgical Journal, November 13, 1884.

On the evening of August 19th her husband called to say that she was complaining of intense pain at the pit of the stomach. I prescribed for her, but did not visit her until the following morning. On that day the pain at the stomach still continued, and there was slight headache, but no impairment of vision. Œdema not excessive even in feet. There was some nausea but no vomiting. No especial mental depression. I advised her to stay in bed for the most part during the rest of her pregnancy. While sitting in a chair at five P. M. of this day she complained suddenly of her head feeling very bad, and had a convulsion. I was sent for at once, but was absent from home. At 5.30 she had a second convulsion. My neighbor, Dr. J. S. Flint, was then called, and arrived at six o'clock, just in time to witness a third convulsion. On my arrival, at 6.15, I found the patient unconscious in a state of coma, from which she soon partially emerged. The condition of the os showed labor to have begun. A subcutaneous injection of four minims of Magendie's solution had been made at six o'clock, and this was now followed by ten grains of chloral, the patient being able to swallow. Dr. Flint, at my request, kindly remained till the labor was completed, and gave me valuable assistance in the management of the case. At 7.30 o'clock occurred the first convulsion after my arrival (the fourth in all). Ether was administered during this seizure, and in the succeeding stage of unconsciousness, from which she did not emerge before the next attack, manual dilatation of the os was performed. In course of an hour the os was expanded from the size of perhaps two centimetres to five centimetres. Then as more active pains were coming on we waited to see what they would accomplish. At 8.30 a fifth convulsion occurred. Ether was then continued after the seizure ceased, and the forceps applied at the brim. Locking was effected with some difficulty, and traction made gradually and continuously. At 9.30 o'clock a male child, weighing eight and one half pounds, was delivered without perineal rupture. The placenta not following within fifteen minutes, and there being little uterine action, I introduced my hand and scraped it off. It was remarkably large, but otherwise normal. Respiration did not become established in the child for some fifteen or twenty minutes, but afterwards went on properly.

The patient lay mostly unconscious until two the next morning, when a sixth convulsion occurred. She was given chloral by rectum, and one fourth grain of Magendie's solution, followed, as soon as she could swallow, by one fourth grain elaterium. This was repeated twice (in all three fourths grain) at intervals of two hours, and produced free catharsis. The seventh and last convulsion occurred at six A. M. She was made to swallow a mixture of the citrate and acetate of potash in frequent doses, and dry cups were applied to the loins. She regained her consciousness in a measure in the afternoon of this day, and was very peevish and irritable. She also passed urine in good quantities. Unfortunately the urine which I drew at the time of applying the forceps was thrown away by the nurse, and no more could be obtained free from admixture with lochial discharge. From the testimony of the nurse it is pretty certain that during the afternoon and night of the convulsions the urine was greatly diminished in amount. After she fairly regained consciousness she was unable to micturate, and the urine had to be drawn by catheter until she was able to sit on a vessel. The convalescence was uninterrupted and normal in every respect. Her recollection of the occurrences for about twenty-four hours from the time of the first convulsion was altogether wanting, and, as she afterwards said, she was not herself for several weeks. For instance, on attempting to write, she found herself unable to spell common words, and on trying to look them up could not find them in the dictionary. Her conversation seemed to her friends strange, and she was conscious that she acted and talked queerly, apologizing after she had quite regained her natural self for what she thought she might have said "wrong" during the few weeks after her labor.

In this case the epigastric pain was very marked, being by far the most noticeable precursor of the convulsions. Had I been aware then of the significance of this symptom, I should have been led to make another examination of the urine, which would, probably, at that time have given the evidence that a week before it failed to present of the impending catastrophe.

Regarding the treatment of convulsions, it is not my present purpose to speak. Suffice it to say that I believe the favorable result in this case was due largely to what is of primary and vital importance whenever convulsions occur before delivery, namely, the emptying of the uterus with all possible alacrity.

REPORT ON PROGRESS IN ORTHOPEDIC SURGERY.

BY E. H. BRADFORD, M. D., AND H. L. BURRELL, M. D.

SPINA BIFIDA.

Löbker[1] reports four cases operated upon by him. The first, seven weeks old, presented a tumor of the size of an apple in the lumbar region. Five grammes of the fluid of the cyst were drawn out by means of a subcutaneous syringe, and two grammes of a freshly made solution of pure iodine 0.5, iodide of potash 1.0, water 30.0 injected in, and slight compression was applied. This procedure was repeated three times at intervals of from five to eight days. Recovery followed, with shrinking of the tumor, so that a year later a small tumor of the skin of the size of a silver quarter was all that remained. A year and a half later the child was reported as well.

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[1] Centralblatt f. Chirurgie, No. 33, 1884, p. 539.

A second case was operated upon twice when from eleven to twelve weeks old. The interference was well borne and the tumor became smaller, but further treatment was discontinued, and the child subsequently died. The third child was five days old, the tumor was in the lumbar region. The pedicle was tied by two ligatures, the sac cut off, and the wound dressed with iodoform gauze. The child is reported to have been discharged well. A fourth case was that of a child four months old, with hydrocephalus. Death resulted from ligature and extirpation.

Löbker advises insertion of the needle of the subcutaneous syringe into the base of the swelling, and compression of the base so that the iodine should not enter the canal.

A child [1] aged two months, female, had a tumor the size of a peach in the middle line, opposite the two last cervical vertebræ. It had a pedicle an inch and a half in circumference. The tumor was soft and fluctuating; under strong pressure it diminished in size, causing the child to cry and have slight convulsive movements of the limbs. The tumor was half emptied of a thin, transparent liquid of alkaline reaction. The pedicle was constricted by a couple of turns of elastic ligature. At the moment of constriction the child cried, became livid, and some clonic movements were excited, but in a few hours these subsided.

On the sixth day there was vomiting, a tendency to coma, and twitching of the upper limbs, but after this they did not return. The ligature separated on the twelfth day.

NATURE OF RICKETS.

Korsakow — in his inaugural thesis at Moscow — considers the following questions: —

(1.) Whether a diet poor in lime salts in young animals produces changes in the bones analogous to rickets? (2.) What influence phosphoric acid and carbonate of lime will have added to this diet? (3.) What influence lactic acid has upon the bones of young animals?

In endeavoring to find an answer the writer instituted a series of experiments upon growing animals with the following results: —

Changes in the structure of bone similar to those observed in rickets in man were produced by food poor in lime salts, which changes can be prevented by the addition of a sufficient quantity of phosphate of lime. These changes also result when a diet rich in lime salts is administered if the lime salts are not properly absorbed by the digestive apparatus. Lactic acid did not produce any rachitic changes, but small doses of phosphorus, and also of strontium combined with improper diet, will produce such changes.[2]

FLAT FOOT.

According to Henke, the primary cause of the distortion of valgus is a relative weakness of the tibialis posticus which allows the abnormal pronation of the front of the foot; secondary alterations take place in the shape of the bones from the altered pressure. H. v. Meyer agrees in the main with this view, believing that the arch of the foot is laid upon its side, but not broken, and in confirmation of this view found that the calcaneo-scaphoid plantar ligament was not lengthened. Lorenz [3] explains the deformity in much the same way. The foot practically consists of two arches or trusses, an outer and an inner. When weight falls upon the foot a slight pronation occurs, and the inner truss in a measure slides on the outer. If the weight is greater than the foot can sustain the outer truss is flattened, the astragalus twisting on its transverse axis, and the inner truss falls to the inner side. Irritation of the joints follows, and contraction of the muscles takes place.

Terrillon [4] found on examining three persons with acquired flat foot, with pain and tenderness, a paresis of the peronei and tibialis anticus.

Verneuil distinguishes three classes of this trouble: in the first a contraction of the peronei is the primary trouble; in the second paralysis of the tibiales muscles; the third, an arthritis of the tarsus.

Despres considers that there are three stages of the trouble: first, a paresis with slight flattening of the arch of the foot, with occasional contracture of the extensors; second, flattening, with a contraction of all of the muscles of the feet; and third, contraction, with alteration of the bones. The only rational treatment consists in the application of electricity and the employment of an apparatus which holds the foot in the proper position.

THE PATHOLOGY OF CLUB-FOOT.

Mr. R. W. Parker and Mr. Shattock [5] have completed their paper advocating the mechanical mode of causation of this deformity. Their opinion rests on the careful dissection of five cases (three varus and two calcaneus) and on a study of the various specimens in the London museums.

The contention was that there was nothing especial in this deformity, and nothing which might not occur in other joints. In one of the cases there was histological integrity of the affected limb, but there was some extra obliquity in the neck of the astragalus. In another case, however, there was no such malformation of the astragalus. Hence they argued the insufficiency of the usually accepted theories, nerve lesion or bone deformity.

It was shown that the conformation of the astragalus which ordinarily exists in talipes is the normal condition of simiadæ, and these animals are not talipedic.

As proofs of pressure in new-born children, instances of torsion of bones of the leg and of the astragalus were referred to, also a case where depressed patches of atrophied skin, with bursæ existing, were found over the external malleolus and over the head of the astragalus like those found in persons who had walked on an unreduced talipedic foot. The varieties of varus and calcaneus were thought to depend on the date of onset, and to be in both cases an exaggeration of normal positions at some time in fœtal life.

EXCISION OF TENDO-ACHILLIS IN TALIPES CALCANEUS.

Mr. Walsham [7] has excised from one half to two thirds of an inch of the lower end of the tendo-Achillis in four cases of talipes calcaneus. The section of the tendon was made obliquely from above downward, and before backwards, and the divided ends were united by kangaroo tendons. All were improved. Two regained the power of flexion and extension of the foot.

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[1] Giornale di Clinica e Terapie, July 19, 1884.

[2] Centralblatt f. Chirurgie, No. 26, June 28, 1884.

[3] Centralblatt f. Chirurgie, No. 19, 1884, p. 315.

[4] Centralblatt fur Chirurgie, No. 39, p. 650.

[5] British Medical Journal, May 24, 1884, p. 998.

[7] British Medical Journal, June 14th.

RESECTION OF MUSCLES IN INFANTILE PARALYSIS.

Mr. Keetly[1] has recently undertaken the resection of part of the quadriceps extensor femoris in a case of infantile paralysis causing inability to extend the right knee. A longitudinal incision was made in front of the thigh about three inches in length, and extending an inch above the patella. The skin was held apart by retractors, and an inch of the entire substance of the muscle was removed with scissors about two inches above the patella. A dozen carbolized catgut ligatures were used to unite the two ends. Esmarch's bandage had been applied before the operation, and only one small artery required ligation. The wound was dressed with an iodoform pad and antiseptic gauze. A splint was applied which made an angle of sixty degrees with the bed.

Mr. Willett has[2] already resected the tendo-Achillis in paralytic calcaneus with good results. He found that the shortening of abnormally elongated tendons enable the muscles of the calf to regain some portion of their lost functions.

TREATMENT OF CHRONIC AFFECTIONS OF THE JOINT OF THE LOWER EXTREMITY.

Caumont[3] generalizes on the cases of disease of the hip, knee, and ankle observed in the hospital at Münsterling between the years 1871 and 1881, 212 in all (and sixty-nine resections).

Of the eighty-five cases of disease of the hip-joint which did not undergo resection the result was the better the earlier the cases came under treatment. For example, of eleven patients treated from the earliest stage nine recovered perfectly, while of twenty cases in which treatment began in the stage of inflammation fourteen recovered and four died. Of the thirty-nine cases treated first in the third stage, but without resection, only nineteen recovered with but little deformity, seventeen died, and three were but little improved. Forty-four were excised with a mortality of 61.03 per cent. Of twenty severe cases, but without marked suppuration, five died, twenty-five per cent. mortality; while of ten similar cases resected five died; a mortality of fifty per cent. Of nineteen severe cases with suppuration, treated without operative interference, a mortality of 63.01 per cent. is recorded; and of twenty-three similar cases which were resected the mortality was about the same, 63.07; while the percentage of recovery with slight deformity was somewhat greater in the excised than in the non-excised cases.

The author quotes Ollier in regard to resection: — "Les resections les moins nécessaires pour la conservation de la vie sont celles qui donneront les résultats les plus brilliants au point de vue de la reconstitution d'une articulation nouvelle."

Of the knee-joint the mortality in ten cases (without suppuration) and not resected was ten per cent; fifty per cent. recovered; forty per cent. lived, but with a limb of little use, and of these one underwent amputation. Three similar cases submitted to excision. Two recovered with useful limbs; one recovered after amputation. Twenty-five suppurative cases gave a mortality after expectant treatment of sixty-four per cent.; thirty-six per cent. recovered, but two of these cases underwent amputation. Twenty-nine suppurative cases resected gave a mortality of forty-four per cent., and four of the cases were amputated.

Nine severe cases of caries of tarsus gave the following figures: two died; two were amputated; two recovered; three did not recover. Seven cases were resected, and two of these were cured, two uncured, and three died.

(To be concluded.)

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

NOVEMBER 24, 1884. The PRESIDENT, DR. CHARLES D. HOMANS, in the chair.

ACRANIA AND SPINA BIFIDA.

DR. W. W. GANNETT showed a fœtus, which was of about seven months, and which presented the characteristic appearances of that form of monstrosity known as acrania, together with spina bifida. There was no appreciable neck, the ears resting upon the shoulders, and the eyes turned upwards. The cranial bones were wholly wanting, their place being occupied by a membranous sac about the size of a peach, containing thin fluid and a small amount of brain substance.

A hydrocephalus occurring early in foetal life was the most satisfactory explanation yet advanced to account for such changes.

The spinal column was interesting from the fact that the arches of the vertebræ, together with the spinal cord, were absent.

DR. BUCKINGHAM said that the mother was a patient of Dr. George W. Gay. The interesting clinical fact, aside from delivery at seven months without obvious cause, was the difficulty in making out the presentation. There seemed to be a cross birth, but it was not possible to determine at which extremity lay the head. The fœtal heart was not to be heard. In vaginal examination, before rupture of the membranes, the finger struck upon what seemed like the extremities of fingers, or like a row of teeth; but which proved to be the union of the ribs with the vertebræ. The presentation being probably transverse, the os three quarters dilated, and the patient beginning to tire, Dr. Gay ruptured the membranes and delivered by the feet. There was a very large amount of amniotic fluid.

As the only other pregnancy had ended in abortion at three months, the question of syphilis had been carefully considered, but there was no history of syphilitic symptoms.

CYST OF THE BROAD LIGAMENT.

DR. J. W. ELLIOT showed a cyst of the broad ligament which he had removed two days before by abdominal section. The cyst was about the size of a cocoanut, and contained a pint of clear fluid. The Fallopian tube was much enlarged and coiled around the cyst. The ovary being about two inches long was also removed. Dr. Elliot had begun to shell the cyst out of the broad ligament, but when he found the tube and ovary diseased had clamped the whole broad ligament. The cyst was adherent to intestines and to mesentery.

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[1] British Medical Journal, May 31, p. 1058.

[2] Ibid.

[3] Deutsche Zeitschr. f. Chirurgie, Bd. xx., 3 and 4.

He had succeeded in removing it through an opening of two inches in the peritonæum. In reply to questions he stated that the patient had not had a bad symptom since the operation; the temperature going only to 100 ° F.

DR. J. C. WHITE read a paper entitled Psoriasis — Verruca — Epithelioma; a Sequence.

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THE USE OF COCAINE IN THE NOSE.

DR. F. H. HOOPER spoke of the effects of this drug in a case of acute coryza. The left nostril was completely occluded; the right only partially. The sense of smell was absent. On applying a two per cent. solution of the muriate of cocaine to the interior of the nasal cavities by means of a cotton-tipped probe, free respiration was immediately established, the sense of smell returning at the same time. The nose remained perfectly free for three hours, when it began to close up again. This was followed in about an hour by a partial reopening, but at his second visit, five hours after the first application, the left nostril was again absolutely stopped, the conditions, in fact, being the same as at the morning visit. Cocaine was again applied in the same manner, and its use was followed instantly by the same result. Both nostrils have since (two days) remained open. He had also used it in a case of chronic hypertrophy of the nasal mucous membrane with the effect of causing a very notable contraction of the swollen tissue. Dr. Bosworth[1] was the first, as far as Dr. Hooper was aware, to call attention to the use of cocaine in the nose. Dr. Bosworth supposes that it produces its effect by causing a tetanic contraction of the muscular fibres which are found surrounding the venous sinuses which form the erectile tissue of the nose.

DECEMBER 8, 1884. The President, **DR. CHARLES D. HOMANS**, in the chair.

HYDROCHLORATE OF COCAINE.

DR. CHARLES H. WILLIAMS stated that, assisted by his brother, he had experimented on himself with cocaine subcutaneously, taking in the arm five one half grain doses at half-hour intervals. There had been partial local anæsthesia extending a short distance up and down the arm, and to a less distance around it. The skin was tested by calipers, and seemed to have lost none of its sensitiveness except near the place of injection. In the throat, reflex spasm did not occur when the pharynx and larynx were touched by instruments. The effect of the drug passed off in about two hours, and other tests were not made on this occasion. He had also applied cocaine to the gum before allowing a tooth to be filled, but did not think it had been of any service. In his hands it had diminished pain when applied before passing the lachrymal probe.

DR. H. W. WILLIAMS had been told by a dentist of large practice that it was not of use in dental operations.

DR. WADSWORTH quoted a recent journal that a Prussian druggist had taken fourteen grains of cocaine by the mouth, then fell asleep, but waked after a time with griping pains in the stomach. There were one or two other symptoms of no great moment. No serious ill effects. He had a number of times greatly lessened the pain of probing the nasal duct, in sensitive patients, by placing two or three drops of a two per cent. solution in the conjunctival sac.

The drug was of value also for another purpose, which he had not seen referred to, for the relief of a certain form of headache. A day or two after he first obtained some of the solution a young lady came to him suffering from headache, to which she was subject. Her drooping lids and whole demeanor were characteristic of headache. The larger part of the pain was referred to the eyes, and it occurred to him to try the effect of cocaine. In a few moments after placing a drop or two on the conjunctiva of each eye the pain in the eyes was wholly relieved, the lids opened naturally, and the lady's whole appearance was changed. Pain in the top of the head and at the root of the nose was still felt, but the total amount of pain was so much lessened as to give little inconvenience. Dr. Putnam, to whom he mentioned the case, had tried the remedy in one or two instances with advantage. In one or two cases in which the pain was not especially in the eyes there was no effect.

DR. HAY said that he had excised a piece of xanthelasma from each eye, one of the pieces being five eighths of an inch long. The patient had been previously treated with cocaine, and there seemed to be little discomfort.

PNEUMO-THORAX.

DR. LYMAN presented three cases of pneumo-thorax, and said, " It is so unusual to have three cases at once and in such condition as to allow of their presentation together for comparison, that I think the Society may be glad of the opportunity to examine them. They are of interest as illustrating different varieties of the disease, one being of surgical or traumatic origin, one due to tubercular ulceration from the lung outward, and one following pleurisy, it being doubtful whether the perforation was from the lung outward or vice versa. I am indebted to Dr. Mason for the statement that in his ten years' review of the hospital records he found no case of simple pneumo-thorax, and none in which the generation of gas from pus was suspected. The probability of such a phenomenon is discredited by many writers.

" The first case (Hart) is nearly well, so that the pathognomonic phenomena, which were well pronounced, must be gathered from the hospital records. It exhibits, however, in a marked degree the resultant phenomena of a typical case of traumatic pyo-pneumothorax. The respiration, as you will see, is nearly restored, but the flattening of the chest is well marked, and owing to the large effusion of lymph the ribs remain nearly quiescent and the heart somewhat displaced. Inflation of the lungs is at the expense of the diaphragm.

" The second case (McGuire) is a typical case of hydro-pneumo-thorax from pulmonary tubercular ulceration into the pleura. The date of the perforation with its accompanying symptoms cannot be ascertained with certainty. The cause of the temporary hemiplegia is also problematical. The percussion, metallic tinkling, and splashing speak for themselves.

" The third case (McCarthy) is interesting in many aspects, especially so with regard to the prognosis. A fairly healthy boy of seventeen, whose mother died of phthisis, was while in apparent health attacked with the ordinary signs of acute pleuritis. For this he was tapped twice before entering the hospital, about three pints of serum being obtained each time, the first clear, the second slightly cloudy. Ten days before entrance, and between two and three weeks after the second tapping, he states that he was *suddenly* seized while ascending the stairs with a sharp pain in the left chest, followed immediately by severe dyspnœa. Possibly there was at that time some slight rupture of the pulmonary pleura, or perhaps some slight injury to that membrane at the last tapping may have resulted in ulceration; or again, it may be one of those cases which have given rise to the belief in the secretion of air by the pleura itself. We can at any rate exclude, as cause, decomposition of the fluid; inasmuch as there was no previous empyema. However this may be, it seems probable, in view of the absence of any marked signs of pulmonary disease, that the opening was from the cavity rather than from the lung. He has had no cough or other signs of any *ulcerative or softening* process in the lungs up to the present moment. He is somewhat anæmic, and emaciated, and the presence of moist rales were reported in the early history of his disease, but nothing which is not readily explicable on the theory of pleuritis alone.

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[1] New York Medical Journal, November 15th.

"The subsequent treatment depends on circumstances. Possibly the pulmonary orifice, if such there be, may be closed by lymph, and thus exclude one factor; but as the fluid which I removed at the third tapping, five days since, was somewhat purulent a permanent opening may soon become necessary."

Case I. Hart, aged twenty-three, single, occupation upper cutter, entered the City Hospital in the service of Dr. G. B. Shattuck August 9, 1884. His father died of phthisis. Had pneumonia four years ago. In June last he received three stabs from a jackknife. Two of them, one in left side and one above right clavicle, were superficial, but the third penetrated the chest at the first right interspace a little inside the line of the nipple, and was followed immediately by intense dyspnœa, and soon after by rigors, pain, cough, and expectoration. At a later period a permanent opening was made by Dr. Latimer, of East Cambridge, in the tenth right interspace one and a half inches posterior to axillary line. The pus was very fetid, and the chest was washed out with some antiseptic solution. On entering he had a large bed-sore over the sacrum, and had diarrhœa; the original wound was found nearly healed, and the pus from the dependent permanent opening was very offensive. The probe entered easily inwards and upwards in a line towards the nipple. The clavicles were prominent, right ribs sunken, and with little motion. Movements of left chest exaggerated. Whole right front and back markedly tympanitic, and vocal resonance absent below angle of scapula. Percussion somewhat dull below sixth rib in left axilla and outer part below angle of scapula. Resonance exaggerated over rest of left lung. Over whole right front respiration much diminished, slightly amphoric, especially below line of nipple, where the sounds are increased and metallic with pectoriloquy. Over left front no râles. In left axilla below sixth rib slightly bronchial with slight bronchophony. Same signs in left back below angle of scapula, with a few fine and medium moist râles after cough, and increased fremitus. The cardiac area extends one inch outside the mammary line, and upwards to upper border of third rib. Three days later a double drainage tube was inserted by Dr. Shattuck and fifteen ounces of thick, offensive pus removed. Cavity washed out with carbolic solution (one to eighty) morning and evening for following week. Patient now able to sit up half an hour at a time.

August 20th. Exchanging tube for a shorter one, a pus pocket was discovered. Diarrhœa still continues.

August 21st. Pus more fetid. Solution of corrosive sublimate 1 to 2000 substituted for carbolic wash. The diarrhœa ceased early in September, and the middle of the month he was moved to tent on the lawn. Sits up each day, though with some pain in right flank.

September 30th. Respiration now extends nearly to base of right back. Percussion still tympanitic.

December 1st. No change has been made by me in the treatment as directed by Dr. Shattuck. Removal from tent to ward in October induced some temporary discomfort only. The tubes have been gradually shortened, and to-day the washings omitted and tube removed. Small sinus through the parietes only. Walks nearly erect. Still slight tympany over right front and diminished respiration, especially below lower angle of scapula. Heart and liver gradually resuming normal position.

December 7th. Sinus healed, and patient ready to leave hospital at any time.

Case II. McGuire, aged thirty-five, entered hospital with phthisis, October 13th. Has had cough for a year, and last spring a hæmorrhage of doubtful origin. Expectoration abundant and greenish. Two months since had paralysis of motion and sensation on left side lasting for six days, when the hemiplegia gradually disappeared. Complains now of dyspnœa, pain in loins, back, and in chest near ensiform cartilage. No night sweats.

In semi-prone position dullness is found below right clavicle with abundant moist râles, and to a less degree over whole right front. Percussion tympanitic over left front, especially between nipple and right edge of sternum; becomes flat at lower border of fifth rib. Metallic tinkling and absence of respiration over left front.

In erect posture dullness half an inch above angle of scapula, and above this line slightly tympanitic. Respiration faint. Right supra-spinous fossa dull, with moist râles extending over right back. Respiration harsh and exaggerated.

Tinkling and splashing in the left back.

The heart apex is in the fifth right interspace half an inch inside the nipple. The left border of the cardiac dullness is two inches to the right of the median line of the sternum. No murmurs.

The liver dullness extends two inches below the ribs.

Case III. McCarthy, aged seventeen, entered the hospital November 15th. His mother died of phthisis. Had been taken sick ten weeks before with cough, dyspnœa, pain in side, chilly sensations, and loss of weight and strength. Neither hemoptysis nor night sweats. Chest had been tapped twice, seven and four weeks before entrance, getting about three pints each time, the first being clear, the second cloudy. Says that ten days ago while ascending stairs he was seized with a sudden sharp pain in left chest and aggravated dyspnœa. Present condition comfortable, good appetite, no pain. Temperature 98.2° F.,; pulse 100; respiration 24.

In recumbent position there is tympany over the whole left front to the lower border of the seventh rib in the mammary line. Respiration and vocal fremitus diminished. Voice unduly clear. Respiration over right front harsh and exaggerated.

In erect position left front flat below. Splashing and metallic tinkling above.

Normal area of heart tympanitic. Apex sounds loudest just below ensiform. Right border one and seven eighths inches to right of sternum. Liver depressed one and one fourth inches.

December 1st. Tympany, in recumbent posture, over left front down to lower border fifth rib; in erect posture line of flatness rises to upper border of second rib with diminished respiration and absence of fremitus, with the heart a little farther to the right.

December 2d. Fifty ounces of slightly purulent fluid removed to-day to relieve dyspnœa.

December 7th. Liver still depressed, respiration on right side extends to the seventh rib. Splashing very evident on succussion.

Dr. F. C. Shattuck remarked on the great treat which Dr. Lyman had afforded the Society by the simultaneous exhibition of three cases of pneumo-hydro-thorax, illustrating so admirably as many modes of origin of the condition. As a complication of phthisis pneumo-hydro-thorax is not so rare; but special interest is attached to the man who was stabbed, and to the third case in which the lung seemed to be sound. Dr. Shattuck treated the case of a young man, a druggist's clerk, who was brought into the Massachusetts Hospital some years ago, and whose chest wall was perforated by one of those lance-head shaped knives, used for erasing writing, in the hands of a fellow clerk with whom the patient was "fooling." General pneumothorax resulted, but no fluid was thrown out, and the man made a rapid recovery.

Dr. G. B. Shattuck said that corrosive sublimate 1 to 2000 was used in washing out the thorax of the first case while in his care, and it had been more satisfactory than anything else he had ever used.

Dr. H. W. Williams read a paper on

APPARENT AND REAL AMAUROSIS.[1]

Dr. Wadsworth said the first case reminded him of a patient, a chronic invalid from asserted hip or spinal disease, who complained of photophobia so great that her room must be constantly darkened, and when she drove out the windows of the carriage were also darkened and her eyes bandaged. By proceeding carefully he was able to make an ophthalmoscopic examination, even of the macular region, without eliciting any sign of annoyance. It is often difficult to distinguish real from asserted loss of sight without ophthalmoscopic examination; even sometimes with it. If there is perception of light in neither eye the pupils should be dilated and without reaction; if one eye only is blind its pupil varies with that of the other eye, but dilates when the other is covered. Should blindness not be total, however, the value of this symptom is lost. He referred to the case of a young woman who had accidentally discovered that the sight of one eye was much impaired. Five weeks later, when she presented herself, the eye was wholly blind. Externally and on careful ophthalmoscopic examination both eyes appeared quite normal, with the exception that the pupil of the blind eye was dilated and immovable when the other eye was covered. There had been no other symptom, general or local. The case was somewhat of a puzzle, but the condition of the pupil and the absence of any symptom of hysteria allowed no doubt as to the truth of the blindness. For two or three weeks the condition was unchanged, then the patient was lost sight of for six months; and when she reappeared there was pronounced atrophy of the disk. The influence of reflex action in causing temporary loss of sight was illustrated by the case of a gentleman struck on the lower lid by a stick. An hour afterward the lid was ecchymosed and very sensitive, there was photophobia, the pupil was smaller than that of the other eye, but in other respects the eye was externally normal. Vision was only $\frac{6}{75}$. Homatropine and a night's rest restored sight.

The difficulty in detecting a malingerer who has studied the subject may be great. An applicant for a pension wore dark glasses, complained of sensitiveness to light, and asserted that one eye was almost completely blind, vision of the other very much impaired. He imitated the behavior of an amblyope very well. On examination with test types at different distances his answers were consistent. He bore ophthalmoscopic examination, however, without giving evidence of sensitiveness to light, and his fundus was normal in both eyes. On testing the blind eye by thrusting the finger suddenly at it while the other was covered he did not wink; but he went too far, for even when the finger touched the cornea he made no sign. Finally, with paralyzed accommodation he was given spectacles containing a strong convex glass before the blind eye, a concave glass before the other. With these he read slowly large print at six inches. The reading must have been done with the asserted blind eye.

Dr. Edes had seen one of the cases (No. III.) reported by Dr. Williams. The young lady was sent to him by another oculist who suspected some constitutional origin for the loss of vision. Dr. Edes said that the patient had some vision, and could for instance recognize the figure of a bird on a screen across the room. The pupils were widely dilated and were apparently but little sensitive to light. The ophthalmoscope showed nothing. In her history was mentioned swelling of the feet and ankles several weeks ago.

The urine was examined and found to contain a small amount of albumen and casts, composed partly of hyaline material with epithelium. Others of broken-down epithelium and some fragments of almost waxy appearance.

Loss of vision sometimes occurs in cases of Bright's disease unconnected with the well-known characteristic changes in the retina. Is it possible in this case that there is a causal relation between the albuminuria and the loss of vision, or is the coincidence accidental?

Dr. Williams referred to the extreme difficulty of detection of simulated amaurosis in both eyes, as the usual tests by which pretended blindness in one eye can be unmasked are here unavailing. Where only one eye is falsely asserted to be blind the claim is disproved by the use of a prism or a colored glass held before the seeing eye by which the patient is made to see two objects instead of one, which would be the case if he were blind of one eye. It is also instantly disproved if he is able to read when a pencil is held, vertically to the printed lines, a short distance from a book. He can only read if he has vision with both eyes.

Cases of feigned or hysterical photophobia are much more frequent than those of pretended amaurosis, the patients sometimes secluding themselves from all light for months and even for years, when there is no organic disease of the eyes, and where recovery within a brief period is obtained by suitable tonic and moral treatment and encouragement.

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[1] See page 577 of this number of the Journal.

Dr. C. H. Williams spoke of the subcutaneous use of strychnia in the treatment of hysterical amaurosis. He had used it at the infirmary, but had not been able to satisfy himself of its value. The chance of the duration of this symptom being self limited, is such that it is hard to feel sure that relief is due to the drug used.

FIBROID AND OVARIAN TUMORS REMOVED BY ABDOMINAL SECTION.

Dr. John Homans showed five tumors from four patients, two of them fibroid and three ovarian. The first was a solid fibroid, weighing seven and a half pounds, from a girl twenty one years old. Severe pain, hæmorrhage, the rapid growth of the tumor, and the age of the patient, with the knowledge that such cases had recovered in a certain number of instances, had decided him to operate. There was a good pedicle, which was clamped in Kœberle's serre-nœud, and held above the pubes by a transfixing pin. The tension, however, was great enough to bend the pin. The patient did well for a few days, then the clamp came off, and the pedicle retracted, leaving a cavity, with black walls, leading towards the pelvis. Her strength failed, and she died at the end of ten days, probably of septicæmia. The stomach was found at the autopsy to be enormously distended, and nearly filled the abdominal cavity; it contained much gas and six pounds of black fluid similar to that vomited during life. The nutritive enemata had all been absorbed.

In his opinion cases like this, with twenty years of menstrual life before them, are the cases for operation rather than immense tumors in exhausted women.

The second case was a fibroid from a woman of thirty-six, in whom the same reasoning had led him to operate, although neither the pain nor the hæmorrhage were so severe. The omentum proved to be adherent in the pubic region, and it was tied in two places and divided between the ligatures. The pedicle was the uterus, which was compressed in a clamp together with the left Fallopian tube and left ovary. He proceeded, as in ovariotomy, to tie, burn, and drop back the stump. Previous to operating there had been a trace of albumen in the urine, and it has since increased. The pulse has become very feeble and rapid, 140–160. To-night the temperature is rising somewhat, and the result is doubtful.[1]

The third case was ovarian, and consisted of two tumors, papillomatous, from a patient who is now getting well. There had been obscure pelvic trouble, with nothing to be seen externally, but one could feel masses in the pelvis, one of which at least appeared to be distinct from the uterus. Operation showed a papillomatous tumor of each ovary rather larger than the first. These tumors were of the variety more properly called multicystic than multilocular, a kind particularly hard to remove, as they do not pull out easily, and have very short pedicles. Papilloma in a cyst is almost like cancer. In fact, in the speaker's opinion all ovarian tumors, structurally, are much like cancer. He has removed them, and in one or two instances has seen the patient die of cancer afterward.

The fifth tumor was ovarian, connected with a fibroid uterus, and accompanied by much pain. The operation was attended by much hæmorrhage from adhesions in the neighborhood of the cæcum and right broad ligament.

One who does much abdominal surgery is reluctant to remove a fibroid tumor by laparotomy. His own experience has not been very encouraging, his mortality having been about twenty-five per cent. The speaker mentioned another case in which he had removed a fibroid tumor by laparotomy, clamping the uterus with Kœberle's serre-nœud. After the serre-nœud had come off the tumor began to be extended and to *grow* (*!*) until at last a mass four pounds in weight lay on the abdomen above the abdominal wound. This was removed by ligature and the scissors. The patient recovered.

ACID ROPY URINE.

Dr. Edes showed a specimen of urine containing a large amount of mucin. It poured from one vessel to another like white of egg. It was not the well-known urine of cystitis, that is, containing pus altered by ammoniacal fermentation, but was acid in reaction, and gave the tests of mucin. The patient was hemiplegic and had no bladder symptoms.

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NEW YORK ACADEMY OF MEDICINE.

NOMINATION OF OFFICERS.

At a stated meeting of the Academy held December 4th, the nomination of officers, took place, and among them were the following: For President, Drs. T. Gaillard Thomas, Wm. T. Lusk, A. Jacobi, C. R. Agnew, and S. T. Hubbard; for Vice-President, Drs. T. A. Emmet and C. C. Lee.

The paper of the evening was by **Dr. Joseph E. Winters**, on

IS THE OPERATION OF TRACHEOTOMY IN DIPHTHERITIC CROUP DANGEROUS? WHEN SHOULD THE OPERATION BE PERFORMED?

Dr. Winters had invited a large number of medical students from the University to hear his paper, and as they came early and almost completely filled the hall, many Fellows of the Academy who arrived a little later were unable to obtain seats. He commenced by saying that he had prepared the paper because he felt it was not right that the sentiment that this was the most dangerous of all operations in surgery, which had been expressed by the author of a paper read before the Obstetric Section in March last (Dr. Ripley), should go forth as the dictum of the New York Academy of Medicine.

The operation not dangerous. He then criticised the opinions of Mr. Timothy Holmes and Prof. S. D. Gross in regard to the risk of the operation, and in speaking of the danger from hæmorrhage (which he thought had been greatly exaggerated) he expressed the opinion that the precaution advocated by Dr. Gross when the isthmus of the thyroid gland had to be divided, of first applying ligatures about the portion on either side, was a mistake as unnecessarily complicating the procedure. He next quoted from a large number of authorities, both ancient and modern, to show that the operation was not dangerous.

How does diphtheritic croup tend to produce death when left to itself? In a large proportion of cases, he said, by the prevention of access of air to the lungs, and when the operation of tracheotomy failed to save life, it was either because it had been postponed until too late, or because the after-treatment had not been attended to with sufficient care. Tracheotomy accomplished perfectly its primary object of preventing death by asphyxia. In this connection he went on to show from various writers that diphtheria of the wound was rare, and that the disease seldom extended down the trachea after the operation. He had expected to find frequent reference to this matter among the German authorities, but this was not the case. As a rule, they believed that diphtheria of the wound could almost always be avoided by the use of carbolic washes, and that if the complication should occur it could easily be combated by the same means.

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[1] Since this report the symptoms have become more favorable, and, December 15th, the patient is convalescent.

When to perform tracheotomy. Having referred to the folly of trusting to spontaneous expectoration of the membranes, such as had been known to occur in a very few exceptional instances, he gave some statistics of the course of the disease with and without operation, and said that the figures adduced were conclusive as to the necessity for surgical interference. Nothing was to be gained by delay in resorting to this, while, on the other hand, delay was extremely apt to seriously compromise the successful termination of the case. Then enumerating the symptoms present in the advanced stage of croup, he condemned in the strongest terms the practice advised by many of waiting till death was imminent before operating, and said that it was just as rational in strangulated hernia to wait until the occurrence of gangrene. Autopsies in cases of diphtheritic croup showed that where no operation had been performed or where it had been deferred until the third stage, death following soon after, the lungs and bronchi were in a state of marked venous congestion, and sometimes pneumonic consolidation, while no such condition was found in cases where tracheotomy was resorted to early. This condition was the effect, then, not of the operation, but of continued obstruction of the larynx. Pure warm air was the best remedy for diphtheritic croup, and in the majority of fatal cases of the disease death was due to want of oxygen and the exhaustion of the nervous system. The physician should not, therefore, wait until the results of protracted obstruction to respiration were evident, but, by operating early, restore to the patient the benefit of the life-giving properties of oxygen, nature's sovereign remedy.

Prognosis. Among the conditions unfavorable to the success of the operation were mentioned early age, previous ill health, the prevalence of scarlatina or measles in the neighborhood when the child had not already had them, and the presence of nasal diphtheria or enlarged lymphatics. No age, however, contraindicated tracheotomy, as it had been successfully performed in infants of six and nine weeks. If after the operation the breathing did not become free or there was difficulty in swallowing it was to be regarded as a bad sign. Dr. Winters having again dwelt upon the dangers of delay, and mentioned a number of instances illustrating this, said that every practitioner of medicine should be ready to perform tracheotomy at any moment when the emergency for it might arise, and said that in communities where diphtheria prevailed its performance ought to be as common as venesection used to be in former times. He then gave a summary of the history of the operation, which he said had several times fallen completely into disuse, and announced a large number of *conclusions*, among which were the following: —

The operation of itself, performed with proper care, involved but little danger. Want of care in operating might result in serious accidents.

Tracheotomy prevented asphyxia, which was the most common cause of death.

It also prevented the extension of the original disease.

The operation should be performed early.

It was never too late to operate.

The operation never added one element of danger to the case.

Performed with care it would save two fifths of the patients.

No patient who died after the operation would have lived if it had not been performed.

The paper being open for discussion, Dr. J. W. Wright said that while the circumstances in which tracheotomy was most frequently called for in New York, namely, in young children living in tenement-houses, were undoubtedly very discouraging, the difficulties attending such cases were not so great but that they might be overcome by the aid of coolness and careful attention. If the attempt was made to control all hæmorrhage before opening the trachea, as advised by some, it would usually be found a very formidable undertaking. If the symptoms were not especially urgent it was well to stop the hæmorrhage to some extent, but if they were he thought it was best to ignore venous hæmorrhage altogether, and to go right on into the trachea as quickly as possible. As the writer of the paper had stated, the flow of blood would cease as soon as the knife entered the latter, or, at all events, as soon as the tube was inserted. With regard to blood getting into the trachea, he could see no special objection to this. Indeed, it had sometimes seemed to him to be of decided advantage, since it was just what was needed to excite violent expulsive efforts which would clear the trachea not only of blood, but of the mucus which was stopping it up. In young children the operation, he thought, was always facilitated by placing an ordinary wine bottle, wrapped in a towel, underneath the back of the neck. When the isthmus of the thyroid gland was in the way he believed that it should be cut through at once without any attempt to control the hæmorrhage whatever in cases of urgency, but where there was no necessity for such haste he thought it was advisable to put ligatures around the two portions and divide the isthmus between them in the manner referred to in the paper. To be of very much use, he agreed with Dr. Winters, tracheotomy ought to be resorted to early. In any case where there was a certain diagnosis of diphtheritic croup, with serious symptoms in connection with respiration which medicinal measures failed to relieve, it was the physician's duty to perform it. The operation was not in any sense a cause of death.

Dr. A. Jacobi said that in the paper but one danger had been referred to, namely, hæmorrhage, and that while a vast number of European authors had been quoted in support of the writer's position that tracheotomy was not dangerous, about the only American mentioned had been Professor Gross, who, indeed, was cited merely for the purpose of showing certain apparent inconsistencies in his works. There were many others in this country who had made valuable contributions to this subject who might also have been quoted with advantage, and among these he mentioned particularly Dr. Gay, of Boston, and Drs. Hadden and Ripley, of New York. As to the dangers of tracheotomy, the principal one was bungling operations. If properly performed it was not usually a bloody operation; but hæmorrhage occurred very frequently when it was done by a careless operator or one who was in haste to get through with it. The main point of success was to operate with deliberation. The trachea should not be cut into until it could be plainly seen, and if the isthmus was encountered, in getting access to it, it was advisable to peel a part of it off, according to the practice of Dr. Voss. It was certainly a great mistake, as a rule, to cut through the isthmus, and this procedure was only justifiable when the case was extremely urgent. When there was much hæmorrhage it was often very difficult to find the trachea at all, and he could not agree with Dr. Wright that it was a matter of indifference whether blood got into the latter or not. All of it would not be coughed off, and some of it would be almost certain to go down into the smaller bronchi and air-cells, and perhaps give rise to broncho-pneumonia, which, from this cause, was very frequent after tracheotomy. Another danger arose from operating without anæsthetics, on account of the violent struggles of the child, and chloroform was preferable to ether, because the inhalation of the latter required a longer time, and also excited more struggling. He did not agree with Drs. Winters and Wright that it was necessary to have a positive diagnosis of diphtheritic croup before operating. The principle on which he acted was, whenever there was serious laryngeal stenosis, whether membranes were present or not, to perform tracheotomy. There were some cases of simple laryngitis in which the obstruction was sufficient to cause death by asphyxia. Pneumonia was not a contra-indication, and in cases in which there was sepsis from diphtheria, there was all the more necessity for operating, since by the opening of the trachea the fetid inhalations from the mouth and nose were cut off. In ordinary cases of membranous croup, however, it was usually safe to defer tracheotomy until a fair trial of bichloride of mercury, in addition to other remedies, had been tried. As to the efficacy of this drug, he still entertained the same favorable opinion that he had expressed in his paper before the Obstetric Section of the Academy in May last, and he was happy to say that his percentage of recoveries without tracheotomy had of late been much larger than ever before.

As to the cause of death after operation, many died of diphtheria and many of croup. Among the special causes were the following: (1.) Diphtheritic sepsis. (2.) Complications of diphtheria, such as paralysis, nephritis, adenitis, fibrinous pneumonia, etc. (3.) Broncho-pneumonia or œdema of the lungs (the most frequent of all); and (4.) The descending diphtheritic process. Many cases appeared to do well for twenty-four hours after the operation, when there would be a change for the worse, and death would ensue in about sixty hours from suffocation consequent upon the extension of the membranes down to the ramifications of the bronchi.

Dr. J. Lewis Smith, having mentioned that all authorities were agreed that the older the child was, other things being equal, the better the chance of success, said that these two combinations of circumstances rendered tracheotomy especially dangerous, namely, when in consequence of the patient's being nearly moribund the physician was induced to operate hastily and without paying sufficient attention to the control of hæmorrhage, and, secondly, when proper precautionary measures were neglected by a novice. He fully agreed with Dr. Jacobi that the degree of stenosis should be the guide for operation, whatever the diagnosis might be, and referred to two cases of acute catarrhal laryngitis, without pseudo-membrane, which had proved fatal at the New York Foundling Asylum. The cases of diphtheritic croup could be divided into two classes. In the first, the inflammation of the larynx commenced at a very early period, with rapid extension of the exudation, and the early performance of tracheotomy was called for. In the second the larynx was attacked later, and the pseudo-membrane did not spread so rapidly; so that there was more time for the trial of other remedial measures before resorting to the operation. In the first rank of these he placed alkaline inhalations, and he said that in cases of diphtheria he had again and again prevented the serious invasion of the larynx by the pseudo-membrane by promptly resorting to these the instant that it was discovered that laryngeal trouble was threatened. In this connection he spoke of the great importance of watching very closely the voice of the patient from day to day in every case of diphtheria. Finally, he referred to catheterization of the larynx as having been employed with some success at the Foundling Hospital as a substitute for tracheotomy in cases where the membrane did not extend very far down.

Dr. John H. Ripley remarked that the position which had been taken by the author of the paper was in direct opposition in almost every particular to that which he himself occupied. At the meeting of the Obstetric Section of the Academy to which Dr. Winters had referred he did not say that tracheotomy was the most dangerous of all surgical operations, but that tracheotomy for croup in young children was one of the most dangerous operations in surgery. The question was not whether tracheotomy in general was difficult and dangerous, but whether in young children suffering from croup it was difficult and dangerous. Under such circumstances he believed that it was, and the danger consisted principally in the critical condition of the patient and the necessity for performing the operation within a certain time. Dr. Winters had alluded to but one possible source of danger, namely, hæmorrhage, but he did not consider that this was the most common cause of death. The child operated on, it must be remembered, was suffering from a diseased system, a stenosed larynx, and often an infiltrated neck. Sometimes it was so paralyzed with the poison of diphtheria that it was liable to die at any moment from syncope, and if the stenosis was very great it might die of apnœa, while in order to get at the trachea it was, perhaps, necessary to go down for two inches, which involved both time and great care. He was content to go with the small minority, which included such names as those of Gross and Holmes and Billroth, in the opinion that the operation was a dangerous one, and he believed that this was shared by a large number of New York surgeons. He had himself peformed tracheotomy at least one hundred and ten times, and he had also seen it done by others at least fifty times. He had met with almost every complication that could exist, and had seen all kinds of men take a trial at the operation. He believed that he had been the means of saving some lives where it was attempted by inexperienced operators, but he had also seen a number of cases die on the table. Some of these had been in the hands of men of marked surgical ability, and he had once witnessed the puncture of the internal jugular vein by one of the best surgeons that the city of New York ever had. It had been stated that it was a simple matter to plunge a knife into the trachea, but he had seen two or three such attempted plunges which were rather disastrous in their effects. One of them was into the spinal column, another into the œsophagus, and another entered the side of the trachea and passed through it. The comparatively greater success of those who operated early was due, not to the relief afforded by the tracheotomy, but because early operations were, as a rule, unnecessary ones. Many of the cases of croup recovered without operation, and, in fact, with very little treatment of any kind, and it was also often difficult to make a positive diagnosis between true croup and catarrhal laryngitis, which almost invariably recovered without operation. These facts accounted for the number of specifics for croup of which we heard so much. He did not agree with Dr. Winters that the obstruction to respiration produced pulmonary congestion, often with the final result of pneumonia. On the contrary, his experience with the disease during life and the autopsies which he had seen led him to believe that there was anæmia of the lungs with hyper-dilatation of the air vesicles (resulting from the attempt to fill up the threatened vacuum), and occasional areas of collapsed lung tissue. The most common cause of death after tracheotomy was bronchial croup from extension of the pseudo-membrane, which would produce a fatal result by suffocation long before the air vesicles were reached by the membrane. Other prominent causes were nephritis with uræmic poisoning, and respiratory and cardiac paralysis. When it was possible he believed that an inexperienced man should always call in an experienced one to assist him in operating.

DR. WINTERS made some extended remarks in reply to the criticisms of the various speakers on his paper. In the course of them he said that he had not by any means attempted to make the latter a complete treatise on the subject, though he had quoted from several other American authors beside Dr. Gross. Among these were Dr. Pooley, professor of surgery in Starling Medical College, and Dr. Mastin, of Mobile, Alabama. Properly performed the operation was almost bloodless, and he advised that the scalpel should be laid aside altogether as soon as the incision through the skin was made, and that a careful dissection of the tissues should follow until the trachea was reached. Dr. Ripley, it seemed to him, had confounded the dangers of the operation with those of the disease, and he still claimed that the operation itself, performed with care, was not dangerous. When death took place on the table he believed it was always due either to carelessness on the part of the operator or to a too late performance of the operation.

— For a number of years it has been the custom in Dublin to have an annual foot-ball game the day before Hospital Sunday for the benefit of the Hospital Sunday fund. This year the game netted some £54 to the good cause. In this country the advantages accruing to hospitals from foot-ball games are chiefly clinical.

REGULAR MEETING OF THE CHICAGO GYNÆCOLOGICAL SOCIETY.

W. W. JAGGARD, M. D., SECRETARY.

NO. 536 WASHINGTON BOULEVARD. FRIDAY, NOVEMBER 21, 1884. The President, H. P. MERRIMAN, M. D., in the chair.

DR. EDWARD WARREN SAWYER opened the discussion on the

TREATMENT OF ABORTION.

He called attention to the frequency of the interruption of pregnancy before fœtal viability. Madame La Chapelle says abortions are as frequent as labors at full term. The experience of the profession oppose the generalization. In his own practice, extending through a period of ten years, he had only seen from forty to forty-five abortions. As illustrative of the wonderful conservatism and care of nature in these cases, he had never met with a fatal case in his own practice, and had seen but one fatal case in the practices of his medical brothers. This fatal case was complicated by cellulitis and pneumonia.

As to causation, abortions are divisible into two classes: (1) those occasioned by natural processes; (2) those induced by accidental or intentional violence. The former class usually terminates favorably. The latter class is the *bête noir* of the physician. It is a matter of medico-legal interest, that in abortions, resulting from natural processes, that is, fatty degeneration of the decidua, the ovum and decidua are expelled, as a rule, in an intact condition, while in criminal abortion the product of conception is expelled in a more or less mutilated state. When the ovum has been mutilated, the embryo is extruded from the cavity of the uterus before the fœtal envelopes and decidua, and is frequently lost. Moreover, the embryo, so late as the fourth week, may be completely absorbed. The absence of the fœtus cannot be regarded in the differential diagnosis of abortion, molar pregnancy, or intra-uterine fibroids. Two distinct courses, as to the treatment of abortion, have been adopted by the profession. The radical method of immediate evacuation of the contents of the uterine cavity and the plan of patient waiting have been, in turn, defended and opposed. Dr. Sawyer has followed the expectant mode of treatment. He waits and allows nature to effect the expulsion of the product of conception. He has waited as long as one week. He has been encouraged in this line of treatment by the fact that he has never seen any untoward consequence in the cases managed in this manner. He enjoins absolute rest in the horizontal position, and the exhibition of quinine and alcohol, as required. Local treatment, apart from the vaginal tampon, is limited to vaginal injections of chlorinated soda. He has never noticed hæmorrhage or inflammatory action as the result of this course of action. He objects to the removal of the whole or part of the product of conception from the uterine cavity because (1) it is a painful procedure involving the use of ether, and predisposing to hæmorrhage from uterine inertia; (2) an assistant is necessary; (3) the amount of unavoidable injury to the genital tract is considerable.

In conclusion Dr. Sawyer exhibited an unusual specimen. The specimen consisted of an intact amniotic sac, inclosing a five months' fœtus, with velamentous insertion of the umbilical cord. Separation had occurred between amnion and chorion. The chorion, placenta, and decidua remaining within the cavity of the uterus. He had been called to see the woman, — five months advanced in pregnancy, — who was suffering from severe uterine contractions and hæmorrhage. After a brief interval, the specimen presented to the Society was expelled. Noting the intact condition of the amnion, Dr. Sawyer paid no further attention to the mass, told the woman to fear no more trouble, and went home. Next morning, upon visiting his patient, he was informed that one hour after his departure, under renewed hæmorrhage and uterine contractions, another mass was expelled. This second mass proved to be the chorion, placenta, and decidua. A medical friend, Dr. Albert G. Paine, had observed a strictly similar case.

Dr. W. W. Jaggard said separation between the amnion and chorion was relatively infrequent during the sixth and seventh months, but was not uncommon prior to that period. In regard to the treatment of inevitable abortion when the ovum was expelled in an intact or mutilated condition, and decidua or portions of the fœtal membranes remained within the uterine cavity, it was necessary to regard the natural history of the condition. This condition had been appropriately termed by Breslau "incomplete abortion." The terminations are briefly: —

(*a.*) Spontaneous elimination of that portion of the product of conception remaining within the uterine cavity, as the result of retrograde metamorphoses, accompanied by intermittent hæmorrhages and uterine contractions.

(*b.*) Sometimes — though seldom — hæmorrhage ceases entirely, and the patient is apparently well. This interval varies from a few days or weeks to months. Suddenly hæmorrhage and pain occur, and the intra-uterine mass is expelled. This retention, with a long interval of rest, is noticed when the placental or decidual attachments are intact. That this act constitutes the termination of the labor, so to speak, is apparent from the facts that the milk secretion is usually established at this time, and the reductive metamorphosis is instituted.

(*c.*) More frequently the retained decidua or placenta undergoes suppurative or ichorous changes, as the result of which systemic infection was liable to occur despite the thrombosis of the uterine sinuses, and the proliferative changes in the uterine mucosa.

(*d.*) The retained placenta or decidua may become converted into placental or fibrinous polyps, conditions which always require operative interference.

All four terminations present sources of danger to the mother. From this glance at the natural history of the condition — for the elucidation of which Spiegelberg deserves especial recognition — the weight of evidence lies in favor of the so-called radical treatment, — empty the cavity of the uterus at the earliest possible period. The plan recommended by Dr. Mundé in the February number of the *American Journal of Obstetrics*, 1883, was worthy of high commendation. One finger within the uterus, one hand on the fundus, was preferable to instruments when equally effective. The subsequent treatment was one of extreme importance.

Whenever the cavity of the uterus is invaded by the finger or any instrument it must be irrigated by some antiseptic solution. Two per cent. solutions of carbolic acid or one to two thousand of the bichloride of mercury are efficient in the destruction of conditions favoring decomposition and sepsis. After irrigation of the cavity of the uterus it was a good plan to introduce within the uterus a *bacillus* of powdered iodoform weighing at least six grammes. Symptoms of iodoform intoxication rarely, if ever, followed the exhibition of this quantity. Ten grammes are usually required to produce toxæmia.

Dr. Philip Adolphus said that abortions were more frequent among multipara than primipara. In the way of prophylactic treatment, he thought women ought to sleep by themselves during the time corresponding to their menstrual periods. Among the upper classes in Europe it is customary for man and wife to sleep in separate beds. He thought it an excellent plan. When abortion was inevitable, the treatment must be symptomatic. To arrest hæmorrhage plug the cervix, not the vagina. Use tupelo or laminaria tents, not those composed of sponge, for various reasons. Use thin tents. When fetor is noticed, empty the uterine cavity. For this purpose either finger or curette might be employed.

Dr. D. T. Nelson said the dangers from abortion were (1) hæmorrhage, (2) sepsis, (3) inflammation. Rest and opium were not sufficient. He could not rest until the uterine cavity was empty. He had no sympathy with the expectant plan of treatment. The manner of emptying the uterine cavity was of importance. If the cervix was dilated, or dilatable, the cavity should at once be cleaned out with the finger. If the cervix was not dilated, nor dilatable, the cervix ought to be plugged in the manner indicated by Dr. Adolphus, with tupelo or laminaria tents. If the cervix was partially dilated or dilatable, and the uterus fixed, give an anæsthetic, relax the spasm, and proceed as in the first case. He had no fear of ether predisposing to uterine inertia. In dissecting off the placenta it was advisable to glove the finger tips with the amnion. In the early months, when the ovum was attached near the cornua, it was necessary to bear in mind the possibility of irregular contraction, and the inclusion within either cornu of a bit of the placenta. The cornua must be thoroughly explored. When he employed intra-uterine irrigation — by no means an invariable method of treatment — he used a one half per cent. solution of carbolic acid, or a dilute solution of ordinary table salt. The solution must be hot, 110° F. to 120° F. Hot water, in the absence of carbolic acid or salt, was effective as a cleansing agent, and as inducing uterine contractions. Dr. Nelson had had no experience whatsoever with iodoform, but regarded it as superfluous in all cases.

Dr. Wm. E. Clarke was more afraid of hæmorrhage and sepsis than of inflicting injury upon the genital tract. He always emptied the uterine cavity at the earliest possible period.

Dr. T. D. Fitch did not consider Dr. Sawyer's specimen a rare pathological occurrence. He had seen the same separate at the same time frequently. He agreed with Dr. Nelson in treatment. Still when the cervix was not dilated he was disposed to pursue the expectant line of treatment. At the time of the occurrence of abortion the uterus was in a physiological condition. Operative interference at a later period was attended by increased risk, as the uterus was then in a pathological state. Usually he found the placenta and membranes detached within the lower segment of the uterus. As he had a large hand with short fingers he employed the placental forceps of Hodge, Dewees, Elliott, or Koler. Once, in the country, he used an ordinary pail bail with the rough edges filed off. He was not in favor of intra-uterine injections. The vaginal douche was sufficient.

Dr. Wm. H. Byford said that abortions were more frequent in large cities than in the country. Madame La Chapelle's estimate of the frequency of abortion was not exaggerated when applied to large communities. In the country, he thought, one abortion to three labors at term represented a fair average. Abortion was never a physiological process, although abortions from diseases of the ovum were attended with less danger than those resulting from morbid uterine changes. In disease of the ovum the circulation was impaired, the embryo perished, and expulsion followed with the inimical degree of hæmorrhage, pain, and sepsis. When the cause of abortion was external violence or decidual endometritis danger in each of these three directions was increased. The specimen exhibited by Dr. Sawyer was of rare occurrence at so late a period; it was comparatively common during the early months.

As regards the prophylactic treatment he had observed two clinical facts in connection with the habit of abortion. When uterine contractions were the prominent symptom, abortion could be arrested in many cases by absolute rest and opium. When hæmorrhage was severe all attempts at arresting the process were usually futile. This was especially true during the first three months. At a later period, even when hæmorrhage was severe, abortion might be arrested.

In regard to the treatment of inevitable abortion, he had never seen the time when champions of the expectant and radical courses of action did not exist. The treatment must be governed by the consideration of the individual case. In any case the patient must be carefully watched. He had never seen a case of abortion terminating by immediately fatal hæmorrhage. The acute anæmias, however, might induce a condition which would render the woman more susceptible to sepsis or any intercurrent disease. He feared sepsis and metro-peritonitis more than hæmorrhage. He was conservative as to operative interference. Let Nature do what she can; only in case of failure on her part, interfere. The finger was preferable to any instrument. Then it was not necessary to insist upon the removal of placenta or membranes with mathematical accuracy. If the placenta was grasped by an irregularly contracted uterus, cut off the free portion, allow the rest to lie in the uterine cavity. If two thirds of the placenta were removed, and the uterus well contracted, the case was to be considered in a safe condition. In event of sepsis, remove all the intra-uterine mass.

Dr. John Bartlett stated that, in his practice, abortions were as frequent as labors at term. The product of conception was usually expelled in its integrity. When abortion was inevitable, two conditions were required, before operative interference was justifiable: (1.) Dilatation of the canal of the cervix to the extent necessary for the passage of two fingers. (2.) The separation between decidua and the uterine mucosa must be more or less complete. Until these conditions were present, the vagina ought to be tamponed. For a tampon, he was in the habit of employing bits of cotton tied on a string in the manner of the kite-tail.

He had seen two cases in which the placenta had remained for a long period of time within the uterine cavity without causing symptoms. The retention in one case lasted through a period of three months; in the other case the period was four months. As to the length of time the tampon could be left *in situ* he had adopted Dr. De Laskie Miller's rule of allowing it to remain twenty-four hours. He had frequently tamponed through three days. The colpeurynter of Braun was a useful tampon. No tampon was effective when the hæmorrhage was not of a passive character, and uterine contractions were severe.

It was necessary to diagnosticate between placenta prævia and abortion. Placenta prævia implied simply an *error loci* of the ovum. It was included between the ring of Bandl and the external os. Dr. Bartlett had never seen a case of abortion terminate fatally from hæmorrhage.

Dr. A. H. Foster had seen one case of retained placenta, in which the retained mass gave origin to no serious symptoms for a period of four months. The importance of subsequent treatment of the puerperium was urged.

Dr. E. C. Dudley referred to the dangers of cervical laceration and subinvolution in consequence of abortion. The best method of applying the tampon was by means of Sims's speculum.

Dr. C. W. Earle occupied the middle ground between the expectant and the radical methods of treatment. He did not agree with Dr. Mundé.

Dr. H. P. Merriman, after indorsing Dr. Byford's remarks on the ætiology of the condition, said that he did not like to use ergot in these cases, as it caused irregular contractions of the internal os, imprisoning the placenta without favoring its expulsion. He produced uterine contractions by dilating the os, and then followed the expectant plan of treatment.

Dr. E. W. Sawyer, in closing the discussion, said that he had observed abortion in the lower animals, and concluded nature required little interference. He then briefly sketched the line of expectant treatment, which he was in the habit of recommending.

CASTS OF THE PREGNANT AND NON-PREGNANT UTERUS.

Dr. John Bartlett then exhibited some casts of the pregnant and non-pregnant uterus for the purpose of class illustration. The idea is an extremely ingenious one, and will receive attention at an early period.

The Society adjourned to meet December 19th at the residence of the President, Dr. H. P. Merriman, No. 1350 Michigan Avenue. Subject for next discussion, Extra-Uterine Pregnancy, to be introduced by Dr. William H. Byford by a paper On a Case of Interstitial Pregnancy.

— "Hot-eye" is the name given Mr. Jonathan Hutchinson in the "Bowman Lecture" for the current year to an affection occurring as a symptom in incomplete or "quiet" gout. One eye is usually affected, sometimes both. The conjunctiva is red and congested. The eye-ball pricks and feels hot, or as if sand were in it. The attack comes on soon after an error of diet, and lasts from a few hours to a day or two. It not infrequently is the precursor of iritis.

Medical and Surgical Journal.

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A PROPOSAL FOR A NEW NATIONAL HEALTH ORGANIZATION.

THE meeting of the Conference of State Boards of Health with the addition of the health authorities of a number of the more important cities of the Union, as well as of the Dominion of Canada, which was in session at Washington during the 10th and 11th of December, appears to have accomplished some important work, a special report of which, already in hand, we are obliged to postpone to next week. Three committees considered respectively questions of national, State, and municipal health organization; reports were made — though not yet made public — which will at least represent the views of those who are at present charged with official sanitary work.

The principal subject under consideration by the Committee on Federal Legislation — a reorganization of the National Board of Health — will probably attract general notice, both from the importance of the subject and from the fact that this body, substantially the same as the American Public Health Association, the founder and devoted adherent of the present National Board, has at last become reluctantly convinced that the present Board has lost its capacity for usefulness, without any abatement of respect or sincere good will on the part of the medical profession for its members individually.

The Convention represented twenty-seven States, and the Committee on Federal Legislation six States: Dr. Walcott, of Massachusetts, Chairman; Hon. Erastus Brooks, of New York, Drs. Smith, of New York, McCormack, of Kentucky, Rauch, of Illinois, Baker, of Michigan, and Herrick, of Louisiana.

Toward the close of the meeting of the Conference a project for a bill amending the Act of 1879 establishing the present Board was reported by the committee, this was recommitted to an enlarged committee with instructions to present a draft of an act of the same general tenor, and to submit the same to Congress. The Committee, with the addition of Drs. Chancellor, of Maryland, Elder, of Indiana, Hearne, of Mississippi, Thornton, of Tennessee, Horlbeck, of South Carolina, completed their bill and presented it to the Committee on Public Health of the House on Friday.

This bill, which is understood to have received the important assistance of a revision by the Secretary of State, is substantially the following: —

First. A Board composed of members representing State Boards of Health, appointed by the President, and confirmed by the Senate; to serve without pay except when actually employed, and then to receive a per diem allowance of $10 and necessary expenses; to meet in Washington once a year; to be convened at other times, if required, at the call of the Chairman or of the President; the officers to be a chairman and secretary, the latter to be the executive officer of and *ex officio* a member of the Board, and the only officer to receive a salary; the Board to have authority to assign any of its duties to the executive committee of seven, including the Chairman, and representing various sections of the country.

Second. The duties of the Board to be general and special, embracing investigations into epidemic and contagious diseases and causes of disease, and measures of aid in coöperation with State and local boards when necessary to protect the public health.

Third. The making of rules and regulations to control the sanitary condition of ships sailing from foreign ports to the United States.

Fourth. Framing rules and regulations for the quarantine service of the United States, and assisting in the enforcement of local regulations when needed.

Fifth. Authority to be conferred upon the President to issue proclamation of measures to be taken in cases of great emergency to be in force only until the Board or its Executive Committee can be convened. This section was added at the instance of the Secretary of State.

It is made the duty of the State Department to obtain information from consuls, or medical officers serving in offices of consuls, in regard to the sanitary condition of foreign ports, and the President is authorized, upon request of the Board, to appoint competent medical officers to serve abroad.

The bill further provides that officers may be detailed by the President from any regular service to assist the Board; that a bulletin shall be published giving all important information, and establishing a permanent office in Washington.

Upon careful examination the bill seems to have been framed with an evident intention to burden the Board with the least possible patronage, to impose upon existing departments as large a share of the executive work as could be done without injury, and to meddle as little as practicable with the ever-jealous Services at the capital. It has been intimated that this draft will not encounter the hostility of the Marine Hospital Service, inasmuch as provision is made by which the President may direct, as it seems proper that he should, what department or persons shall carry into effect the rules made by the Board.

The proposed legislation seems to us conservative and wise. If enacted it completes, in the same manner as does the National Government, the successive steps in the progress from the health organization of the smallest village in a State to the sanitary oversight of all the States and Territories of the Union. While the number of members may appear to some to be large, there seems no other way for securing a truly representative body. As there is little probability, with a competent executive committee, of more than one annual meeting of the full Board, the general government will not be called upon to bear a serious burden of expense.

The urgency of some more direct representation of the sanitary needs of the country was shown by the action of the Secretary of the Treasury, who requested a conference with the Committee on Federal Legislation, and submitted to them his own draft of an amended Treasury order in relation to the vexed question of the importation of rags, with the assurance that the Committee's action would determine the course of the Department. The order upon this subject published in the daily press Saturday contains the recommendations of the Committee, whose influence is shown by the concluding provision allowing disinfection at foreign ports under proper supervision, a concession hitherto opposed by Mr. McCulloch.

Such a Board as that suggested by the Conference would go far to relieve the country of the reproach of a national organization which has so far lost public confidence as to fail of an appropriation sufficient for mere existence even, and which has not been strong enough to oppose the one-man power sheltered behind the Treasury.

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THE ANNUAL REPORT OF THE SURGEON-GENERAL.

Among the great number of annual reports of the different government officials, that of the Surgeon-General of the Army is by no means the least interesting. Though dealing in great measure with statistical tables, whose chief value can only be reached by comparison with similar tables for former years, it still contains many items well worth attention.

The first subject noted concerns the distribution of trusses, in which the legal regulations cause apparent hardship, if not injustice; for instance, a soldier ruptured during the war with Mexico, although he may be receiving a pension on account of hernia, is not entitled to receive a truss. Under the law, as it now stands, the following classes of persons are not entitled to trusses: Those who were ruptured at any time while serving as commissioned officers; those who were ruptured prior to April 19, 1861, whether commissioned or enlisted, although the disability may have been incurred in the line of duty and during the prevalence of war; and those who have been ruptured since August 20, 1866, whether commissioned or enlisted, unless the disability may have been incurred in the line of duty during war.

It is recommended that existing law on this subject be so amended as to allow a truss to every person who has been, or may hereafter be, ruptured in the line of duty while serving in the army or navy.

In the report on the health of the army it has always been the custom to institute a comparison between the white and colored troops. This year, for the first time since their organization, the death-rate for the colored troops has fallen lower than that for white troops. The death-rate among the colored troops from respiratory diseases is more than four times as great as that of the white troops: the deaths being wholly from pneumonia. The colored troops present a higher rate than white troops for syphilitic and other venereal diseases. On the other hand, their comparative freedom from intemperance continues to be of interest.

No casualties whatever from actual warfare are reported, the year having been the first for many years not marked by losses to United States troops from Indian hostilities. Life in the army has not been without its perils, however. Increased interest in rifle practice has been followed by a number of accidents; the returns of the War Office showing for the year nine cases of shot wounds received at the firing range, with three deaths, and in addition forty-seven injuries from explosions of rifle-cartridges occurred while soldiers were preparing ammunition to be used in target practice.

Typhoid fever has been quite prevalent among the white troops, amounting to .6 per cent. of all cases of disease and injuries returned, or eleven per thousand of mean strength, while the average annual occurrence for the past sixteen years has been but 3.58 cases per thousand. Sixty-five per cent. of all the cases have occurred in the cavalry, though this arm of the service numbered less than thirty-four per cent. of the combatant force. Most of these cases occurred in young recruits, and the evidence shows that the Recruiting Depot at Jefferson Barracks, near St. Louis, Mo., was the source of a very wide-spread dissemination of typhoid and typho-malarial fevers.

The literary and scientific work of the Surgeon-General's Office is, probably, the most interesting portion of the army work to our readers. The Index Catalogue receives the barest mention, but we are glad to repeat the information that the manuscript of Volume VI. is in an advanced state of preparation, and the first part of it is now going to press.

The Library has become a matter of national pride, and its growth is watched with interest by the profession in all parts of the country. The increase in the appropriation has made it possible to arrange to have every new medical work from every country sent promptly to the Library, as recommended in the last Annual Report, and henceforward it is hoped that those who consult this collection will find that it contains the latest information on any subject in which they may be interested. The number of those using the Library is, very naturally, steadily increasing.

The long illness and death of the lamented Surgeon Woodward has delayed the publication of the Third Medical Volume, the last of the series of the Medical and Surgical History of the War. The completion of this volume has been intrusted to Surgeon Charles Smart, and its publication may be expected in about a year.

It is a lamentable fact that each year it is necessary to repeat the statement that a fire-proof building is a necessity for the proper protection of the Museum and Library. A bill for such a building, reported favorably to the House of Representatives, was not reached in the order of business at the last session, and is still pending. A similar bill has already passed the Senate. We cannot feel that the legislators of the country who have already done so much to preserve the medical results of the fearful conflict between the States, and have so nobly encouraged the work of the Army Medical Department, will willingly longer imperil the safety of these valuable collections.

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DISPOSAL OF SEWAGE AT PROVIDENCE. A SEWAGE BESIEGED CITY.

The practice of casting sewage into the nearest water-course has finally brought the city of Providence, as it so lately brought Boston, and will sooner or later bring others of our large or growing cities, to a realizing sense of its sins in this particular. Whether the inhabitants are sufficiently conscious of the necessities of the situation to pay the inevitable price of reform, now estimated at $3,500,000 in round numbers, remains to be seen.

The city authorities, two years ago, directed the city engineer to report plans of intercepting sewers, and of any other work necessary for collecting, conducting, and disposing of the sewage of the city in accordance with best approved methods at such a point and in such a manner as would be least injurious to the public health. A year later the engineer, Mr. S. M. Gray, and his assistant were directed to proceed to Europe to investigate the various plans in practical operation for the disposition and utilization of sewage.

As a result we have before us a very handsome and complete report lately issued. The bulk of the report contained in Appendix A is taken up with a good account of the most important sewerage systems and methods of sewage disposal. It contains much the same information which was available in Boston before its new system of intercepting sewers was undertaken, and which was published in a Supplement of the National Board of Health Bulletins, prepared by Mr. Rudolf Hering. The results at Boston, are however, not referred to, probably as being too near home.

The present sewer-connections at Providence are believed to take the sewage from about 36,500 inhabitants; the daily dry weather flow of sewage of the town is estimated at about 3,000,000 gallons. In addition about 4,823,000 gallons of filthy liquid wastes of manufactories are emptied daily, except Sundays, into the small tributaries of the Providence River, at or near the town. A population of 300,000 is provided for in the estimate of the proposed system of intercepting sewers. It is recommended that the sewage be carried to comparatively deep water at Field's Point, where Providence River debouches into Narragansett Bay; that it be treated there by chemicals in such a manner as to precipitate the matters in suspension and clarify the sewage; and that the clarified effluent be then emptied into the Bay. The plan now pursued at Boston, of emptying the sewage without treating it, is impracticable on account of the feebler tide and smaller volume of water. The plan of utilizing the sewage for irrigation was duly considered, but the engineer says he did not feel justified in recommending its adoption, for, from careful and extended surveys, he became convinced that the large amount of suitable land required for the purpose could not be obtained at any reasonable cost within reasonable distance of the city. The amount of land required for the disposal of sewage by irrigation being placed at about one acre to 100 inhabitants, some 3000 acres would be necessary.

Mr. Gray states the cost of chemicals and labor for treating sewage by precipitation at well-managed works in England at from .24 cents to .36 cents per annum per inhabitant connected with the sewers, and thinks it might cost twice as much in this country, but apparently is not very positive or exact as to this point.

On such a basis it is calculated that purification can be accomplished by precipitation at far less expense than by irrigation, even though the residual sludge should possess no commercial value, but that it would possess some value as a fertilizer he has no doubt.

The taxpayers of Providence, whatever may be true of the voters, will probably find it hard to bring themselves to pay the price for relief from their present troubles, but delay will steadily augment both.

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MEDICAL NOTES.

— An important and for this State novel experiment in the disposal of criminals has just been inaugurated at Concord, Mass., in the buildings recently vacated by the removal of the State Prison to Charlestown. A reformatory is to be established at the former place for the more corrigible of the criminal class. The determination of what cases shall be committed here has been left wholly with the courts, proposals for a limitation by law to first offenders and to prisoners under thirty years of age having been rejected. A minimum sentence of a year, however, is made a requisite, the same as obtains at the State Reformatory Prison for Women. It has been found that in many cases several months of confinement are necessary to enable the prisoners to overcome the disturbing effects of the irregularities, alcoholic and otherwise, from which they are suffering when sentenced. Long sentences, with discretionary power given to the local authorities to release a prisoner on ticket of leave for good behavior, have worked favorably in similar institutions elsewhere, and it is believed will give good results in the present instance.

It is understood that the Commissioners of Prisons have established in the reformatory a separate department for men sentenced for drunkenness, so that they will, in the main, be kept by themselves. Heretofore men convicted of drunkenness have been sent to the city or county prisons, to be congregated with the distinctively criminal classes, and for punishment rather than reformation. Here they will be required to work, as they should be, and will have the medical attendance necessary in many cases. It is hoped by the friends of the new measure that the reformatory will receive a very large number of men who are under the power of the appetite for drink, who have in the past either been let off with fines or sentenced to minor prisons for brief terms. Under the law a man may be sent to the reformatory for a year if he is convicted of drunkenness for a third time within twelve months. The sentence is not a longer one than is frequently necessary to secure reformation, and will ordinarily be reduced by release upon ticket of leave, under surveillance, when it is thought that reformation has been accomplished.

— Considerable surprise and disgust are expressed, and with reason, by a recent writer in the *Polyclinic*, over the rate of medical fees prevailing in certain districts in Scotland where sixpenny charges are made by physicians. An English town of 50,000 inhabitants is also referred to where one shilling charges are made for medical advice. The writer quotes from the *Medical Press and Circular*, of September 11, 1872, page 216, the following charges adopted by a practitioner of thirty years' experience: "Midwifery, two shillings and sixpence; advice, sixpence; consultations, one shilling," and asks: Is there a barrister in England, or an attorney-at-law in Pennsylvania, who accepts such insignificant fees for professional services? We cannot answer for the barristers, but truth compels us to admit that there is, or was a short time ago, in Boston an institution of a quasi educational nature where there is a resident physician (female homœopathic) whose charges for a consultation, including medicine, are twenty-five cents.

— What could be more characteristic of English conservatism than the maintenance year after year, in the same form, of the Harveian and Hunterian orations? The preëminence of these two masters in medicine is not to be for a moment doubted, but what is there new to be said of either of them to a professional audience after the eulogies which have been pronounced for so many successive years? Everything that is knowable about these men has long since been discovered by repeated gleaners in the well-trodden field, and if an orator saves his speech from the trite and commonplace it is only by taking great latitude in his treatment of the subject. If this custom is to be continued as heretofore, a Harveian oration with the Harvey left out will be the only resource left to the speakers. The sameness of these repeated laudations might well give place to the discussion of some timely and vital professional topic. And yet that the lay public have something to learn of Harvey still is shown by a story told in the *Athenæum* of a Spaniard who, after gazing at the façade of London University, pointed to the statue of Harvey and remarked to the friend who acted as his guide: "Just like you practical English, to erect a statue to a man because he invented a sauce."

— In the *Lancet* (May 17, 1884) is reported a case of sarcoma surrounding the heart. The patient was a girl, aged seven years, who had suffered for eight months previously with labored respiration, which gradually became so distressing that orthopnœa resulted. She also had paroxysmal attacks of angina. When seen the pulse was 150, respiration 40, temperature 98.8° F. On the left side of her chest there was a reddish protuberance with varicose veins running over it. Dullness all over the left chest. The first sound of the heart was feeble, the second inaudible. The dyspnœa continued, with occasional attacks of angina, until, about a month from the time she came under observation, an unusually severe attack left her so exhausted that death resulted. *Autopsy.* The heart was surrounded by a growth two inches in thickness, of a yellowish color and firm consistence. The large vessels had been compressed by the growth. The mass extended some distance down the spinal column. Its origin was difficult to trace, but it was supposed to have begun in the thymus gland. Microscopic examination showed it to be a round-cell sarcoma.

NEW YORK.

— At the last meeting of the Society of Medical Jurisprudence and State Medicine, held December 11th, the annual election of officers took place, and resulted as follows: President, Dr. Frank H. Hamilton; Vice-President, the Hon. Amos Hull; Secretaries (recording, financial, and corresponding), Dr. George W. Wells, Max F. Eller, Esq., and Dr. J. F. Chauveau; Treasurer, Dr. A. M. Jacobus. A paper on The Evidence of Experts was read by Mr. Hull, and in the course of it he said that a clamor had been raised against expert testimony on the ground that it was unreliable, purchasable, and corrupt, and he believed that there certainly was cause for complaint. Members of the Bar had placed unscrupulous medical men on the stand as experts in conspicuous cases, and they had failed to show that candor, impartiality, frankness, truthfulness, learning, and ability, which the public had a right to expect. Having alluded to the conflicting expert testimony in the Gosling, Guiteau, and Rhinelander cases, he remarked that lawyers were often too ignorant to examine medical witnesses, and contended that members of the Bar should be able to question an expert witness with a degree of skill which could overthrow his testimony if it were defective. He then condemned the provisions of a law which had been proposed by Ex-Surrogate Calvin for remedying the present evils, according to which judges would have power to appoint experts to the exclusion of all others, on the ground that the Legislature had no constitutional authority to enact such a law, since it would make medical experts public officers and part of the administration of the State, over which the judges had no legal power. In conclusion, he read the draft of a law framed by himself in which it was provided that judges should have the right to enter an order summoning such learned experts as they might deem necessary, but not to the exclusion of others. In the discussion which followed the paper Mr. Jacob F. Millar said that the trouble with experts was that they seemed to think that they went on the stand for the purpose of swearing evidence in behalf of the side which called them; while in reality they had no more to do with either side of a case than did the interpreter who translated a witness's testimony for the benefit of the jury who did not understand the language in which it was given.

— The twenty-ninth anniversary of the Woman's Hospital was celebrated on the 11th of December. The report of the Secretary of the Medical Board showed that during the year ending September 30, 1884, 630 patients had been treated in the wards and 4180 in the out-door department. The total number of operations performed in the hospital was 516, and the number of deaths was 23. "From a professional stand-point," said Dr. Hunter, "the Medical Board has good reason to be satisfied with these statistics. A comparison with the year preceding shows a larger number of patients treated, a larger number of operations performed, and a smaller number of deaths, — smaller by eight." A number of gifts and legacies were announced as having been received during the year, the largest of which was one of $25,000 from the estate of Ex-Governor Edwin D. Morgan.

— The Commissioners of Charities and Correction sent their annual report to the State Board of Charities at Albany December 10th. There were relieved during the year ending October 31st, including the out-door poor, 48,325 paupers. Five hundred and ninety-six children were born in the poor-house, and there were remaining November 1, 1884, 8273, of whom 3784 were lunatics, 290 idiots, 130 blind, 63 deaf mutes, and 207 epileptics.

— The first number of a new magazine called *Babyhood* has just been issued. Its object is "to gather and present to parents the best current thought on the care of infants and on all topics relating to nursery life," and the medical editor is Dr. Leroy M. Yale. The first number (December) contains articles on Vaccination by Dr. Yale and the Adulteration of Milk by Dr. John B. Isham.

Correspondence.

A PLEA FOR THE USE OF THE CRAYON IN MEDICAL SCHOOLS.

Mr. Editor, — With the vast strides that medical instruction has taken in the last two decades, it is astonishing that one means to this end has been practically neglected, namely, the crayon with the black-board.

Art is so universal in its applications at the present day, that it is strange that it has not been made to minister in the didactic and clinical instruction of surgical and anatomical lecturers.

There are so many features in the various branches of medicine and surgery that could be so much more intelligently and vividly presented by the crayon than by the dead subject. One of its widest fields of usefulness is in the illustration of surgical anatomy, where you can give life-like representations of the various regions representing the different tissues, arteries, veins, lymphatics, and nerves in their life-like color. Using the crayon in conjunction with the cadaver, in this line of instruction, the conditions during life could be much more clearly set forth.

But in the department of operative surgery its usefulness is much more apparent. Nothing has ever seemed more useless and unsatisfactory to me than the operations performed before a class of medical students, as is done year after year, on the dead human body. Dead flesh cuts so differently from the living, and dead tissues behave so dissimilarly. The veins and the arteries present hardly one feature of their appearance during operations performed in life. While with a fair amount of skill in drawing, an art anatomist, even though he be not a Rimmer, can depict these operations with all the vivid charms of drawing. "Drawing has been termed the grammar of art. The great artists of the Italian and Flemish schools excel their successors more in the beauty and *power* of their drawing than in anything else." With the use of the crayon and the black-board you can so present an operation that you can almost see the flesh quiver and the vessels bleed.

Dissection of the human cadaver is undoubtedly useful and necessary to the student of medicine and surgery, yet the minimum amount that will answer the purposes of thorough instruction is the desirable amount. Maclaise has done much for surgical anatomy in his beautiful illustrations. Bougery has done the most in his superb and life-like delineations of surgical operations, and I see no reason why these should not be equally well produced on the black-board, giving far more power to the instructor in operative surgery: and the teachers of clinical surgery would also augment their powers as instructors by the artistic use of the black-board, not the off-hand use that is now made of it by many teachers. The surgeon who has so drilled his hand and educated his eye as to use the crayon with artistic effect will hereby promote his skill as an operator. It has often been said that the true physician should be master of all sciences. But the surgeon should be more, he should be a good physician to begin with, and a man of mechanical genius and an artist as well. Very truly yours,

Geo. G. Hopkins, M. D.,
Surgeon St. John's Hospital, etc.

283 Lafayette Ave., Brooklyn, N. Y.,
November, 1884.

Miscellany.

OBITUARY. — DR. EDWARD JARVIS.

The late Dr. Eward Jarvis, whose death we have recently recorded, was eminently a philanthropist. Born in Concord of this State, January 9, 1803, Dr. Jarvis died October 31, 1884, two days before his wife, and was buried with her, fifty-two years after their marriage. After graduating at Harvard College, and later at the Harvard Medical School, he began the practice of his profession in Northfield, from which he soon removed to his native town, where he remained a few years, then going to Louisville, Kentucky. There he became deeply interested in the public school question, and after long and patient work succeeded in introducing the system then common in Massachusetts. He also devoted himself to a careful study of insanity, and so clearly pointed out the evils in the asylum treatment of the insane that many of his suggestions for their improvement were adopted.

His next removal was to Dorchester, where he remained until his death, devoting his time until the infirmities of age came upon him to the treatment of the insane in his home, attaining, by his personal qualities and his devotion to their care, a rare success. Dr. Jarvis was one of the members of the Corporation of the Perkins Institution for the Education of the Blind, where he rendered the late Dr. Howe material aid; he was Superintendent of the School for Feeble-Minded Youths, Trustee of the Worcester Lunatic Hospital, Consulting Physician to the New England Hospital for Women and Children, and for nearly a third of a century President of the American Statistical Association.

Dr. Jarvis was very much interested in all matters relating to the welfare of mankind, and whenever he had the opportunity he enthusiastically devoted himself with a single mind and large heart to furthering the cause especially of public education, State charity, public health, sanitary science, the treatment of the insane, and vital statistics, upon which subjects he was a frequent contributor to the Journal, where, as elsewhere, he showed that his interest in science was chiefly as a means of benefiting humanity. He was the earliest petitioner to the Legislature for a State Board of Health. He labored year after year, early and late, for its establishment, and he did his best to support it by zealous work. His enumeration of the insane in Massachusetts (Report of 1854), his essays on political economy, social science, and statistics, and his valuable contributions to the United States Army Reports gave him a well-deserved reputation as a statistician in this country and in Europe. As a kind-hearted citizen and philanthropist Dr. Jarvis was ever ready with sympathy and help for every person and good cause that needed them, and his public spirit was shown to the last in the gift of his valuable collection of books and reports to Harvard College, the American Statistical Association, and the public libraries of Concord and Boston. He also gave $500 each to Harvard College and the Statistical Association.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 6, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Deaths from				
				Infectious Diseases.	Lung Diseases.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	712	282	160	134	10	68	13
Philadelphia	927,995	425	140	81	42	22	49	6
Brooklyn	644,526	254	96	43	52	3	22	2
Chicago	632,100	217	101	63	33	4	40	4
Boston	423,800	195	58	27	43	7	13	4
Baltimore	408,520	138	48	18	15	2	11	4
St. Louis	400,000	144	58	43	17	3	21	9
Cincinnati	272,400	123	61	23	10	5	5	—
New Orleans	234,000	113	27	25	5	1	7	1
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	57	17	12	6	1	5	4
New Haven	62,882	25	7	4	5	1	2	1
Nashville	54,400	14	2	1	1	—	1	—
Charleston	52,286	41	15	5	3	—	3	—
Lowell	71,447	28	9	5	5	2	2	—
Worcester	69,442	23	14	11	2	1	9	—
Fall River	62,674	30	11	7	7	—	—	—
Cambridge	60,995	29	7	7	5	3	2	—
Lawrence	45,516	12	—	1	3	—	—	—
Lynn	44,895	13	3	3	3	—	1	—
Springfield	38,090	12	3	4	—	—	2	—
Somerville	31,350	13	4	3	1	—	3	—
Holyoke	30,515	15	4	—	5	—	—	—
New Bedford	30,144	8	4	2	1	2	2	—
Salem	29,503	12	4	3	—	2	2	—
Chelsea	24,347	11	2	1	2	—	—	—
Taunton	22,693	7	0	—	—	—	—	—
Gloucester	21,400	8	2	1	2	—	—	—
Haverhill	20,905	9	2	4	—	1	1	2
Newton	19,421	4	2	2	1	—	—	2
Brockton	18,323	3	0	—	—	1	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	2	—	—	—	—	—
Fitchburg	13,433	65	12	3	—	—	2	—
Eighty-three Massachusetts towns	—	—	—	—	—	—	—	—

Deaths reported 2764: under five years of age, 997; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 562, lung diseases 403, consumption 319, diphtheria and croup 273, typhoid fever 70, scarlet fever 48, diarrhœal diseases 45, measles 40, malarial fevers 33, whooping-cough 27, cerebro-spinal meningitis 13, erysipelas eight, puerperal fever four, typhus fever one. From *diarrhœal diseases*, New York 12, New Orleans eight, Chicago seven, Brooklyn five, Cincinnati and Fall River four each, Boston, St. Louis, Providence, Charleston, and Springfield one each. From *measles*, New York 23, Cincinnati seven, Fall River three, Brooklyn and Chicago two each, Baltimore and St. Louis one each. From *malarial fevers*, St. Louis seven, New York and Cincinnati six each, Brooklyn five, Baltimore four, Philadelphia three, Chicago two. From *whooping-cough*, New York 17, Brooklyn, Chicago, and Boston two each, New Orleans, Providence, Cambridge, and Lawrence one each. From *cerebro-spinal meningitis*, New York seven, Chicago, St. Louis, Cincinnati, Charleston, Worcester and Springfield one each. From *erysipelas*, New York four, Philadelphia, Brooklyn, Lowell, and Lynn one each. From *puerperal fever*, Brooklyn, Chicago, Cincinnati, and Cambridge one each. From *typhus fever*, New York one.

Cases reported in Boston: scarlet fever 55, diphtheria 40, measles 27, and typhoid fever 16.

In 100 cities and towns of Massachusetts, with an estimated population of 1,307,683 (estimated population of the State 1,955,104), the total death-rate for the week was 19.29 against 18.92 and 15.60 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending November 22d, the death-rate was 20.9. Deaths reported 3512: infants under one year of age 832; acute diseases of the respiratory organs (London) 354, whooping-cough 76, scarlet fever 72, fever 6, measles 59, diarrhœa 40, diphtheria 44, small-pox (London) 33. The death-rates ranged from 17 in Bristol to 26.2 in Preston; Birkenhead 20.1; Birmingham 19.9; Bradford 22.4; Hull 23.9; Leeds 19.8; Leicester 19.6; Liverpool 24.6; London 19.7; Manchester 24.7; Nottingham 25.2; Sheffield 21.4; Sunderland 25.8. In Edinburgh 23.3; Glasgow 29.6; Dublin 32.7.

For the week ending November 22d, in the Swiss cities, there were 21 deaths from consumption, lung diseases 15, diarrhœa 13, diphtheria and croup eight, typhoid fever four, scarlet fever one, erysipelas one. The death-rates were, at Geneva 11.2; Zurich 2.0; Basle 13.2; Berne 25.6.

The meteorological record for the week ending December 6th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Nov.–Dec., 1884.	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 30	30.111	36	41	30	78	47	57	61	W	SW	NW	9	8	4	F	O	O	—	—
Mon., 1	30.119	34	42	31	80	35	57	57	NW	W	W	12	11	18	C	O	C	—	—
Tues., 2	30.156	30	36	24	80	61	56	66	NW	E	NE	6	6	5	C	C	C	—	—
Wed., 3	29.806	35	43	25	72	26	64	54	NW	W	W	3	5	15	F	F	F	—	—
Thurs., 4	30.066	43	51	34	70	42	60	57	SW	SW	SW	5	11	17	C	C	O	—	—
Fri., 5	30.152	48	58	40	64	34	79	59	SW	SW	SW	5	8	8	C	C	C	—	—
Sat., 6	30.085	42	47	35	96	91	100	96	SW	NW	E	3	6	23	G	G	R	—	—
Mean, the Week.	30.071	38.1	45.3	31.0				64.2										7.30	.27

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

FRANKLIN DISTRICT MEDICAL SOCIETY.

RESOLUTIONS IN MEMORY OF THE LATE CHARLES M. DUNCAN, M. D.

At a quarterly meeting of the Franklin District Medical Society, held in Greenfield, November 19, 1884, exercises commemorative of Dr. Charles M. Duncan, late of Shelburne, were held.

Eulogistic addresses were made by several members present, and the following resolutions were adopted by the Society: —

Whereas as it has pleased our Heavenly Father to remove our much-respected and honored brother, and long-time Fellow of this Society, Dr. C. M. Duncan, who died October 4, 1884, at the ripe age of seventy-six years, falling, as he had often expressed the wish he might do, in the furrow, with the harness on, of the profession he had adorned for more than fifty years;

And whereas, in the death of Dr. Duncan this Society loses its oldest, and, up to the time of his death, most useful and valued member, and the medical profession one of its noblest veterans in caring for, and ministering to, sick and suffering humanity; therefore

Resolved, That in the death of our brother the Franklin District Medical Society loses one of its most useful and esteemed members, and the profession a wise and honest physician.

That, in the record of his long, active, and earnest life, given entirely to the arduous and self-sacrificing service of a country doctor, he has erected a monument to his memory in the hearts of his fellow-men more enduring than any shaft of stone or bronze, and that this Society will ever cherish this record among its treasured possessions.

That the memory of his success as a true and scientific physician, without pedantry or egotism, always faithful to his convictions and his patients, will ever stand as a bright and shining example to those of us left behind to do the work that was so well done by him for half a century.

That we extend our deepest sympathy to his bereaved family in this their great loss.

That a copy of these resolutions be presented to his family, and to the County newspaper and the *Boston Medical and Surgical Journal* for publication.

NINTH INTERNATIONAL MEDICAL CONGRESS.

DEATH OF JAMES G. THOMAS, M. D., OF SAVANNAH.

The Executive Committee announces, with great sorrow, the death of Dr. James G. Thomas, of Savannah, one of the members of the General Committee of Organization.

Dr. Thomas took a deep interest in the success of the Congress, and, at a considerable sacrifice, came to Washington, November 29th, to attend the meeting for organization. While on the way he was seized with a violent chill, and on his arrival at once took to his bed, from which he never again rose, the disease proving to be acute lobar pneumonia. He may be said to have lost his life in the service of the Congress, and it is an irreparable loss to it, as well as to his bereaved family and his fellow-citizens of Savannah and of Georgia.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM DECEMBER 6, 1884, TO DECEMBER 12, 1884.

Hammond, Jno. F., colonel and surgeon. Retired from active service, by operation of law, on December 7, 1884, under provisions of Act of Congress approved June 30, 1882. S. O. 287, A. G. O., December 8, 1884.

Irwin, B. J. D., major and surgeon. Granted one month's leave of absence. S. O. 112, Department of Arizona, November 28, 1884.

McKee, J. C., major and surgeon. Leave of absence still further extended one month. S. O. 288, A. G. O., December 9, 1884.

Porter, Jos. Y., captain and assistant surgeon. Sick leave of absence extended four months on surgeon's certificate of disability. S. O. 286, A. G. O., December 6, 1884.

Appointment. — Dr. Charles D. Sawin has been appointed to be physician and surgeon to the Massachusetts State Prison at Charlestown.

Original Articles.

THE LIBERATING OF THE RING FINGER IN MUSICIANS BY DIVIDING THE ACCESSORY TENDONS OF THE EXTENSOR COMMUNIS DIGITORUM MUSCLE.[1]

BY WILLIAM S. FORBES, M. D.,

Senior Surgeon to the Episcopal Hospital, Demonstrator of Anatomy at Jefferson Medical College.

When the middle finger and the ring finger are brought down by the flexor muscles, and their balls are held down firmly against the keys of a musical instrument, as in performing on a piano, for the purpose of producing continuous sounds, and at the same time it should be necessary to extend and then to flex the ring finger in order to produce accompanying sounds, it will be found that in the still flexed position of the middle and little fingers the ring finger can be but very slightly extended. Its complete extension, without operative interference, can only be brought about by long-continued exertion in practice, when elongation of certain accessory, but restricting, tendons is made by nutritive change.

To explain the cause of the inability to extend at once completely this ring finger, and to demonstrate the way to remove this cause by a surgical operation of simple moment, is the object of this paper.

In the dorsal aspect of the metacarpal zone in man, dissection shows that the tendon of the extensor communis digitorum muscle that goes to the ring finger gives off a slip on either side, one of which goes to join the extensor tendon of the middle finger, and the other to join the extensor tendon of the little finger. These two slips are known as the lateral vincula or *accessory* tendons. Now while the middle and little fingers are held in a flexed position these accessory tendons, by virtue of their attached extremities, hold in check the extending power of the muscular fibres operating upon the tendon of the ring finger, and thus this finger is restricted in its function of extension to a very limited degree.

These accessory tendons are sometimes found in one hand and not in the other. They exist more frequently in the right hand than in the left. Now and then the extensor tendon of the ring finger splits at the point of departure of the accessory slips and then reuniting leaves a button-hole appearance, and again these accessory slips are entirely absent.

In 1857 Mr. J. D., a young musician and a performer on the piano, consulted me in regard to his inability to *lift up*, as he expressed it, the ring finger of his right hand while the middle and little fingers neighboring were held flexed on the keys of his piano. This restriction did not exist in the ring finger of his left hand; with it he had no trouble. I explained to him the presence of the accessory tendons in his right hand, with their restricting power, and told him of their probable absence in his left. They could be distinctly felt in his right hand; I could not observe them in the left.

At his desire I performed the operation of subcutaneous tenotomy on the tenth day of November of that year. An incision less than a quarter of an inch in length was made through the skin and fascia just below the carpal articulation of the metacarpal bone of the ring finger, and above the radial accessory slip of his right hand and parallel with, and on the radial aspect of, the extensor tendon of the ring finger.

A narrow, blunt-pointed bistoury placed in this incision, with its handle depressed and its blade flatwise, was carried beneath the accessory slip and down as far as just a little above and between the knuckles of the ring and middle fingers, where its blunt point could be felt beneath the skin. The bistoury was now turned with its sharp edge towards the skin, and the middle finger strongly flexed and the ring finger extended, so as to make tense the accessory slip, when, with a gentle sawing motion, the slip was at once severed. The bistoury, turned flatwise, was now withdrawn through the same opening by which it entered. The accessory slip on the ulnar side of the extensor tendon of this ring finger was divided in a similar manner immediately afterwards by a distinct incision through the skin and fascia on the ulnar side of the extensor tendon of this finger. Not a quarter of a drachm of blood was lost in the two operations. A small piece of adhesive plaster was placed over each incision, and a figure-of-eight bandage was carried around the wrist and hand, leaving the thumb free, and kept on for two days, when the patient was asked to perform on his piano in order to keep the cut extremities of the accessory tendons apart. A slight swelling of the parts existed for less than a week. The liberation of the ring finger was complete. The ball of the finger could be elevated an inch farther from the plane of the hand, and my patient expressed his gratification at the extended and great facility with which he could use this ring finger on the keys of his piano.

In 1881 Mr. Richard Zeckwer, the accomplished professor and director of music in the Philadelphia Musical Academy, called on me and asked me whether I could not cut these accessory tendons. He stated that if they could be cut in some of his students in music that he was sure much time would be saved, and their advancement in music greatly accelerated.

Mr. Zeckwer had been well taught the anatomy of the hand in Leipsic, where he was educated in music, and was well aware already of the restraining force of these tendons. His views were right, in my opinion. He brought to me a young man whose left ring finger was very much restricted, and the tense accessory tendons could be distinctly felt. At the young man's desire I operated at once, and on dividing the tendons of the fingers he could lift this finger from the plane of the hand an inch higher than before the operation.

Since 1857 I have divided these accessory tendons for the purpose of liberating the ring finger in fourteen persons, and in nine of these the operation was performed on the tendons of both hands at one sitting. I do not think at any one of these operations half a drachm of blood was lost. In not one of them did any accident follow the operation. The issue in all of them was successful.

In two persons who came to my office together, strangers from a distance, I performed this operation on the two hands of each of them in the presence of my friend, Dr. Addinell Hewson, Jr. These two patients said, with emphasis, that there was not only relief in using the ring finger, but there was also an absence of exertion, which before the operation was constant and forcible along the back of the fore-arm and hand.

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[1] Read before the Philadelphia County Medical Society, November 12, 1884.

It will be observed that in this operation the totality, the complete sum of the power of the extensor tendon going to the ring finger is left unimpaired. Nor does the operation lessen in the least the power of the common extensor muscle to extend the neighboring fingers.

The question may be asked, then, Of what use are these accessory tendons in man? As far as I am capable of observing they are entirely vestigial. Just as we may believe that the plantares are vestigial muscles.

This brings us to look into the comparative anatomy of these accessory tendons, and to examine the entire muscular anatomy of the hand. Professor Owen thus writes in regard to the flexor and extensor muscles in the hand of mammals:[1] "The deep and superficial flexors of the fingers are distinct, but a remnant of that blending which exists in most lower mammals may be seen in the short connecting tendon which in the aye-aye passes from the ulnar belly of the 'flexor sublimis' to the division of the 'flexor profundus,' giving off the tendon to the middle fingers. The fleshy part of both flexors, but especially the deep one, is continued nearer to the hand in *Lemuridæ* and most other *Quadrumana* than in man, thus enabling the muscles to continue their action as finger-benders when the hand itself is flexed. . . . The 'flexor brevis,' the 'abductor,' the 'adductor,' and 'opponens pollicis' are present in the chimpanzee and gorilla, as are likewise the 'extensor longus' and 'extensor brevis.' In the orang these muscles begin to be confounded; in most lower *Quadrumana* they are blended together. The homologue of the 'extensor indicis' of man bifurcates and sends a tendon both to the index and medius digit; the homologue of the 'extensor minimi digiti' likewise splits and sends a tendon also to the annularis; so that while in man the index and minimus only have two extensor tendons, all four fingers have them in most *Quadrumana*. The hand is thereby the stronger as a suspensor of the body from a bough."

In all felines we find that although lateral motion in the hand is restricted flexion and extension are very forcibly made. Thus in the cat we find not only a common extensor, but also a proper extensor to the index, middle, ring, and little fingers. The proper extensors to the index and to the little fingers have their analogues in man in the extensor indicis and the extensor minimi digiti. In man the common extensor tendon of the ring finger gives off lateral branches; in the cat it does not, for here we find a perfect additional organ. We may believe, then, that the accessory tendons going off from the extensor tendon of the ring finger in man are the vestigial remains of muscles which in the lower animals are developed and perfect organs.

The perception of pleasure in the equality of sounds is the principle of music. If the power of producing the equality of sounds is restricted by the vestigial accessory tendons they should be divided, especially as this division is so easily accomplished.

I would divide them just as I would divide the tendon of the internal rectus in certain cases of squint in order to extend the range of vision.

In examining the muscular anatomy of the hand it will be found that flexion and extension are produced not only by those muscles which especially make these motions, but by all those muscles whose tendons pass beyond the radio-carpal articulation. Flexion of the wrist is produced by the radial and ulnar flexors of the carpus, and is aided by the flexors of the fingers when the action of those muscles of the fingers is either completed or is opposed by any resistance, as when the over-extended hand is pressed against a surface in pushing or in the support of the body. Extension of the wrist in a similar manner is accomplished not only by the three muscles specially devoted to that function, — the extensor carpi radialis longior and brevior and the extensor ulnaris, — but also by the extensors of the fingers.

To insure the efficient action of the long extensor and flexor muscles of the fingers it is necessary that there should be simultaneous action of the flexors and extensors of the wrist respectively; for the wrist-joint must be fixed backwards by its extensors in order that the long flexors of the fingers may act. And the wrist must be fixed forwards by its flexors in order that the long extensors may act upon the fingers.

The flexor communis digitorum sublimis and the flexor profundus bend respectively the second and the third phalanges of the fingers, while the extensor communis extends the *first phalanx*. The four lumbricales, on the other hand, and the seven interossei muscles have a double action in consequence of their insertion into the lateral expansions of the extensor tendons, and some of the interossei directly into the base of the first phalanges. This action consists, first, in the flexion of the fingers at the metacarpo-phalangeal articulations, and, second, in extension of the second and third phalanges. The lumbricales and interossei,[2] therefore, are antagonists to both the long flexors and to the long extensor. This partial and combined action of the long and short muscles upon the fingers has been well known for some time, especially as regards the lumbricales, but it has recently been confirmed and elucidated as regards the interossei by the electro-physiological experiments and pathological observations of Duchene.[3]

With respect to the interossei, it is further to be observed that besides being *flexors* of the *first* phalanges, by virtue of their insertion into the base of these bones, and at the same time *extensors* of the *second* and *third* phalanges, by virtue of their further insertion into the lateral expansions of the extensor tendons, they severally exercise an abducting or adducting action on certain fingers or direct them away from or towards the middle line of the hand, according to the places of their respective insertions. And thus the four dorsal interossei are abductors of the index, middle, and ring fingers, and the three palmar interossei are adductors of the index, ring, and little fingers respectively.

THE TYPHOID OF NEW-COMERS.

BY JOHN D. HALL, M. D.,

Assistant Surgeon, U. S. A., Fort Randall, D. T.

FORT RANDALL, Dakota Territory, has in some respects an advantage of location as being remote from the lines of travel. In fact, probably few places exist within a radius of a thousand miles from Chicago so unexposed to the waves of travel and traffic as this post.

Placed in the midst of a big Reservation, and with no settlers for many miles to disturb or contaminate, and with a river wide and deep between it and the approaches of civilization, it is mostly left to the action of such causes of disease as the locality or the people themselves may occasion.

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[1] Owen, Comparative Anatomy and Physiology of Vertebrates, vol. iii., p. 54.

[2] Quain's Anatomy.

[3] Duchene, Physiologie des Mouvements

For the simplification of some medical problems such places may have an advantage. Diseases of the contagious class are few and far between. Diphtheria, scarlatina, cerebro-spinal fever, that have been such scourges elsewhere, are here unknown, and, in fact, with the occasional exception of measles, mumps, whooping-cough, and typhoid fever, it may be said the whole fiendish brood of infectious diseases is conspicuously absent.

So accustomed does the mind become in such a locality to trace contagions to the introduction of their specific cause, that in cases affording no clue we are naturally led to the conclusion that these diseases belong to the place, that is, are autochthonous. In this way the writer has been led to infer the spontaneous origin of typhoid fever.

The theory of typhoid originating *de novo* is not a new one, as it has long been advocated by Murchison and others, who refer the causation to the decomposition of filth. How much or how little the power of filth may have to do with it, there still seems room for research. Certainly the connection of typhoid indissolubly with filth (pythogenesis) seems hard to understand in the light of numerous observations, since one often sees the foul products resulting from faulty drainage of weeks' or even months' standing without any concomitant of typhoid, and, per contra, cases of typhoid arising in other places without any fault of drainage really open to criticism.

Here is a post having a water supply of acknowledged good quality, with cleanliness and ventilation carefully maintained in its living rooms, and cleanliness and disinfection in its outhouses. The writer has never known of a case of typhoid fever among habitual residents of the post or vicinity, but occasionally has a case among new-comers. During the last four years there have occurred five cases of typhoid (at long intervals apart), of which four recovered and one died. The writer has notes of the four which recovered, the other was seen only in consultation. There was little danger of confounding these cases with any form of malarial fever. No fact could be much better evidenced than the absence of malaria at this place. No case is remembered as being met with, except here and there the outcropping of preëxisting malaria in the system; and, moreover, such cases have always proved exceedingly mild and tractable, yielding readily to quinine. The cases of typhoid, however, showed no disposition to yield to quinine treatment, had a slow progressive onset, and ran through their tedious weeks with no semblance of remission. One of the cases occurred in midwinter, when malarial causes are supposed to be in abeyance even in their chosen haunts. All of the cases occurred in new-comers, one in the first week, others in the second or third week, and two in the seventh or eighth week after arrival. Unless we suppose an extraordinary period of latency, the last two cases, at least, must have been contracted after arrival. But in what way? Faulty drainage and sewer gas (the supposed root of so much pathological evil), filthy surroundings, and impure water supply may be excluded in a place so isolated, and so hygienically cared for as this. Far apart in time of occurrence, there could be no contagion from one case to another — neither direct nor miasmatic contagion (Liebermeister). Moreover one of the two cases last mentioned was in an officer's family, living in a commodious house, where there had been no cases of serious illness for several years, and have been no other cases since this. This case was that of a boy of thirteen years, delicate, arrived seven weeks before from Camp Lewis, Colorado; the case was of considerable gravity, with a sustained high range of temperature till about the third week, when it began to decrease and oscillate; after four weeks there was a relapse of ten days, and after another interval of improvement there came a second relapse of five days, so that the febrile period covered fully eight weeks, recovery then taking place to extra good and lasting health.

The other of the two cases above referred to was that of a sergeant, named Donovan, who died after two weeks' sickness about two months after arrival from Governor's Island. There were no notes nor temperature charts of this case, and there was no autopsy.

The only theory that seems satisfactory to the writer in regard to these cases is that they are due either to climatic influence, or to that difference of telluric and atmospheric surroundings known as change of climate. Taking the first part of this hypothesis as having the more weight, we would assume that there is a slight tendency towards typhoid at Fort Randall, as also in many other portions of our northern zone, and that here it is never intensified by crowding and neglect, and is just enough to sometimes affect new-comers.

This hypothesis of autochthonous origin of typhoid would also explain such outbreaks as are vaguely called mountain fever and typho-malarial fever. Such fevers are often spoken of and assumed to exist even in localities where the commoner manifestations of malaria, such as intermittents, exist not at all or only in very slight degree.

While at Fort Benton, some years ago, the writer remembers there were reports of typho-malarial fever having caused an endemic among the soldiers soon after their arrival a year earlier. Nothing deserving to be relegated to the nomenclature of mountain fever or typho-malarial fever was seen in the three following years, but several cases were seen which ran the regular course of typhoid (about one or two cases a year), and these were mostly in new-comers.

Recurring to the cases seen at Fort Randall, and particularly the one case most dwelt upon, the question arises, was it typho-malarial, although there was no malaria? Was it mountain fever, although the altitude is only moderate (1200 feet)? Was it pythogenic, although in surroundings remarkably cleanly? Or was it the typhoid due to conditions imperfectly known, incident to climatic influence, and which might be designated The Typhoid of New-Comers?

— There is no new thing, even therapeutically speaking, under the sun, and nerve-stretching turns out to be of respectable antiquity, as a contemporary points out. Philip Doddridge seems to have suggested it early in the eighteenth century, and on rather a wholesale scale. He says: —

"Arise, my soul, stretch every nerve."

REPORT ON PROGRESS IN ORTHOPEDIC SURGERY.[1]

BY E. H. BRADFORD, M. D., AND H. L. BURRELL, M. D.

ACETABULAR HIP DISEASE.

Dhourdin [2] has examined the material at the hospital at Berck and found a number of cases of diseases of the hip-joint where the primary seat of affection appeared to be in the acetabulum. The diagnosis was to a certain extent conjectural, and was based chiefly upon careful palpation within the rectum. The treatment consisted of correction of the distortion under an anæsthetic and fixation of the trunk and limb without extension and excision in the severe cases. The statistics are based upon 237 cases, and show fifty-three per cent. of recovery. Under conservative treatment eighteen per cent. died; four per cent. were improved. Twenty-six patients underwent excision. Fifteen per cent. complete cure; forty-two per cent. incomplete cure; forty-two per cent. mortality. The patients at the hospital at Berck have the benefit of sea air.

PSEUDARTHROSIS OF THE TIBIA.

Hahn [3] describes an ingenious method for restoring the usefulness of limbs greatly shortened by complicated fractures. "The conical extremity of the upper end of the tibia having been removed the fibula is divided at the same level, its lower extremity is implanted in the medullary canal of the tibia, and the lower end of the tibia is refreshed in an oblique direction in order to strengthen laterally the support afforded the fibula."

TREATMENT OF INFANTILE PARALYSIS.

Bernard Roth [4] gives the following as the guiding principles to be followed in the treatment of infantile paralysis: —

(1.) To improve the power of those affected muscles which have still some voluntary power left.

(2.) To prevent the onset of any deformity, or, if this has already occurred, to reduce it to a minimum.

To improve the power of the affected muscles he advises, first, the correction of the lowering of temperature of the limb by hot baths, friction, the wearing of loosely-knitted woolen stockings, or fur-lined cloth leggings. Next, massage or rubbing should be faithfully applied for a half hour or an hour morning and evening. Massage he divides as follows: —

"Kneading," a combination of grasping and large pinching and pressure with each hand, one after the other, so that what is left of the wasted muscle is thoroughly squeezed and moved about. As considerable force is used, the skin should be protected by a lubricant.

"Circular friction by the thumb" is done as follows: The thumb is firmly placed on any given spot, and while considerable pressure is exerted, describes small circles, from left to right, and from right to left. A spot an inch higher or lower or to one side is then treated in the same way.

General friction of the limb he also considers of importance.

Of more importance, however, than massage is the methodical exercise of the muscles which have partially recovered. This is gained by medical gymnastics or the so-called "Swedish exercises." Although faradization is useful it does not compare with the methodical exercise of the muscles.

DIRECT TREATMENT OF SPINAL CARIES.

Mr. Frederick Treves,[5] in a paper read before the Royal Medical and Chirurgical Society, advocates operative interference in cases of caries of the lumbar — and with some reservation — the last dorsal vertebræ, where purulent collections have formed. A vertical incision is made near the outer edge of the erector spinæ; the sheath of that muscle and the quadratus lumborum are cut through; the psoas muscle is incised, and the vertebræ are reached by continuing the operation along the deep aspect of that muscle. By means of this operation the vertebræ can be examined, carious or necrosed bone removed, and a ready and direct exit can be given to all morbid products. If Heuter's statement be true, that the two vertebræ most frequently attacked by caries were the last dorsal and first lumbar, the operation would be of frequent application.

Mr. Treves has operated on three patients, all of whom made a good recovery.

Mr. Richard Davy reports [6] a case of removal of necrosed particles of bone from a diseased vertebræ.

STATISTICS OF SPINAL ABSCESSES.

Before the Royal Medical and Chirurgical Society Mr. R. W. Parker [7] said that out of one hundred and eighty-three cases of caries of the spine, he found nine cervical, eighty-two dorsal, twenty-one dorso-lumbar, thirty-seven lumbo-sacral, and in forty-two cases the position was not noted.

In about eight per cent. of his dorsal cases suppuration ensued, while it was found in thirty per cent. of his dorso-lumbar cases, and in seventy per cent. of the lumbo-sacral.

THE VALUE OF THE PLASTER-OF-PARIS JACKET.

Sonnenburg,[8] after six years of experience with the jacket, and the treatment of 205 cases and 600 jackets, draws the following conclusions: In antero-posterior curvatures he regards extension as dangerous, for example, death by compression of the spinal cord and trachea — by a large abscess which lay along the spine. He thinks that extension causes abscess. He considers that a plaster jacket ideally fulfills the conditions required for an apparatus for scoliosis. Kuster has never seen any abscesses which could be attributed to extension.

Israel, Küster, and Eulenburg, Sr., all use the jacket with extension in lateral curvatures.

Eulenburg, Sr., especially decried the use of extension in plaster-of-Paris jackets in angular curvature. In his opinion it did not maintain extension, and the tendency to union was prevented by separation of the diseased surfaces.

Mr. Macnaughton Jones [9] states that his practice is, "In angular curvature, until I believe that ankylosis is complete, and the patient has had all the benefits possible from a rigid support, I apply and keep on the uncut plaster or tripolith jacket." He "combines rest in the prone position with the employment of the support." "As a rule in the early stages of Pott's curvature he does not use extension, save in applying the jacket."

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[1] [illegible] 584.

[2] [illegible] Paris, 1884.

[3] Centralblatt für Chirurgie, May 24, 1884. Philadelphia Medical News, September 1, 1884, p. 291.

[4] British Medical Journal, 1884, No. 1236, p. 400.

[5] British Medical Journal, January 12, 1884, p. 58.

[6] Medical Times and Gazette, January 19, 1884, p. 78.

[7] British Medical Journal, January 12, 1884, p. 58.

[8] London Medical Record, July 15, 1884.

[9] On the Treatment of Spinal Curvature by Extension and Jackets. London: J. & A. Churchill, 1884, 8vo, pp. 127.

ÆTIOLOGY OF LATERAL CURVATURE.

A difference in the length of the lower extremities has long been recognized as causative of this deformity. Henry L. Taylor, in a paper on Primary Crural Asymmetry,[1] reports sixteen cases of crural asymmetry, and demonstrates the strong bias this gives to the production of lateral curvature and obliquity of the pelvis.

PROGNOSIS IN LATERAL CURVATURE.

Pravaz [2] considers the patient's general condition of great importance in the prognosis of lateral curvature. Chlorosis and imperfect nutrition are unfavorable to the reëstablishment of the figure. In general, recovery of the figure is more to be expected in younger than in older patients, but the writer wishes to warn against the prevalent idea that patients will grow out of a curve of the spine. If the distortion is manifest and does not disappear in the horizontal position, careful treatment is necessary. The prognosis in curvature following phthisis is unfavorable, and distortions due to disturbances of muscular action are often very difficult to treat, and rickety distortions are more unfavorable for treatment than those due to a loss of flexibility of the spine in children at the time of the second dentition or puberty. Curvatures submitted to treatment at an early stage, even when quite pronounced, may become corrected provided the patient's general condition is good, the prognosis depending in a large measure upon the amount of rotation of the vertebræ present rather than on the amount of the curve. Curvatures in the lumbar region are less favorable than those in the dorsal region, and curvatures with a long radius are more readily straightened than those with a short.

SPINAL DEFORMITY.

Mr. Arbuthnot Lane [3] describes three distinct forms of spinal deformity occurring among burden bearers. The *first form* occurs in men carrying weights on their right shoulder, as draymen.

A man supporting a weight on his right shoulder, it will be found that his spine forms a large curve with its convexity to the right, and that the upper dorsal and cervical vertebræ are flexed more than normal. There is an accompanying slight rotation of the vertebræ which affects the position of the ribs. By the continual pressure which the weight exercises on the upper two or three ribs on the right side they, acting as levers on the bodies and transverse processes of the vertebræ, rotate the upper three or four dorsal vertebræ towards the left, forming a small curve with its convexity to that side. The situation of the spinous processes is not modified by this relation to any extent. The formation of the upper curve necessitates a compensatory increase in the deviation of the lower part of the spine from the median line with an increased rotation of the bodies of the vertebræ. The form of the bodies and inter-vertebral substances and the position of the ribs on either side are altered by these compensatory changes. In the lumbar region there is no compensatory curve to the left.

Second form. This is when heavy loads are carried on the back. Here the pressure produces compression, changes in the bodies and inter-vertebral substances of the fifth, sixth, and seventh cervical vertebræ, straightening of the upper two thirds of the dorsal spine, marked and progressive lordosis and destruction of the bodies and inter-vertebral substances of the lower dorsal and upper lumbar vertebræ at that part of the spine where the straightened dorsal part joins the lumbar convexity. It produces a form of spondylolithesis.

The *third form* is due to carrying loads on the head. The changes produced are most marked in the cervical spine, where a well-marked lateral curve, with its convexity to the right, is produced. The axis and third cervical vertebræ are frequently fused together, and the bodies and fibro-cartilages of the cervical vertebræ are much modified, especially in the concavity of the curve and between the upper vertebræ. In the dorsal region there are two compensatory lateral curves, the upper being most marked. The convexity of the upper one is directed to the left, that of the lower to the right.

TUBERCLE IN JOINT DISEASE.

Barwell [4] considers that Schüller's (of Greifswald) experiments conclusively prove "that a tubercular state of the body does not produce joint disease. In other words, the earlier phases of joint disease are not tubercular." Schüller injected tuberculous material into the lungs of twenty-four animals (dogs and rabbits), and at the same time, or soon after, inflicted a sharp blow on the right knee-joint. Not a trace of tubercular disease could be found in any of the uninjured joints, and although tubercle completely studded nearly all of the animals' viscera only six injured joints showed suspicious spots, which were described "as perhaps initial tubercle," and some as "heaped-up epithelioid cells" and "colossal giant cells." Barwell clings to the idea of a strumous diathesis, and hence considers the "ambulatory treatment of chronic joint disease the proper one."

CONGENITAL DISLOCATIONS OF THE HIP.

This affection has been extremely intractable to permanent relief.

Esmarch has cured a case by permanent extension. Brodhurst drew the head of the bone into the acetabulum after subcutaneously dividing the tendons of the obstructive muscles. A groin pad and a thigh splint were worn for six weeks, and the patient was able to walk without the aid of artificial support. Dr. Heusner, of Barmen,[5] has placed on record an excision of the hip for congenital dislocation: —

"The operation was done for excessive suffering in the left joint of a girl twenty years of age. The ligamentum teres was absent, the head of the femur was about as large as that of a child of six years, ovoidal in shape, and much flattened, and its surface was uneven, and the neck of the bone formed an obtuse angle with the shaft. The acetabulum was fully developed and of normal size, although its rim was somewhat flattened and polished above and below. The head, neck, and shaft, and nearly an inch of the shaft of the femur having been excised, the acetabulum was made deeper with the chisel and the parts brought into apposition."

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[1] New York Medical Record, April 26, 1884.

[2] Bull. et Mém. de la Soc. de Chir. de Paris, t. x., p. 177.

[3] Lancet, June 14, 1884, p. 1074.

[4] Lancet, August 2, 1884.

[5] Philadelphia Medical News, 1884, xlv., 463.

After eleven weeks the patient was able, with the aid of a cane, to walk for a half hour without fatigue; the pain was relieved, and a useful limb resulted.

OSTEOTOMY FOR ANKYLOSIS AT HIP-JOINT.

Poore[1] says deformities of the hip-joint which may be relieved by osteotomy may be considered under four heads: —

(1.) After hip-joint disease.
(2.) After rheumatism.
(3.) After unreduced dislocation.
(4.) After fracture united at an angle.

He considers that an angle of 125° with the long axis of the body is the most useful one for a patient's limb; in that he can sit down, walk, or put his shoes on.

The object of an osteotomy he considers is to correct any adduction of the limb and to reduce the amount of flexion to an angle of 125°. Three points of section of the femur are: —

Through the neck;
Between the trochanters;
Below the trochanter minor.

The accidents following osteotomies of the upper end of the femur are few. Out of 148 patients 119 were cured with the limb in good position. Seventeen died, and in twelve the operation failed, making a mortality of 11.48 per cent. In thirty-three cases suppuration is reported, and in only three is any necrosis mentioned. In three cases an Adams operation did not correct, or the deformity returned, and a section below the trochanter minor was performed with success. In one case compression of the femoral vessel, from tilting upward of the upper fragment after a section below the trochanter, occurred. In one severe hæmorrhage happened on the twentieth day after a section through the neck, from either the femoral or one of its large branches, necessitating a ligation of the femoral. The patient recovered.

Maisonneuve is reported to have divided the sciatic nerve during an operation of section between the trochanters through a large wound.

Many of the operations were performed before experience had demonstrated the proper ones for section. Hence the rate of mortality.

OSTEOTOMY OF THE HIP.

C. B. Keetly[2] has reported ten osteotomies of the hip. Six were done above the trochanter, and four below it. Nine were for ankylosis, one was for an irreducible dislocation. All were done with the chisel and mallet, and under strict Listerian methods. The dressings were changed at most once, or not at all. In two cases drainage tubes were used and necessitated more frequent changes of dressing. One recurrent hæmorrhage occurred. All did well. There was but slight constitutional disturbance.

Each patient was kept in bed six weeks, and allowed to discard crutches and sticks in a few weeks.

GENU VALGUM.

MacEwen[3] has performed osteotomy for genu valgum 820 times. Death has followed the operation in five cases, but in no one instance was it directly traceable to the operation. Suppuration occurred in eight instances; but during the last three years in all the cases the wound has healed without the formation of pus.

In all the cases the operation has corrected the deformity and improved the strength and utility of the limb.

A relapse even to a slight extent was noticed in only one case. The earliest age at which MacEwen has operated is seven years, and the oldest forty-seven.

The average duration of treatment is six weeks in the splints and four weeks convalescing and learning to walk. Combining his own cases with those of British surgeons he has 1384 limbs operated upon by the supra-condyloid method. Three deaths directly traceable to the operation have occurred. Two from septicæmia, the third from a cause not stated.

Howard Marsh[4] reports a case where the anastomotica magna was wounded. The incision was made in the usual position for a MacEwen's operation in a child aged seven. Recurrent hæmorrhages took place, and on the seventh day Mr. Marsh enlarged the wound and came at once upon the anastomotica magna, in the side of which an oval opening was plainly seen from which the blood was freely escaping. The vessel was completely divided, ligatured; bleeding ceased and never returned. The child made a good though slow recovery.

Mr. McGill[5] records a case where the femur was divided transversely above the condyles. A hæmorrhage occurred on withdrawing the chisel a second time, which was controlled by pads. In three hours the blood oozed through the pads. The dressing was removed. The popliteal space was found much distended. An incision five inches in length was made over the outer border of the semi-membranous muscle, exposing the artery. The artery was found completely divided. The two ends were secured with catgut. The case recovered.

At the Annual Congress of French Surgeons[6] Boeckel reported twenty osteotomies and twenty osteoclases for genu valgum.

The results were uniformly good. In his osteoclases he had three accidents, namely, a rupture of the external lateral ligament, a suppurative periostitis, and an incurable pseudarthrosis.

Lumniczer[7] has successfully treated a case of pronounced double genu valgum, in a patient nineteen years of age, by osteotomy of the tibia in one limb, and fixation of the other limb by a plaster-of-Paris in a flexed position for nine weeks. (Hueter's method.) The limbs were found straight, and the deformity had not reappeared in a year.

OSTEOCLASIS FOR GENU VALGUM.

Polaillon and Gillette[8] report successful cases of rectification of osteoclasis (with Collins's apparatus) for the correction of genu valgum in patients fifteen and eighteen years of age, the fracture in both cases occurring at the point of election (that is, above the condyles), and without relaxation of the ligaments.

MM. Rolin and Molieré have an osteoclast whereby the femur may be broken two fingers' breadths above the knee-joint, and the joint is not in the least degree affected. They state "that after the fracture an interval of at least three days should elapse before the limb is straightened.

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[1] New York Medical Journal, June 7, 1884, p. [illegible]
[2] British Medical Journal, February 9, 1884, p. 261.
[3] [illegible], September 27, 1884.
[illegible]
[4] British Medical Journal, April 5, 1884, p. 665.
[5] Lancet, May 17, 1884, p. [illegible]
[6] New York Medical Record, August 9, 1884, p. 165.
[7] Centralblatt f. Chirurgie, No. 37, 1884.
[8] Bull. et Mém. de la Soc. de Chir. de Paris, 1883, t. ix, p. 885.

OSTEOTOMY AFTER A BADLY UNITED FRACTURE OF THE FEMUR.

Lumniczer[1] corrected a severe deformity in the femur consisting of a sharp angle in the upper third of the femur. The operation was performed four months after the fracture, and was performed under strict antiseptic precautions. The deformity was corrected, union by first intention took place, and eight weeks after the operation the patient was able to walk about upon crutches.

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Reports of Societies.

ADJOURNED CONFERENCE OF STATE BOARDS OF HEALTH AT WASHINGTON, D. C., DECEMBER 10, 11, 12, 1884.[2]

The Conference of State Boards of Health, adjourned from a previous meeting held at St. Louis in October last, met at the Ebbitt House in Washington, D. C., on Wednesday, December 10th, at ten A. M. The call for this meeting included an invitation extended to the principal local boards of the United States and Canada.

THE ROLL-CALL.

The following States and cities were represented and answered the roll-call: —

Louisiana: S. R. Oliphant, S. S. Herrick, New Orleans. Indiana: Dr. E. S. Elder, Secretary of the State Board, Indianapolis. Illinois: Dr. J. H. Rauch, of Springfield, Secretary of the State Board. Georgia: J. T. McFarland, Savannah. Connecticut: C. A. Lindsley, New Haven. Kentucky: Dr. J. N. McCormick, Secretary of the State Board; W. L. Breyfogle, Louisville. Michigan: H. B. Baker. West Virginia: James E. Reeves, President of the American Public Health Association and Secretary of the State Board of Health; Dr. T. A. Harris, Parkersburg, President of the State Board of Health. Wisconsin: J. T. Reeve, Secretary of State Board of Health. District of Columbia: Dr. Smith Townshend, Health Officer of the District and chairman of the local committee. Texas: William Perry, Galveston. Missouri: J. W. Jackson, Kansas City; J. C. Hearne, Hannibal; Joseph Spiegelhalter, Health Officer of St. Louis, and Dr. Outtan, of the St. Louis Board of Health. Pennsylvania: Crosby Gray, Pittsburg; E. W. Germer, Erie. Ohio: C. W. Rowland, Cincinnati, and A. H. Iddings, Dayton. North Carolina: Dr. Thomas F. Wood, Wilmington, Secretary of State Board of Health. New York: Dr. Joseph H. Raymond, Health Officer of Brooklyn; A. C. Mercer, Syracuse; Erastus Brooks, first Vice-President of the American Public Health Association, and also Chairman of the Conference of the State Boards and member of the State Board of Health, and Dr. W. M. Smith, New York City. New Jersey: Dr. Ezra M. Hunt, Secretary of State Board of Health. New Hampshire: Dr. Irving A. Watson, Concord, Secretary of the American Public Health Association, and also Secretary of the State Board of Health. Maryland: Dr. Charles W. Chancellor, Secretary of the State Board; Dr. James A. Stuart, Baltimore. Massachusetts: Dr. Henry P. Walcott, Chairman of Health Department; Dr. S. W. Abbott, Health Officer; Surgeon-General Holt, of Cambridge, and Dr. S. H. Durgin, of Boston, Health Officer. South Carolina: Dr. Horlbeck, Health Officer of Charleston, and J. Ford Prioleau. Canada: A. B. LaRoque, Montreal; Dr. Frederick Montizambert, Quebec, delegate from the Provincial Government of Ottawa; Dr. Covernton, of Toronto, representing the Government of the Dominion of Canada. Tennessee: G. B. Thornton, Memphis; Dr. J. B. Lindsley, of Nashville, Treasurer of the American Public Health Association, and Secretary of the State Board; Dr. Charles Mitchell, of Nashville, member of the State Board. Minnesota: Prof. Charles

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[1] Centralblatt f. Chirurgie, No. 35, 1884.

[2] Specially reported for the Journal.

Hewitt, of Red Wing, Secretary of the State Board. Michigan: Dr. H. B. Baker, Secretary of State Board of Health. Richmond, Va., Dr. J. G. Cabell. Toronto, Dr. Cunniff.

THE PRESIDENT'S ADDRESS.

The President, **HON. ERASTUS BROOKS**, of New York, opened the meeting by an address stating the objects of the Conference: —

First. To hear reports from States and cities as to present sanitary conditions.

Second. To consider the best measures for the prevention of cholera in the United States and Canada.

"We regret," he said, after referring at length to the importance of preparing to meet the cholera, "to read the statement of Dr. Hamilton to tho Supervisor-General of the Marine Hospital, made far in advance of the present meeting of this Conference, that 'the health boards here in session in Washington said all there was to say at St. Louis.' We also regret Dr. Hamilton's statement that the more recent Conference of 'sanitarians in New York City decided that they wanted no more governmental aid than is now being provided.' Such was not the judgment, conclusions, or record of either of the two bodies in session at St. Louis in the month of October. Nor was it the judgment of the Conference of sanitarians held two weeks since in the city of New York. Upon the contrary, these three bodies, composed of practical sanitarians, expressed the opinion that more and better work could be done by the government to arrest, and if possible prevent, the appearance of a fatal calamity than had hitherto been accomplished. While it may be self-conclusive to a single officer of the government that his own work is complete, and that all other advice, knowledge, and assistance is uncalled for or unnecessary, it is the judgment of your presiding officer, and he presumes of this Conference upon the best information they can obtain, that in a crisis like the present a more enlarged, liberal, and comprehensive system of health administration is necessary for the country than is at the present time provided for by Congress or by one officer or department of the government."

APPOINTMENT OF COMMITTEES.

On motion of **DR. WALCOTT**, of Massachusetts, the following committees were appointed: —

On Federal Legislation. Drs. Walcott, of Massachusetts, W. Smith, of New York, Rauch, of Illinois, Herrick, of Lousiana, Baker, of Michigan, Brooks, of New York, and McCormack, of Kentucky.

This committee was subsequently enlarged by the addition of the following: Drs. Hearne, of Missouri, Wood, of North Carolina, Chancellor, of Maryland, Elder, of Indiana, and Thornton, of Tennessee.

On Matters pertaining to the Hygiene of States. Drs. Watson, of New Hampshire, Hunt, of New Jersey, Hewitt, of Minnesota, Thornton, of Tennessee, Hearne, of Missouri, and Covernton, of Canada.

On Municipal Hygiene. Drs. Raymond, of Brooklyn, McFarland, of Savannah, Durgin, of Boston, Breyfogle, of Louisville, Montizambert, of Quebec, Spiegelhalter, of St. Louis, and Mr. C. W. Rowland, of Cincinnati.

The Chairman proposed that the Committee on Federal Legislation should consider the subject of reduction of postage on all documents relative to public health issued by State authorities.

Several papers were then presented by representatives of Indiana, Kentucky, and New York Boards of Health, and, with the exception of the latter, were referred to the Committee on State Action.

DR. WM. SMITH, Quarantine Officer of the port of New York, read a paper on

THE FAILURE OF MARITIME SANITARY REGULATIONS.

Dr. Smith gave a summary of the statistics of immigration from 1819 to the present year. He stated clearly the relations of the subject of immigration to the introduction of infectious diseases, illustrating the liability of the immigrant to be the medium of such communication in consequence of his habits at his departure, during the voyage, and at his arrival. The imperfection of present regulations was shown, and the comparative value of consular bills of bills of health as contrasted with those of local authorities. Dr. Smith emphasized in strong terms the need of better trained and experienced medical officers on board transatlantic steamers, who should supervise the sanitary condition of ships, their cargoes, crews, and passengers, and all matters pertaining to the hygiene of sea-going vessels. He also cited instances illustrating the want of intelligence and experience on the part of such officers, particularly in regard to the diagnosis of infectious diseases, isolation, disinfection, and ventilation.

DR. COVERNTON, of Toronto, stated that the present epidemic of small-pox in Canada was traced to infection from an immigrant boy.

Before the adjournment of the morning session an invitation was announced from Surgeon John S. Billings to visit the Army Medical Museum, where specimens of the comma bacillus and the bacillus tuberculosis were on exhibition.

AT THE EXECUTIVE MANSION.

During the recess at noon the members of the Conference went to the Executive Mansion, and were introduced to President Arthur and also to Secretary Frelinghuysen by Medical Director Gihon, of the Navy.

CHAIRMAN BROOKS briefly stated to the President the objects of the Conference, and commended his reference to the subject of cholera in the annual message, and urged the necessity of legislation.

PRESIDENT ARTHUR replied expressing his hearty sympathy with the objects of the Conference, and also stated that the matter in hand was already under consideration by the Secretaries of State and of the Treasury. He also inquired whether it were desirable to present the subject for the consideration of any congressional committee.

DISINFECTANTS.

At the afternoon session the Chairman of the Committee on Disinfectants (appointed at St. Louis in October), **SURGEON STERNBERG**, made a report of the progress of the Committee.

The Committee was divided into sub-committees on experimental research, the practical application of disinfectants, and the literature of the subject.

The experimental work, in charge of Dr. Sternberg, is conducted at the Biological Laboratory of the Johns Hopkins University at Baltimore. The work at present being confined to the examination of commercial disinfectants, the first test employed is a given quantity of beef tea, a definite amount of each disinfectant being used in the performance of the test, after which it is proposed to employ well-recognized disease germs, such as the bacillus of anthrax, etc. Many of the popular disinfectants have already been tested, such as Squibb's coal-tar disinfectant, girondin, phenol, Williamson's disinfectant, Platt's chlorides, Labarraque's solution, etc. Dr. Sternberg attributed to the latter officinal preparation a higher disinfectant or germicide potency than has ordinarily been accredited to it.

Dr. Raymond gave a brief report on the practical application of the subject.

Dr. Rohé reported that $425 had been contributed by State and local Boards for the work of the Committee, and that $1000 was necessary to defray its expenses.

INTERNATIONAL COMMITTEE.

Dr. Reeves, of West Virginia, offered a resolution that measures be taken for the formation of an international committee, composed of representatives from each maritime nation, who should take cognizance of all matters relating to shipping and the water-carriage of persons and cargoes.

This resolution was referred to the Committee on Federal Legislation.

The remainder of the afternoon session and most of the morning of Thursday was occupied in hearing the

REPORTS OF STATE AND LOCAL HEALTH OFFICERS, some thirty-five or more in number, as to the measures taken and in progress for the purpose of resisting the approach of cholera. The majority of the reports were verbal, and evinced a deep interest on the part of health authorities throughout the country in the objects of the Conference. Some of the reports consumed much time upon irrelevant matters, and others deserve special notice for points of excellence embraced in them.

Dr. Rauch, of Illinois, reported that the State Board had received returns from 420 towns and villages as to sanitary condition, and said that a systematic survey of the State would be made, and efforts also would be made to remedy all defects in statutes relative to public health. He also said, "We propose to place Illinois in a condition to take care of itself if the general government does not do its duty.

Dr. McCormack, of Kentucky, reported that a sanitary survey of the State had already been made.

The condition of Boston and Cambridge was clearly stated by **Drs. Durgin** and **Holt**, of those cities.

Dr. Reeves, of Wheeling, West Va., reported the condition of that city, especially with reference to the danger incident to pollution of its water supply.

Dr. Raymond, of Brooklyn, N. Y., presented a carefully prepared report as to the condition of that city, and the measures which had been taken there for the prevention of cholera. In summing up his report certain definite measures were advised, as follows: —

(1.) The abolition of pump wells in cities.

(2.) The abolition of privy vaults wherever sewer connections could be made.

(3.) The filling and disinfection of stagnant ponds or pools.

(4.) The supervision of sewers and plumbing.

(5.) Inspection of tenement-houses.

(6.) Inspection of food supply, especially of milk, meat, and vegetables.

(7.) Removal of garbage and kitchen refuse.

(8.) Garbage not to be used for filling vacant lots.

(9.) The attention of all public institutions to be directed to the necessity of cleanliness.

(10.) The necessity of taking every possible measure for the prevention of cholera, and of giving immediate notice to health authorities in case of local outbreaks.

THE CUMBERLAND EPIDEMIC.

A special report was read by **Dr. McCormack**, of Kentucky, embracing the result of an investigation by Dr. J. H. Carson in relation to the recent epidemic which had prevailed in the eastern or Cumberland region of that State. He concluded that the disease was epidemic dysentery. That its cause was not a mineral poison, but rather a specific malarial poison due to drinking the water of stagnant pools in a dry season. Public accounts had been greatly exaggerated, and the deaths in Kentucky had not been more than two hundred and twenty-five.

Dr. Arbeely, a native Syrian physician, from Damascus, detailed his experience with cholera at Beyrout and Damascus, and attributed much of the fatality to intemperate habits.

At this point a telegram was read from an importer of rags to the effect that there was no instance on record of cholera infection through the medium of rags.

Mr C. E. O'Hara, of the Seymour paper company, stated that they employed two hundred hands in sorting rags at their factory at Windsor Locks in Conn., and no case of cholera had occurred among them in thirty years.

REPORTS OF COMMITTEES ON STATE AND MUNICIPAL ACTION.

The Committee on State Action then reported that the laws of the States are so diverse that it was difficult to formulate a system of uniform action. Each State should be fully advised of the conditions prevailing at the ports of neighboring States through which disease might gain admission to its own cities. In reference to interstate communication it is essential that officers of State and Federal Boards in adjacent States should promptly notify each other of any case of cholera occurring in its own domain.

It is also essential that local boards shall determine in advance how the first cases shall be cared for, so as not to lose valuable time and allow the disease to gain a foothold. It is the judgment of the committee that the time has come when the State Health Boards should be recognized in some national form as having authority to indicate what sanitary measures are necessary, and secure the same through these departments of the government under which they would naturally fall.

The Committee on Municipal Action presented a report embracing the ten propositions already stated in Dr. Raymond's report upon the sanitary condition of Brooklyn, together with an eleventh proposition of a more general nature, urging upon municipalities the importance of prompt measures for the amelioration of all unsanitary conditions.

Dr. Baker, of Michigan, moved that the legislatures of States should be recommended to enact bills providing for contingent funds to be used in the event of an outbreak of cholera. This resolution was referred to the Committee on State Action, and afterward incorporated in their report by vote of the Conference.

REPORT OF COMMITTEE ON FEDERAL RELATIONS AND LEGISLATION.

The Conference reassembled at 4 P. M., and after preliminary discussion on the publication of the proceedings of the Conference. **DR. WALCOTT**, of Massachusetts, made a partial report from the Committee on Federal Relations and Legislation, that the draft of a bill had been prepared which needed more consideration and examination, and commented on various sections. He thought the collection of foreign statistics should be by consular officers through the State Department.

DR. CHANCELLOR, of Maryland, offered the following resolution: "That so much of the report on federal legislation be referred back to the committee, and the committee be increased by five, and the committee be directed to urge on Congress a bill providing for the organization of a health department of the United States.

The principal features of the report on federal legislation as finally adopted were published and commented on in the JOURNAL's editorial columns, December 18th.

DR. SMITH, of New York, from the Committee on Legislation, offered a resolution, which was adopted, providing an international health committee, to be of three members appointed by the Secretary of State, who shall correspond with foreign health officials, and that a conference of Boards of all maritime nations be asked for by the President of the United States, which conference shall adopt rules for carrying and inspection of ships and passengers.

The Conference then adjourned, at 5.30 P. M., to meet at the call of the President.[1]

AMERICAN PUBLIC HEALTH ASSOCIATION.

MEETING OF THE EXECUTIVE COMMITTEE.

The Executive Committee of the American Public Health Association, which was appointed at the annual meeting held in St. Louis, in October last, met December 11th at the Ebbitt House, Washington, Dr. Reeves, President of the Association, presiding, and Dr. Irving A. Walton, secretary. Eleven members of the committee were present.

Arrangements were completed for the holding of the thirteenth annual meeting of the Association at Washington the second Tuesday in December, 1885, and a local committee was appointed, with Dr. Smith Townshend as chairman, and J. Cooper McGinn, Esq., as secretary.

Subjects were selected for competition for the Lomb Prize Essays as follows: (1) Healthy Homes and Food for Working Classes; (2) Sanitary Necessities and Conditions of School Life; (3) Disinfectants; (4) Life-Saving Appliances in Certain Occupations. The full text of the subjects as they are to be treated will be published at an early date. These essays are for prizes of $500 each, and the competition is not confined to members of the Association, but is open to all citizens of the United States.

The Committee on Disinfectants, consisting of Major George M. Sternberg, U. S. A., Dr. J. H. Raymond, Brooklyn, and Dr. George H. Rohé, of Baltimore, was authorized to prepare a preliminary report as soon as possible for publication, in view of the anticipated advent of the cholera next year. It was decided to incorporate the Association under the United States laws relating to the District of Columbia. The committee adjourned to meet in New Orleans next April.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY evening, November 13, 1884. The President, DR. SHAKESPEARE, in the chair.

SOME STUDIES ON THE MICROCOCCUS OF THE PLEURO-PNEUMONIA OF CATTLE.

By **THOMAS D. DUNN, M. D.**

On September 25, 1883, through the kindness of Dr. Bridge, Assistant State Veterinary Surgeon, and Mr. Thomas Edge, Commissioner of Agriculture, of Pennsylvania, I was invited to be present at an autopsy on some cows suffering from pleuro-pneumonia. Their condition being such that recovery was deemed impossible, Mr. Edge ordered them killed. As a description of the macroscopic and microscopic conditions of the lungs was read before this Society a year ago, and as it would have no special bearing on the bacterian nature of the disease, a detailed account will be omitted. Suffice it to say the lung is completely solidified, the air cells filled with effused blood, serum, and lymph, which usually extends into the small bronchial tubes. Portions of the consolidated lung and blood from the heart were placed in a bottle which had been thoroughly cleansed, and the bottle closed with a ground-glass stopper. These were examined microscopically by Dr. George Martin and myself, and were found swarming with germs — micrococci. These little bodies, although seen distinctly with a power of 670 diameters, are best studied with a power of 1000. They are colorless, globular, or oval in form, outline regular, and refractive power notable. The Brownian movement is marked; this is a tremulous motion not peculiar to micrococci. It is common to inorganic particles as well as minute vegetable and animal organisms. They do not seem to move in a manifest manner independent of the currents of liquids in which they exist. They measure from a third to a half micromillimetre or from $\frac{1}{6000}$ to $\frac{1}{8000}$ inch in diameter. They are not dissolved by ether, alkalies, or acids, and take the staining of aniline colors slowly. I have, however, succeeded in staining them by first treating with aqua ammonia, then with staining fluid, and afterwards washing with a weak solution of nitric acid. They have recently been more satisfactorily stained by a two per cent. alcoholic solution of methyl violet. They multiply in nitrogenous culture fluids at ordinary temperatures by millions. They are generally separate, though sometimes united in pairs and little cellular colonies forming distinct zoögloea. From the fact of their being occasionally seen in pairs it is reasonable to suppose that multiplication is taking place. They resist putrefaction, for the cultivation tubes started September 26th swarmed with them two months later. When the nitrogenous material is exhausted their growth is stopped, and they remain in a latent state, as it were, until additional food is given, or they are transplanted into fresh fluid. After the tubes stand a few weeks, the membrane formed on the top sinks to the bottom and the liquid above clears. That they are not dead, but only in a state of repose, is evident from the fact that they multiply anew when inoculations are made from them, but less rapidly than inoculations from more recent cultures. Dr. J. J. Woodward, U. S. A., presented at a meeting of this Society in 1861 a pleuro-pneumonic lung, and mentioned certain "spores of fungi" found in both the healthy and diseased lung, but he did not describe them. These "spores of fungi" are probably the micrococci under consideration. Aside from this I have not found any record of them, but unfortunately I have not had access to the literature pertaining to this subject.

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[1] [illegible] St. Louis, [illegible] Dr. J. H. Rauch, [illegible] Our readers are referred to his Address as subsequently published in pamphlet form. — ED.

The following culture experiments were made with the serum virus taken from the diseased lung: The culture fluid consisted of extract of fresh beef, made by chopping it fine and pouring over it hot water. After maceration the juice was expressed and the extract boiled for several minutes. It was then filtered and again boiled to thoroughly destroy all germs. It was then placed in culture tubes which had been washed in a solution of corrosive sublimate, and afterwards boiled. The tubes were closed by absorbing cotton which was sterilized with corrosive sublimate and the application of dry heat. After the culture fluid in the tubes had cooled a minute quantity of the serum was introduced by a small knife whose blade had been heated in a spirit lamp. The tubes were then placed where the temperature ranged from 90° F. to 120° F. On examination of these tubes on the 28th the liquid was found turbid, a thin membrane formed over the surface, and there was a slight deposit. Under the microscope thousands of micrococci were seen.

From this cultivation a second was made and after standing forty-eight hours the surface membrane, cloudiness of fluid, and slight deposit appeared, and myriads of micrococci were found. From this a third generation was started in which appeared a few bacilli — the first discovered.

They are very active colorless bodies, measuring from three to five micromillimetres in their long diameters, and from one third to one half in their short. Their movements are at times rapid, again they are in a state of repose. Sometimes one will remain a long time motionless, then suddenly dart across the field of the microscope, setting many of its fellows in motion, who seem to catch the spirit of the active bacillus. At one time they advance with the rapidity of an arrow, then retreat or describe circular lines. It was noticed in those cultivations in which the bacilli were found the surface membrane was thicker and more tenacious. In cultivations conducted at a lower temperature the development of micrococci was not so rapid. Fearing that some atmospheric germs might have been introduced with the culture other cultivations were begun from the second generation, in which no bacilli were found. The culture fluid was boiled at intervals to kill germs that might develop from spores not destroyed by previous boilings; and as a further test non-inoculated tubes were placed by their side. In forty-eight hours the former were swarming with both bacilli and micrococci, while the non-inoculated ones remained clear for ten days. These subsequently developed germs after inoculation.

A second series of observations was commenced with fresh virus obtained October 4th. The first and second cultures were pure, but in the third bacilli appeared, and in the fourth they had greatly increased.

It is difficult to explain the relation these forms bear to each other, as to whether the bacilli are organisms developed from the micrococci — the latter being in a sporal stage of their growth — our investigations will not justify a positive answer. Koch has determined that the bacilli of anthrax develop veritable spores and they in turn develop bacilli. Several other observers hold this view, and according to the investigations of Koch, Cohn, and Pasteur upon the development of bacteria it is probable that the spores of bacilli and other bacteria are identical with micrococci in form, aspect, and behavior toward chemicals. In those diseases in which certain bacilli and micrococci are found to be the virus, it is impossible to distinguish them from harmless ones by their microscopical appearance, — that is, a specific disease germ can only be determined by its effects on living organisms. The micrococcus of pleuro-pneumonia, so far as present observations go, is identical with that of diphtheria, chicken cholera, and the recently discovered micrococcus of scarlet fever. It is further found that the germ of virulent matter rendered harmless by attenuation does not differ microscopically from the unattenuated which destroys life. I have made no inoculations on animals with the micrococcus of pleuro-pneumonia, but a few cows have been inoculated by others without any reference to a special virus or cultivation of the germ, and the disease was transmitted. However, several experiments have been made in view of destroying the germ, the results of which I will briefly state: A tube containing cultivated micrococci was boiled, and from it a second was inoculated. In thirty-six hours the tube contained many micrococci showing that the germ is not destroyed at 212° F. A culture fluid to which had been added ten per cent. of alcohol was then inoculated. No micrococci had developed a week later. One and one-half per cent. of benzoic acid with borax to dissolve was then added to a culture fluid. Neither micrococci nor bacilli had appeared six weeks afterward. Another culture was started to which was added corrosive sublimate in the proportion of one half grain to the ounce. In three weeks there were no traces of germ life. To test the influence of cold on these organisms a tube containing cultivated germs was frozen, and from this sterilized liquids were inoculated. In forty-eight hours they contained myriads of micrococci and a few bacilli. A portion of diseased lung was frozen, and inoculations from this grew in about the same time. It was afterwards found that the cotton which had been sterilized by heat and corrosive sublimate had been inadvertently exposed to old cultivations and decomposing organic substances, and it is possible that bacteria were introduced by it. When I repeated these experiments it was found that while inoculations from non-frozen virus develop micrococci in a few hours, it requires several days for sowings from frozen specimens to grow in the same culture fluid and under the same conditions of temperature. Whether they were not exposed to cold long enough to destroy the germs or the influence is only sufficient to render them inactive, further investigations will be required to determine. It is my impression that cold will check the spread of the contagion, but not destroy it altogether, and that when the disease once attacks an animal cold will have no influence upon it, though it may prevent the spread of the infection to others in the same herd. The power of medicinal agents to control the disease seems to be very feeble. It would appear that corrosive sublimate, alcohol, and benzoic acid arrest the growth of these germs, but whether doses sufficient to destroy them can be administered without endangering life our veterinary surgeons must determine.

(To be concluded.)

PHILADELPHIA COUNTY MEDICAL SOCIETY.

REPORTED BY G. BETTON MASSEY, M. D.

November 12, 1884.

Dr. Wm. S. Forbes read a paper on

CUTTING ACCESSORY TENDONS OF EXTENSOR COMMUNIS DIGITORUM.[1]

Dr. John B. Roberts, in opening the discussion, said: I have been greatly interested in hearing the account of the operation given. Since student days it has been in my mind, but I never happened to be called on to perform it. It was then taught as advisable and looked on as justifiable, and I now know that this suggestion must have come from Dr. Forbes. I have often tried to figure out a reason for these slips, and the disposition has been to regard them as analogues of structures found in lower animals, as Dr. Forbes holds. We have special extensors for the index and little fingers, and I have seen, on rare occasions, a special extensor for the middle finger, but I have never heard of a special extensor for the ring-finger.

The remarks on white fibrous tissue are interesting. The actions of this tissue are most important in holding the various organs of the body in place. It is at times, however, a surgical disadvantage, as, for instance, in the case of abscesses, where the pus being confined by the density of this tissue does harm by more or less extensive burrowing. In binding down tumors and thus causing pain by pressure upon the nerves, and in causing suffocative pressure in bronchocele, it also demands operative interference. We can often relieve pain and asphyxia caused by pressure of this tissue by free incisions made subcutaneously or openly.

I shall be glad to hear further as to the time-test of these cases; and also whether the uncut tendon is made more pliable by actual stretching after long months of piano practice. It would seem to me that there was no stretching of this tendon possible, but that practice caused only a lateral movement of the contiguous tendons and thus permitted a greater freedom of motion in the finger. If this increased motion is possible, then how much time is gained by the operation? The operation itself must be a very simple one, and there should be very little danger of the tendinous bands uniting again.

Dr. H. A. Slocum: As there will probably be many ladies undergoing this operation, a pertinent question is, How much of a scar does it leave?

Dr. De Forest Willard: Some years since I heard that this operation had been performed for pianists, but did not know the exact details of results desired until this evening. The only danger would be that too deep a cut might divide fibres of the dorsal interossei, muscles which are of especial service to the musician, since extension and flexion of the first phalanx are important actions. These accessory tendons, as seen in the dissecting room, are sometimes variable in their position, but the operation seems simple, and from the excellent results which I am accustomed to secure by subcutaneous divisions of fasciæ and tendons, I am inclined to favor the procedure of the lecturer.

Dr. Shakespeare: In connection with Dr. Forbes' incidental reference to Wickerscheimer's preservative fluid, I would like to ask him if he has had any success in its use. I have myself made trial of it, as made here, after the formula published by the Government, and have, in every instance, failed to get good results when using the fluid as an injection. I do not know of any successful results out of Germany, and do know of many failures. The suggestion has been made that there is a secret yet held back by the inventor. On the contrary, with the fluid for immersion, moderately successful results have not been very difficult to obtain.

Dr. H. H. Smith: This operation, and the advantages to be gained by a free use of this finger, are both altogether new to me. As Professor Zeckwehr is present, I hope he will state its value to the pupil, and whether it is better than the ordinary ring and elastic cords used by beginners.

Dr. O'Hara: I think it odd that no mention has been made of females being operated on for this condition. Is it possible that a vestigial condition remains with man, and woman does not share it? There are so many more women than men playing upon the piano, it would appear that the ring finger was freer with them than with men.

Professor Zeckwehr, speaking by request of the Chair, said: Pianists find great difficulty in performing, owing to their inability to extend the ring-finger. It takes a long time to remedy the difficulty to any extent by practice. With the palm down it can be raised but a short distance. The natural strength of this finger is not so great as that of the others. My pupil, on whom Dr. Forbes operated, gained in a quarter of an hour what I had not accomplished by twenty-five years' practice; before the operation he could raise the finger a quarter of an inch — after it, an inch and a quarter, a gain of a whole inch in a few minutes. I surely think the time gained a great advantage to piano pupils.

Dr. Carl Seiler: I am not a practical musician, but would ask if there was a great improvement in touch to be gained by this operation. I have noticed in what might be called one school of musicians, that the motion from the fingers was taught, while another taught motion from the wrist. The question is æsthetic: Can we gain a better touch by severing these bonds?

Professor Zeckwehr: I never heard of the method of playing from the wrist. All musicians play from the knuckle-joints, keeping perfectly quiet wrists.

Dr. Seiler: Many musicians play from the wrist, and by that motion harshness is done away with and greater flexibility attained.

Dr. Blackwood: In organ-playing lateral movement of the fingers is necessary as well as extension. Does the operation increase the abduction and adduction movements? Experience has shown me the advantage of such mobility, particularly when the same hand is occupied in playing chords on two different manuals at one time, as, for instance, the 1st, 3d, and 5th on the great and choir.

Dr. Forbes, in closing the discussion, said: In regard to the scar, I examined one of the patients to-day, and the scar could be scarcely seen. It should be distinctly understood that the cut necessary for the operation is but little longer than the width of a match. By means of a blunt knife to cut the tendon, and making the tendon tense, nothing else need be cut. From the first I performed this operation with a tenotome, but I received a letter from a gentleman at a distance, who said he had cut his own tendons with a razor. Dr. Willard spoke of cutting the dorsal interosseous muscle. If he does not carry the incision beneath the investing sheath he will not touch the muscle. You *may* cut the nerve to be found here next to the skin, but a dull knife avoids this by *shoving* the nerve before it. Dr. Allen spoke of encountering membranous bands on the tendons. I would cut tendons and bands at once. The patient should play at once on the piano after the operation, and if any bands remain they should be cut by reintroducing the knife. Both tendons are cut at one sitting. Dr. O'Hara was struck by the absence of the mention of women, considering their great activity as pianists. In fact, one patient alluded to was a woman. It may be that their joints partake of the greater mobility of their nature, and are less rigid. I have certainly found that these ligaments do not obstruct their playing on the piano so much as in men.

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[1] See page 601 of this number of the Journal.

If the principle in music depends on the equality of sound, and these bands interfere with the development of this equality, I see no reason why they should not be severed.

This operation, of course, cannot lessen lateral motion.

As to elongation of tendons, this can be only by nutritive change. There is no elasticity in white fibrous tissue; sometimes it appears to elongate, but this is merely by lateral movement of fibres. This rigidity is the greatest value of white fibrous tissue.

In regard to Wickerscheimer's fluid, I have had a great deal of difficulty in its use, and thought he used some other ingredient in that imported, not mentioned when he sold his secret to the naval officers representing the United States Government. If, however, it is slowly injected in the preparation previously immersed in water, and then immersed in the prepared fluid and kept entirely immersed, sometimes it does well. The best quality of glycerine should be used.

CLINICAL SOCIETY OF THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

Stated Meeting held December 6, 1884. Dr. Thomas E. Satterthwaite in the chair.

Dr. E. L. Partridge opened the discussion upon

ERYSIPELAS,

the subject of the evening, as follows: Erysipelas, like the exanthemata, is infectious and epidemic; it has a period of incubation, prodromata, and a definite course, but on the other hand it is less contagious than any exanthem, and recurs with greater frequency, in these points resembling diphtheria and septicæmia. It is not interchangeable with the exanthemata or diphtheria, but may possibly be with septicæmia and puerperal fever, and perhaps with typhus. In 1838 erysipelas and typhus fever had existed together in an English hospital, and apparently were related. The relation of puerperal fever may perhaps be shown by the not uncommon case of the puerperal woman, who, contracting septicæmia, dies soon after childbirth, while the child dies of a distinctly phlegmonous erysipelas. It is probably never of neurotic origin, nor is it always necessary for it to be preceded by traumatism; there is undoubtedly an idiopathic form in which the poison gains access, in all probability through the respiratory tract. Of this latter view, however, we have no absolute proof, and the view which insists upon the necessity of an abrasion is therefore entitled to respect. The disease is probably spread through the lymphatics, and it has been shown by Billroth that it is possible for it to be thus conveyed to the pleura or meninges, and we may have inflammation of these tissues as a complicating factor in the disease. A predisposing cause may probably be found in a sluggish condition of wounded parts, as shown by flabby grayish granulation and scanty secretion, as well as in constitutional disease which impairs the venous return, as in disease of the liver, kidney, and heart.

The mortality of erysipelas was found to be greater in the winter than in the summer, being increased by contaminated atmosphere; to be greater in the very young or very old than in the middle aged; greater if the disease arose in the vicinity of wounds, and especially greater if there was any coexisting disease of heart or kidneys.

The best treatment was probably to rely upon general support and stimulation and to treat constitutional symptoms as they arose. A saline cathartic may be given with local depletion to relieve the tension when great, and quinine when the temperature runs high. It is very doubtful whether specific treatment or so-called abortive measures are of any use in limiting the disease.

Dr. D. B. St. John Roosa was inclined to think, possibly from his surgical education, that erysipelas is always traumatic in its origin. He did not believe that erysipelas could be generated on a sound skin. He believed that every eczematous spot and every lesion of the mucous membrane in persons in hospital life, or in delicate persons everywhere, should be, if possible, healed. He considered the poor ventilation common during the winter months as one of the causes of the prevalence of the disease during that season rather than the low temperature. In his experience cold did not produce the disease, but he thought he traumatism of a high wind blowing upon the face a very efficient cause. He considered the antipyretic use of quinine as useless and dangerous; that the dilatation that precedes the contraction of the blood-vessels by quinine does much harm. He recalled a case in which the temperature fell from 104° F. to below normal under no other drug than the tincture of the chloride of iron. He would use no medicine except a purgative, when necessary, but would rely upon good air, good food, stimulation, and attention to the comfort of the patient; locally he would use the lead and opium wash. The most disagreeable treatment that he has found is that with white paint.

Dr. W. O. Moore said that erysipelas was rarely a cause of eye trouble, or at least the connection was not, as a rule, made out, although we do meet with two forms of intra-ocular disease directly traceable to the poison of erysipelas, especially when facial. The first is a thrombosis of the retinal vessels, due to a direct propagation of the inflammation along the walls of the vessels, causing finally an obliteration of their calibre, or it may also be due in part to compression of the central retinal artery by the products of inflammation around the optic nerve and orbit. It is rare that one has the opportunity of seeing these cases during the acute erysipelatous period. "Since Knapp's paper, read in the early part of this year, I have anxiously looked for such a case, and at last, on August 6th, I saw one with the following history: H. C., male, aged thirty-nine, had received a slight cut, while being shaved, on the right side of face. This soon developed into the ordinary form of acute erysipelas, in three days spreading over the entire face, though most marked upon the right side. The eyelids were moderately swollen, but no protrusion of the eye was noticed. The erysipelas did not yield promptly. Ten days after it commenced, on opening his eyelids, the patient noticed that his vision was impaired, although to outward appearances the eye was normal. On the fourteenth day I saw him, and on ophthalmoscopic examination found much the same appearances in the fundus as seen in the Coggin's and Knapp cases, namely: right eye, media clear; optic disk, outline clear, but substance milky, as was also the retina near the nerve; the vessels were distorted and tortuous; one small hæmorrhage into the retina towards the periphery of the fundus; the arteries were smaller than normal, and carried less blood; vision $\frac{10}{200}$. One week later the eyelids were well open; eye clear and bright; pupil moderately dilated; vision same as before; optic nerve more white; retina less milky; vessels smaller, looking as though no blood entered them; hæmorrhage previously noticed absorbing; one of the vessels looks like a white cord. In two months the patient was totally blind in the right eye, the other remaining in good condition. The only change in fundus appearance is in the optic nerve, which is white and atrophic, with only a few vessels containing any blood, the others being apparently empty. The second picture we see is the last stage of the disease, where the patient comes, months after the erpsipelas, with the ordinary white atrophy of the optic nerve. In looking over records of atrophy where a probable cause is given I find out of 200 cases only one where erysipelas was supposed to have a bearing. This percentage is, I think, too high."

Dr. David Coggin, of Salem, Mass., in the Transactions of the American Ophthalmological Society, 1879, reports a case of Ischæmia of Retinal Vessels of both Eyes after Facial Erysipelas. His idea was that the erysipelatous inflammation was propagated under the capsule to the optic nerve, where it exercised enough pressure to retard the circulation in the retinal vessels, and thus caused thrombus, or by thrombosis due to extension of the inflammation to the vessels themselves. The patient never recovered his vision.

Dr. A. Carl, in Zehender's *Monatsblättern für Augenheilkunde*, April, 1884, reports a case of Blindness from Erysipelas. Erysipelas began at the tip of the nose, then extended to the face. Fifteen days from the beginning of the disease R. E. became blind, with protrusion and immobility of the globe. Dr. Carl saw the patient seven weeks after the blindness came on, and found the media clear; V. = O; optic nerve outlines clear; disk milky and opaque; retinal vessels reduced in number, partially filled with blood, and partly reduced to white cords. Four months after blindness appeared complete atrophy of the optic nerve was noticed, and some of the arteries had entirely disappeared. The L. E. was in a normal state.

Dr. H. Knapp, in a paper read before the New York County Medical Society, March 24, 1884, says: First. Blindness was produced by compression of the central [illegible] vessels and thrombosis of the retinal veins. Second. No [illegible] is seen by the ophthalmoscope, but the successive stages of a thrombosis. Third. The white segments in the veins and arteries were white thrombi, and not hypertrophy of the walls of the vessel.

DR. SENECA D. POWELL considered that the progress of antiseptic surgery during the past few years had done much to limit the spread of erysipelas. He did not consider that idiopathic erysipelas, or erysipelas without traumatism, was of uncommon occurrence, especially upon the face. It differed from traumatic varieties in not being contagious. The speaker had seen a case where erysipelas had set in after amputation of the breast, beginning about the wound and creeping down the left arm, returning up the arm, around the neck, down the other arm, then back across the neck, and again down the left arm, where it ceased. He was in the habit, if the patient had a full bounding pulse, of giving liq. ammon. acetat. ʒi.–ʒiv., spts. æth. nit. ʒi.–ʒiv., and tr. aconit. rad., gtt. i.–iij., q. 2 h. He used iron only in the idiopathic variety, employing a tincture made from the black oxide of iron three parts, hydrochloric acid ten parts, and alcohol thirty parts, with no water, instead of the officinal tincture, which contains both nitric acid and water. When in either variety the patient began to show signs of debility he always gives alcohol freely. Locally he considered the lead and opium wash applied hot, and the compresses covered with oiled silk, or, if this did not relieve the inflammation, heat applied by means of the hot bran bags, as the best applications.

DR. C. A. VON RAMDOHR said that in his opinion erysipelas depended upon a peculiar coccus which, if introduced into the circulation of a puerperal woman, might give rise to erysipelas, puerperal fever, or peritonitis, and therefore prophylaxis was a very important matter. The question of how long a physician should wait after seeing a case of septicæmia, pyæmia, or erysipelas, before attending a confinement case, could be answered by the remark, "If a physician knows what disinfection is he may go at once, if not he should give up attendance altogether." He made it a rule whenever he had seen a case of erysipelas to make a complete change of clothing, take an entire bath, and to particularly disinfect his beard, hair, and hands.

After this process he had attended confinements without any unhappy result. He made it a rule, however, not to examine very frequently after making out the presentation, but put the hand into the vagina as seldom as possible. He had seen the progress of the erysipelatous blush apparently checked by the injection of a three per cent. solution of carbolic acid into the sound tissue near the margin. Sixteen injections were used, and though very much reduced at the time the patient recovered.

DR. W. M. LESZYNSKY said that during the past week he had a case of facial erysipelas, in which the compound tincture of benzoin had seemed to have a good effect when locally applied. He had also seen another case in which the injection of a two per cent. solution, in different spots about the line of demarkation, had seemed to have a beneficial effect. He thought that in many cases where the recovery from a supposed erysipelas was very rapid the disease might have been, in reality, a dermatitis, and that the high temperature of erysipelas should have been present to establish a trustworthy diagnosis.

(*To be concluded.*)

— A remarkable variation of temperature occurred in Boston on the 21st inst., from − 1.2° F. to + 54.2° F., the range being 55.4° F. within twenty-four hours.

NEW YORK ACADEMY OF MEDICINE.

REPORT OF THE COMMITTEE ON ETHICS ON A "CHARGE AGAINST A FELLOW."

At the meeting held December 4th it was announced that a charge had been made against a Fellow, and had been referred, according to rule, to the Committee on Medical Ethics. At the meeting of December 18th this committee, of which Dr. Andrew H. Smith is chairman, made their report, the First Vice-President, Dr. Robert F. Weir, presiding. The charge was made against the President, Dr. Fordyce Barker, by six Fellows of the Academy, that he had violated Section Third of the Fourteenth Article of the By-Laws by "committing an act which unfavorably affects the character of the medical profession."

Specification 1 was as follows: On or about January 4, 1854, or at some time later than January 4, 1854, the said Fordyce Barker did, with his own hand, inscribe in the signature book of the Academy the statement that he was a graduate in medicine of Paris of the date of 1844, the said Fordyce Barker not being at that time or at any subsequent time a graduate of Paris.

The other specifications made similar charges for different dates.

As the charges had already been made public the matter was disposed of in open session.

Dr. Smith, chairman of the committee, proceeded with the report, which took up the specifications in regular order.

As to the first, an investigation of the signature-book of the Academy showed that the entry, "and Paris, 1844," after Dr. Barker's name was in a different ink from the rest of the writing, and had evidently been written over an erasure; a fact to which the accusers made no allusion. It was manifestly impossible that Dr. Barker should have inscribed his name and the source of his degree in 1854, since the book was not in existence until the year 1862. Before that time such records were kept on loose slips, and there was at the present time in the possession of the Academy Dr. Barker's original application for membership, in which he stated that he had received the degree of M. D. from Bowdoin College, Maine, in 1841; no mention whatever being made of his being a graduate of medicine of Paris. Furthermore, Dr. Barker had always stated that he never knew that a diploma had been granted him in Paris until 1861.

As to Specification 2, Dr. Barker admitted that he had inadvertently given the year 1844 as the date of his Paris diploma instead of 1845.

In support of their statement that Dr. Barker had never received a diploma in Paris the accusers presented communications from a M. Clemenceau, who was said to be the secretary of the Paris Faculty of Medicine, a M. Chevallier, and others, to the effect that the tables of theses from 1840 to 1845, inclusive, had been looked through, that all the papers, complete and incomplete, of doctors, and even of officers of health, of these six years had been examined, without the name of Dr. Barker being found, and that without defending a thesis no one could become a Doctor of Medicine of Paris. They also stated that another search of the archives and of the library of the Faculty of Medicine had revealed that no trace of the medical studies of Dr. Barker in Paris between the years 1840 and 1870 existed, and that it was not possible that a foreigner should have received a diploma of Doctor of Medicine unless his name were inscribed in the archives. Having read the translations of these reports, Dr. Smith remarked that he would say in passing that only that afternoon there had been placed in his hands a copy of the *Almanac Générale de Médicine* which contained the official list of the Faculty of Medicine of Paris for 1844, and that he had searched in vain in it for the name of either M. Clemenceau or M. Chevallier.

The defense of Dr. Barker, the report continued, consisted in a clear and dispassionate statement in which the following points were maintained: That in 1845, at the suggestion of friends in Paris who were members of the Faculty, he underwent partial examinations for a degree from the School of Medicine; that his studies and examinations were interrupted by his being called home by the alarming illness of his wife's mother; that while awaiting a steamer in which to return he received a letter from Professor Orfila, Dean of the Faculty, informing him that a diploma would be granted him at some date in the near future; that he wrote a reply to this note relinquishing his claim to the diploma, as he could not reply to the necessary conditions; that sixteen years afterward, in 1861, not having in the mean time heard anything about the diploma, he was dining in Paris with M. Trousseau, in company with the Minister of Public Instruction, when Trousseau publicly referred to his (Dr. Barker's) being a graduate of Paris; that he immediately disclaimed the title, and related the facts above stated; that Trousseau affirmed that he knew that a diploma had been made out for Barker, as he himself had taken special interest in it, and as this document must be somewhere in the Department of the Minister of Public Instruction he appealed to that officer, who was present, to have it searched for; that a few days later, on returning from a temporary absence from Paris, Dr. Barker found at his hotel a roll, addressed to M. Trousseau and marked as coming from the Minister of Public Instruction, which contained his diploma from the School of Medicine in Paris, dated in 1845; that on his return home he showed this diploma to a number of friends gathered at his house to welcome him on the evening of his arrival in New York, two of whom were still living and remembered the occurrence; and that some years later it was discovered that this diploma, together with all his diplomas received prior to 1862, was lost, presumably on the occasion of his removal to his house on Madison Avenue.

When Dr. Barker heard of the present charges it occurred to him that he had shown his Paris diploma to a number of friends gathered to meet him on the occasion of his return from Europe in the autumn of 1861, and as Drs. Edwin H. Davis and R. Ogden Doremus were the only ones that he could remember who were still living, he wrote to each of them, without mentioning why he wished the information, to inquire if they remembered seeing the diploma and could recall any of the circumstances connected with his showing it to them. The replies of these gentlemen, together with the notes of inquiry to them from Dr. Barker, accompanied the statement of the latter, and were read by Dr. Smith. Both remembered seeing the diploma perfectly well, and also a number of the circumstances of the occasion when it was shown. Dr. Davis mentioned that among those who were present were Dr. Doremus and Dr. Charles Budd; that the diploma was dated in 1844 or 1845; that Dr. Barker explained how it was that he had been so long in receiving it, though he could not now recall the explanation; that the time of his seeing the diploma was in 1861, as Dr. Barker had commented on the strange manner in which it impressed him to meet a regiment on its way to the seat of war as he was coming up Broadway on his way from the steamer; that he had examined the diploma with especial care, as he was at that time connected with the old New York Medical College, and had much to do with getting up diplomas, and that he remembered seeing Orfila's name signed to it and Trousseau's name on the back. Dr. Doremus wrote that he could fix the date because the battle of Bull Run and the birth of the only child of his who had not been brought into the world by Dr. Barker had both occurred during the summer, while Dr. Barker was away. He was struck with the name of Orfila on the diploma, because he was so familiar with it in his toxicological studies. Dr. Barker had pointed out the date, 1845, explaining how that had happened, and telling of Trousseau's kindness in recovering the diploma for him. He also remembered that Dr. Budd had made some facetious remarks in regard to the way in which the diploma might be used.

The report of the committee was concluded in the following words: "This statement from a man of the high character of Dr. Barker, coupled with the fact that he did not claim that he had a Paris degree until after his return from Paris in 1861, when he had been already twenty years in practice, during sixteen of which he had been a professor, and when he had been the recipient of many professional honors, might well be deemed a sufficient answer to mere negative evidence, depending for its validity upon an assumption that a record cannot be incomplete. Added to this is the evidence of two unimpeachable witnesses. The committee has therefore decided unanimously that the charges are not sustained."

The report of the committee was adopted by a unanimous vote.

— A man went to Bristol, Eng., says a daily contemporary, for a few days to stay with some people, and especially to visit a lunatic asylum in the neighborhood, where a large concert for the benefit of the inmates was given. The visitor found the audience, with very few exceptions, intelligent, appreciative, and, to all outward appearance, perfectly sane. The person who sat next to him conversed so delightfully that he felt compelled to remark: "I beg your pardon, but you are surely not a — a — resident here?" To which the stranger replied meekly: "Yes, I am." But insisted the visitor, "You are not — you cannot be — the least mentally afflicted?" And the other replied: "Well, I have an inconceivable predilection. In fact, you see this piece of chalk. Wherever I go I can't resist the temptation to write bad language on the walls. My keeper has nothing to do but walk behind me with a wet sponge and rub it out, but he has a hard time, for I write very rapidly. I was three damns ahead up to 7.30, and I have just written 'hell' five times on your back!"

Medical and Surgical Journal.

THURSDAY, DECEMBER 25, 1884.

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SPECIAL NOTICE. — Messrs. Houghton, Mifflin & Co. desire to announce that arrangements have been made to transfer the publication of the "Boston Medical and Surgical Journal" to Messrs. Cupples, Upham & Co., on the first of January, and they wish to close up the accounts of the Journal as soon as possible.

They therefore earnestly request all subscribers to the Journal who have not paid their subscriptions up to January, 1885, to remit without delay the sums due on this account to

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ANNUS MEDICUS, MDCCCLXXXIV.,

Or rather Annus Domini 1884, but Annus Medicus — what? In a sense the latter expression may seem to be synonymous with Annus Salutis Humanæ, but for the numeral really appropriate to the medical year we should rather look to the Hebrew than to the Christian calendar. Annus Medicus I. was probably Annus Mundi I., but for the number of the current medical year we will allow each reader to make his own calculation. Meantime, following a former custom of this journal, we will in this closing number of the year briefly recapitulate some of its leading events.

The prominent point of interest for the past year for medical men has unquestionably been the invasion of Europe by cholera. The first case was reported to have presented itself June 14th on board a French man-of-war which had been lying at the naval yard at Toulon for fifteen months. The disease ravaged Toulon, attacked Marseilles, and spread to a number of smaller towns and villages throughout Southern France. Italy was invaded by Leghorn and Spezzia in spite of elaborate quarantine proclamations, the clothing of Italian workmen returning from France being very efficacious in spreading the poison, — in fact it could not have been more effective in this way if it had been baled rags!

Naples was the greatest sufferer, about seven thousand deaths taking place in a population of half a million. Cholera found its way into Spain, but its victims there, though widely scattered, were comparatively insignificant in numbers. Some cases of cholera were reported at Paris and neighboring towns early in the summer without being officially authenticated. Toward the end of October there was no doubt about the presence of the pest at Nantes, Montreuil, St. Nazaire, Yport, and other places in the northern departments; and by November 5th, the fact that cholera had entered Paris was officially recognized. The epidemic in Paris was a short and mild one, and now at the end of the year little more is said about it.

The number of cases in France and Italy, since the middle of June may be stated at not far from 25,000, and the mortality at something under fifty per cent.

The comma bacillus of Koch has excited and continues to excite much discussion and experimentation.

Rietsch and Nicati, and subsequently Koch himself, announce that they have supplied the missing link of inoculation; but, on the other hand, a skeptical Frenchman has swallowed the bacilli with impunity, and an English observer (we believe incorrectly) is persuaded that it exists in all saliva. We prefer to await the lapse of another year before attempting to estimate the exact relation of this microbe to cholera. An English commission, consisting of Drs. Klein and Heneage Gibbes, is now at work on the question in Bombay, and their official report may be awaited for additional light. We understand that, thus far, although recognizing the bacillus as a distinct microbe accompanying cholera, they have been unable to establish any pathogenic relation to it.

Let us hope that a year hence our exact knowledge of cholera may be enlarged, but only as an abstract disease-problem.

Considerable agitation has been caused in educational and medical circles in England by the open criticism offered by a number of medical men, notably by Mr. Crichton Browne, of the overpressure upon pupils in the public schools. Mr. Browne's paper called forth a rattling rejoinder from the Minister of Education, which was met in turn by further detailed evidence, that, to the minds of the medical public at least, seems to present quite a strong case. The matter is certainly one not to be settled by any flippant wordy war, and our English brethren will, it is to be hoped, in the interest of the great question of popular education, which is broader than any national limits, investigate calmly and dispassionately how far the demands of the present school system are in conflict with the true mental and physical welfare of the pupils.

In April the University of Edinburgh celebrated in a series of brilliant assemblies the completion of her three hundredth anniversary in a condition of material wealth and intellectual vigor promising well for a perpetuation of her existence for another three hundred years. Among the scientific men called to receive academic degrees on that occasion were several of our own countrymen.

During the summer a novel and interesting exhibition has been held at South Kensington, London, of articles relating to public and individual sanitation. "The Healtheries," as the buildings were dubbed by the public press, have been thronged during the whole season, and the undertaking has at least financially proved a successful venture. The scope allowed to exhibits has been a wide one, and improved methods for heating, lighting, ventilation, drainage, cooking and preserving food, dress, technical education, sanitary plans for the domicile and the workshop, and many other important subjects were illustrated. Moreover, those popular features were not omitted which serve to present instruction in an attractive form. Lectures on topics of interest were given by competent speakers, and the English people, as well as visitors from other countries, have had an opportunity never granted heretofore of becoming practically informed on many important subjects not usually well understood by the public.

The rescue of Lieutenant Greely and the few survivors of his party by the relief expedition under Commander Schley was one of the satisfactory achievements of the year. The capacity of the human frame to endure exposure to cold and insufficiency of food has been again illustrated. The readers of the JOURNAL were given the medical history of Greely's case from the time of his rescue till his restoration to health, as recorded by the surgeon in charge of him. Attention has been directed anew to the physical and mental effects of starvation, as well as to some phases of that dire experience which seems to have been forced upon the survivors, namely, anthropophagy.

The profession in Berlin has been considerably agitated over the appointment of Dr. Schweninger to the Medical Faculty of that university by the command of the Prime Minister, and over the protests of the other members of the body. A paternal government is often claimed as affording an especially favorable atmosphere for higher scientific culture. But paternity sometimes passes over into nepotism, and the illustrious grateful patient recompensed his attendant with a chair which he is universally admitted to be too small to fill, to say nothing of certain methods so strongly savoring of charlatanism that they look singularly incongruous with professional robes. Meantime, as the paternal government does not favor freedom of speech, medical opinion can speak in no louder or clearer tones than a suppressed growl, and Schweninger keeps his seat. That the honor is somewhat of a barren one, however, is shown by the fact that thus far not a single student has attended his clinic, and it remains for the autocrat to issue a ukase to the effect that students shall admire and seek after the new professor.

Among the therapeutic novelties of the year we may mention two, etherization by the rectum and cocaine. The former proceeding was brought to the attention of European and American physicians by Dr. Mollière, of Lyons. The advantages first anticipated from this method in economizing the amount of the anæsthetic were found to be counterbalanced by the impossibility of regulating the degree of anæsthesia and by the intestinal disturbance caused by the local action of the gas, so that the procedure has been generally relegated to those few cases in which inhalation is for some reason impracticable.

Cocaine was introduced, or, rather, was shown to be of practical utility as an anæsthetic by Dr. Koller, of Vienna. Its great value as a local anæsthetic upon the conjunctiva has been abundantly established, and experimentation with it in various forms of administration is now rife on every hand. With what permanent residue of good must be left to the chronicler of a future Annus Medicus.

The medical world has come to look with interest for those statements of the latest and best professional opinion upon various topics which are embodied in the endowed courses of lectures of which our English brethren enjoy several, and which, it is to be hoped, will some day, through the beneficence of some of the wealthier members of the profession, become a regular institution of our own medical centres.

Among the more notable English productions of the year in this kind have been the following: —

The Lettsomian Lectures on Modern Operations for Cataract, by Mr. R. Brudenell Carter.

The Gulstonian Lectures on Neuroses of the Viscera, by Dr. T. Clifford Allbutt.

The Croonian Lectures on the Evolution and Dissolution of the Nervous System, by Dr. J. Hughlings Jackson.

The Lumleian Lectures on the Ætiology of Phthisis, by Dr. J. Andrew.

The Bradshawe Lecture on the Pathological Relations of the Absorbent System, by Dr. G. Hare Philipson.

The Bowman Lecture on the Relation of Certain Diseases of the Eye to Gout, by Mr. Jonathan Hutchinson.

Of other valuable courses of lectures we should mention that by Sir Henry Thompson on Some Important Points in Connection with the Surgery of the Urinary Organs.

The more important Societies met during the year as follows: —

The American Climatological Society held its initial meeting in Washington, May 3d to 5th.

The American Medical Association, at Washington, May 6th to 8th.

The American Laryngological Association, in New York, May 12th to 14th.

The Massachusetts Medical Society, in Boston, June 10th to 11th.

The American Neurological Society, at New York, June 18th to 20th.

The British Medical Association, at Belfast, July 29th.

The International Medical Congress, at Copenhagen, August 10th to 16th.

The International Congress of Hygiene, at The Hague, August 21st.

The Canada Medical Association, at Montreal, August 25th to 27th.

The American Gynæcological Society, at Chicago, September 30th to October 2d.

The American Public Health Association, at St. Louis, October 14th to 17th.

GENERAL NECROLOGY FOR THE YEAR.

Dr. Elisha Harris, Secretary of the New York State Board of Health and Superintendent of Vital Statistics, died February 1st, aged sixty. During the war he was active in the organization and work of the United States Sanitary Commission, and since then has done much service in various official positions in connection with vital statistics and public health.

Dr. George Engelmann, of St. Louis, a prominent physician of that city, and for many years President of the St. Louis Academy of Medicine, died February 4th, aged seventy-six.

Dr. John Hutton Balfour, emeritus professor of medicine and botany in the University of Edinburgh, and author of a variety of books and articles on scientific topics and especially botany, died in February, aged seventy-six.

Dr. L. P. Yandell, of Louisville, Ky., editor of the *Louisville Medical News* and professor of the theory and practice of medicine in the University of Louisville, died in March, aged forty-seven.

Professor Reichert, late professor of anatomy in the University of Berlin, died, aged seventy-three.

Allen Thomson, M. D., F. R. S., etc., one of the most distinguished anatomists and embryologists of his time, died in London March 22, 1884, at the age of seventy-five. He was born in Edinburgh, and was at one time associated intimately in anatomical work with Dr. William Sharpey. He was professor of anatomy and physiology at different times in three of the four Scottish Universities, namely, Aberdeen, Edinburgh, and Glasgow, and was a voluminous writer. Perhaps that portion of his work most familiar to our readers is in connection with Quain's Anatomy, of which he edited the seventh and eighth editions. He received numerous academic honors, among them the degree of D. C. L. from Oxford.

Jean Baptiste Dumas, professor of chemistry at the Faculty of Sciences, the Faculty of Medicine, and the College of France, friend and disciple of Lavoisier, and member of the Académie Française, died at Cannes, whither he had gone for his health, April 17th, at the ripe age of eighty-four.

Charles Adolphe Wurtz, of Paris, an associate of Dumas, and an equally distinguished chemist, died in Paris, May 12th. He was a successor of Orfila and of Dumas in the professorship of chemistry, was Dean of the Faculty of Medicine and of the Academy of Sciences, and a fertile writer on chemical subjects.

Dr. Pliny A. Jewett, of New Haven, Conn., for twelve years professor of obstetrics in the Medical Department of Yale, and ex-President of the Connecticut State Medical Society, died April 10th, aged sixty-eight.

Dr. Moreau, of Paris, formerly connected with Bicêtre and La Salpétrière hospitals, and a somewhat noted alienist, died, aged eighty.

Dr. Willard Parker, of New York, died April 25th, at the age of eighty-four. He held professorships in anatomy and surgery at the Vermont, the Berkshire, and the Cincinnati Medical Colleges, and from 1839 was for thirty years Professor of Surgery in the College of Physicians and Surgeons of New York. At the end of this time he resigned this chair and was given that of clinical surgery. His contributions were numerous to public health as well as to surgical science, in which field he devised a number of operative procedures. He was an honorary member of the Massachusetts Medical Society.

Prof. Samuel D. Gross, of the Jefferson Medical College of Philadelphia, one of the most illustrious American surgeons of his time, died May 6th, at an advanced age. His contributions to surgical literature were numerous, among the most widely known being his System of Surgery, of which he had just completed with the aid of his son a new and much enlarged edition at the time of his death. In 1880 he received the degree of LL. D. from the University of Cambridge, England. News of his death was received during the session of the American Medical Association, and was announced to that body, of which he had been a former president.

Dr. Alexander Tweedie, of Edinburgh, died May 30th at the age of ninety. He was the originator of the Cyclopædia of Practical Medicine, which covered with considerable fullness the ordinary range of medical subjects, and also edited the Library of Medicine which appeared in 1840.

Sir Erasmus Wilson, a well-known authority and author on dermatology, died in England, August 7th, at the age of seventy-five. He had been President of the Royal College of Surgeons. He was possessed of large wealth, which he used liberally during his lifetime for public charities. He endowed a chair of Dermatology in the College of Surgeons, of which he was himself the first incumbent. He also founded the chair of Pathology at Aberdeen, and left a residuary legacy to the College of Surgeons which will probably amount to $900,000.

Joseph Janvier Woodward, Surgeon, U. S. A., an original worker in microscopy and micro-photography, and a collaborator with Dr. F. N. Otis upon the early volumes of the Medical and Surgical History of the War of the Rebellion, died August 17th, aged fifty-two.

Dr. Julius Cohnheim, in early life an associate of Virchow, at Berlin, later professor at Kiel and at Breslau, and finally at Leipsic, best known for his researches on the pathology of inflammation, died at Leipsic, August 14th, at the age of forty-five.

John Netten Radcliffe, an able and industrious laborer in the field of public health in England, died in September. In familiarity with epidemiology, especially that of cholera, he was probably equaled by none of his contemporaries. A report on this subject to the Privy Council in 1865 was the first of a series of such papers which gave an immense amount of information as to the place of origin and the progress of various epidemics; the last of these reports was issued in 1881. He was made President of the Epidemiological Society in 1875. His experience would doubtless have been of great value in the epidemic of the present year, had he been spared.

Dr. Jacob H. Stewart, a prominent physician of St. Paul, Minn., formerly mayor of that city, member of Congress, and surveyor-general of Minnesota under President Hayes, died August 25th, aged fifty-six.

Dr. Robert E. Rogers, Professor of Chemistry in the Jefferson Medical College of Philadelphia, died September 6th, aged seventy. He had filled a similar professional chair in the University of Pennsylvania.

Prof. Luigi Somma, of Naples, founder and editor of *Archivio di Patologia Infantile*, was stricken down by cholera during its invasion of Naples, and died at the post of duty, September, 19th.

Professor Jäger, of Vienna, renowned as an ophthalmologist, died during the summer.

Dr. Herman von Zeissl, a contemporary and coworker with Skoda, Hebra, and Rokitansky, and an eminent syphilographer and teacher of Vienna, died September 23d, aged sixty-seven.

Dr. Sulpice Antoine Fauvel died in Paris, November 5th, at the age of seventy-one. He was for many years inspector-general of the Sanitary Department of France, and had represented his country at two international sanitary congresses.

Dr. Frederick A. Mahomed, a student and writer in the domain of what might be called transcendental pathology, died of typhoid fever November 22d, in the 36th year of his age. His first elaborate work was on the sphygmograph, he made several contributions to the pathology of Bright's disease, and during the past summer he was engaged in organizing the anthropometrical laboratory at the Health Exhibition. He was one of the most active promoters of "collective investigation."

Prof. J. B. Fonssagrives, a well known French writer on medical and hygienic subjects, died of cholera.

NECROLOGY OF THE MASSACHUSETTS MEDICAL SOCIETY. 1884.

George Carlisle Lawrence, M. D., of North Adams, died January 6th, aged sixty-three.

Joshua Jewett Johnson, M. D., of Northborough, died January 29th, aged seventy-four years.

Almon Nelson Allen, M. D., of Pittsfield, died February 6th, aged sixty-three.

Noble Bennett Pickett, M. D., of Great Barrington, died February 5th, aged eighty-three.

Albert Faxon Eastman, M. D., of Abington, died February 13th, aged forty-one.

Henry Lyman Sabin, M. D., of Williamstown, died February 24th, aged eighty-three.

Michael Roberts, M. D., of Lawrence, died February 10th, aged fifty-six.

Morris Spofford, M. D., of Groveland, died March 7th, aged fifty-five.

George Hooker, M. D., of Longmeadow, died March 14th, aged ninety.

Wilbur Fiske Sanborn, M. D., of North Sandwich, N. H., died March 19th, aged thirty-four.

William Henry Campbell, M. D., of Roxbury, died April 24th, aged fifty-two.

Willard Parker, M. D., of New York, died April 25th, aged eighty-four.

Edgar O'Meara Fowler, M. D., of Danvers, died May 1st, aged thirty-one.

Charles Hosea Hildreth, M. D., of Gloucester, died May 18th, aged fifty-eight.

William Lawrence Sprague, M. D., of Boston, died June 22d, aged thirty-four.

Benjamin Franklin Wing, M. D., of Jamaica Plain, died August 1st, aged seventy-nine.

Abel Bryant Adams, M. D., of Lexington, died August 13th, aged seventy-three.

John Homer Dix, M. D., of Boston, died August 25th, aged seventy-two.

Frank Abner Langworthy, M. D., of Lakewood, N. J., died in California, August 31st, aged thirty-four.

Howard Franklin Damon, M. D., of Boston, died September 17th, aged fifty-two.

Luther Clark, M. D., of Boston, died September 26th, aged seventy-four.

Charles Morris Duncan, M. D., of Shelburne, died October 4th, aged seventy-six.

William Jackson Currier, M. D., of Lexington, died October 27th, aged sixty-nine.

Edward Jarvis, M. D., of Dorchester, died October 31st, aged eighty-one.

Nathan Savery Chamberlain, M. D., of Marlborough, died October 31st, aged thirty-nine.

Samuel Augustus Fisk, M. D., of Northampton, ex-President of the Massachusetts Medical Society, died November 16th, aged sixty-three.

Henry Austin Martin, M. D., of Roxbury, died December 7th, aged sixty.

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THE TRIAL AND ACQUITTAL OF DR. FORDYCE BARKER BY THE NEW YORK ACADEMY OF MEDICINE.

The trial last week of Dr. Fordyce Barker before the New York Academy of Medicine, of which he was President, for improperly claiming a Paris degree of Doctor in Medicine, was a sad business. We care very little for the evidence in the matter one way or the other. But the forcing of such an issue in such a manner against a professional brother of Dr. Barker's standing bears too plainly the impress of personal pique and spite. The profession of medicine can gain nothing from such performances.

This trial is to be regarded as a melancholy echo of the wrangle over the Code in New York last year. Whatever opinion we may entertain of the wisdom of the men who forced that foolish issue last year we are glad to be able to congratulate Dr. Barker heartily upon the handsome vindication he has received.

Hitherto the only good issue of the whole Code controversy which we have been able to detect was the formation of a State Medical Association which does really valuable medical work to the neglect of wire pulling and pipe laying for public popularity.

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MEDICAL NOTES.

NEW YORK.

— The exercises of the sixteenth anniversary of the Presbyterian Hospital were held on Sunday evening, December 14th, at the West Presbyterian Church, when a sermon appropriate to the occasion was preached by the Rev. Dr. John R. Paxton, in the course of which he said: "We are indebted to the Jews for many things, for human law and their teachings of the sacredness of life, but not for hospitals. These are the sole creation of Christianity. The first hospital founded was in a little inn on the road from Jerusalem to Jericho, when the good Samaritan, as attending physician, poured oil into the wounds of the first patient, the man found upon the road-side. This hospital was but the beginning; but although insignificant, the idea had been born, the duty to aid our fellow-men recognized, though the means how to do it best were wanting." Since the last anniversary five beds have been endowed by the Presbyterian churches of New York at a cost of $25,000, and thirteen churches and chapels are now providing funds for additional beds, while a certain lady has promised to give $50,000 towards $150,000 that is needed for the erection of children's and accident wards if the rest of the amount is subscribed.

— The annual meeting of the State Charities Aid Association was held December 13th, when the Sub-Committee on Hospitals reported that they had prepared two plans: one for a village hospital, accompanied by an explanatory leaflet, and one for a model poor-house. An effort has been made by another committee to establish cooled-water fountains in crowded tenement-house districts. Reports from the Metropolitan Drinking Fountain Association in England, it was stated, show that these fountains supply a great want in such districts, and are the means of doing much good, diminishing sickness among children, and also lessening intemperance. A special Committee on the Insane, which was appointed last February, has prepared two pamphlets: one entitled A Summary of Legislation in England, and Condition of Lunatics in Scotland, and the other on the Training of Nurses for the Insane. This committee has secured the coöperation of the Bellevue Training School, and is now occupied in maturing a plan by which a certain number of women trained there as nurses for the sick may secure in one of the asylums a special training in the care of the insane. A fund of $1350 has also been contributed to be used in the training of such nurses.

— "Doctor Grattan," Dr. Hammond's second novel, has appeared, and in it the author is said to have availed himself of his experience in mental disorders to produce a number of romantic and surprising situations. In the meanwhile his "Lal" is being prepared for representation on the stage.

Correspondence.

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LETTER FROM PARIS.

THE CHOLERA EPIDEMIC.

Paris, *November 22*, 1884.

Mr. Editor, — Believing that a short account of the recent epidemic of cholera, which has visited this city, may be of interest to some readers of the Journal, I send you a brief description of what it came in my way to observe: —

I reached Paris October 20th. In Berlin, which I left, the weather had been cold with frequent drizzling rains, and a dull, dark, and dismal atmosphere. I was told that a somewhat similar state of things had also been present in France, although the weather was fine on my arrival. During the four weeks of my stay in this city there have been two rainy days, and two or three cloudy days. The weather during the remaining time has been generally clear, and the temperature cool, the midday reading averaging perhaps 50° F. to 55° F.

The drainage of the greater part of the city seems to me excellent, the sewers are supplied with an abundance of water from the public fountains and other sources, and the mains are regularly opened in the streets or beneath the sidewalks for the purpose of additional flushing. I have never been able to detect any odor from the sewer openings, and in the houses where I have been there was not the slightest perceptible trace of sewer gas.

I did not go through the sewers, but a friend who traveled through some five miles of main or contributory sewers on October 25th described the condition of the sewage as very dilute, and except in a few localities at the junction of several trunk sewers there was no offensive odor. The telegraph system of Paris is also conveyed in the interior of the sewers, and one of the men constantly employed in repairs and new construction said that he had not been sick or in any way unpleasantly affected by the work in the sewers during five years of service.

In some limited districts of Paris the improved sewerage system has never been fully carried out, and one there sees still the old form of gutter near the sidewalk with more or less offensive and discolored contents. The older houses are also built in the shape of a square block inclosing a small court-yard, where the water supply for the entire building is located, and the drainage, except from the latrines, flows through the court-yard and under the main entrance to the street in an uncovered gutter. Here there may at times be noticed a somewhat offensive odor.

The food supply seems to be exceptionally good. I visited the great central market, "les Halles," at one o'clock in the morning. I could observe nothing in the least degree questionable in quality, and was struck by the absence of "second class" articles of food consumption. There is evidence of a rigorous inspection of all articles of food supply.

The water is of surface origin and is soft in quality, clear in appearance, and free from perceptible odor or taste. I believe the house service is generally by a supply tank, and not by direct flow from the mains. I have no knowledge of the milk supply further than the fact that in several places of pleasure resort there are stables in which cows are kept and visitors enter the stalls and for a small price receive a cup of milk warm from the cow. I tasted no milk which impressed me as bad, and saw no dirty milk.

Under these condition cholera appeared in the city, and after four or five days had assumed such proportions in the form of an epidemic that it was impossible to further conceal the fact of its existence. The first cases occurred in one of the poorest districts in the city, and were for a time confined to certain large tenement houses inhabited by rag pickers, and occupied in part as a depository or depot for rags of all kinds. The patients were without an exception those of intemperate and filthy habits, who were badly housed, insufficiently nourished, poorly clad, and much exposed to cold and wet. Many of the earlier cases died without treatment or were treated in their homes; but soon arrangements were adopted for the immediate transportation of cholera patients to the various hospitals where special isolated wards were devoted to their care. Removal from the patient's home was never made obligatory, nor was it considered necessary to place the infected houses in quarantine or to establish police supervision over the residents.

At this time no restriction was placed on travel between Paris and the southern parts of France.

For some days after the official announcement of the existence of an epidemic the disease increased in severity and extended from its point of first appearance to nearly every ward of the city. In nearly all instances some means of infection from previous cases could be traced, but in some cases it was not possible to discover the manner by which the disease had been acquired.

A volunteer medical service was at once established, and with the coöperation of the municipal sanitary board and the aid of the police, the city was thoroughly patrolled, and every offensive place either cleansed by the authorities or by the owners or occupants of the property. The smell of disinfectants was frequently noticeable, and the public streets and squares were, if possible, kept even more scrupulously clean than before. In many streets the gutters were constantly flushed by opening the hydrants, and the public urinals were disinfected. Each day the mayor issued an official bulletin in which the number of cases under treatment and the number of new cases was announced as well as the rate of dissemination of the disease by wards in the city. It was stated that the highest rate only amounted to one patient to 17,000 inhabitants. The cases were usually of a mild type, the mortality never to my knowledge exceeded thirty-three per cent. of the number of patients, and except in an outbreak which occurred in an asylum for the aged, supported by the scanty means of a few sisters of a religious order, there was no appearance of especial virulency about the epidemic. In this asylum the inmates who took the disease were, I believe, all above seventy years of age, and the mortality, as might have been expected, was relatively very high. Here also occurred the only instance of the entire epidemic in which a nurse or attendant was known to take the disease. One of the sisters who was constantly in the room devoted to cases of cholera is said to have taken the disease, and after two days died from it. With this single exception no instance was known in which cholera was directly communicated from the person of the patient to his attendants, or even to his surroundings.

As may be supposed, many persons then in Paris were much alarmed by the presence of cholera as well as by the apprehension that neighboring countries might establish quarantine against persons or commerce from French ports, and a general exodus of travelers and strangers at once took place.

It is estimated that within four days more than thirty thousand people crossed the channel to various ports in England, nearly all of whom came from Paris. The hotels became literally empty; many families who were established for the winter at once left the city, and a vast change was immediately noticeable in the clubs, thoroughfares, and fashionable restaurants. Strange to say, the resident inhabitants of Paris did not become in the least frightened, and no signs of a panic were at any time observable. The theatres were better filled during the weeks of cholera than during the weeks immediately preceding, and no change was noticeable in the behavior of the common people, that element which is generally most easily frightened by any unusual occurrence.

After about ten days of maximum severity the number of cases and the gravity of the disease became gradually diminished, until to-day the epidemic is at an end. Cases of so-called "choleraic" disease were reported for some days after the subsidence of the true cholera, but these were uniformly of mild character and ended in every instance by recovery.

The report of cases in the military establishments are very unsatisfactory, and are not taken into account, though there were doubtless a few cases in the barracks.

The reported treatment consisted in a general way in the moderate use of anodynes, the administration of stimulants, the application of external heat, and the nourishment of the patient by bland food in liquid form. In some cases nutrient enemata were employed, and the use of saline intravenous injections was also reported. No special mode of treatment has seemed to influence the disease in an appreciable manner. The favorable change in the epidemic and its final subsidence are generally referred to the lower temperature, and particularly to the frosts of the middle of November.

So far as I was able to observe, there is a far greater degree of confidence on the part of the medical profession in France, in the employment of prophylactic measures to prevent the occurrence or spread of cholera than in any method of treatment when the disease has once appeared. The low death-rate in the present epidemic is attributed wholly to the mild form of the disorder, and not to the advancement of our knowledge concerning the disease, or of improved methods of treatment.

The police were supplied with flannel bands for the abdomen, and were served a ration of grog and sometimes coffee during the night patrol. The municipal government made grants of money for the relief of the sufferers, and the gratuitous supply of disinfectants among the poorer classes.

There is no doubt that much cleansing was accomplished, and with this and the coming of cooler weather the disease abated and finally entirely disappeared.

In review, we have the outbreak of a limited epidemic in the centre of a large city, manifesting itself especially among rag pickers, and for a time apparently confined to them and to their habitat alone. Afterward the disease spread to a moderate extent and was reported from nearly every part of the city. The patients were almost without exception persons who were underfed, insufficiently protected, dissolute, and intemperate. To my knowledge not one stranger was attacked in the entire epidemic, and no English speaking person was known to suffer from the disease. But few residents of Paris left the city, and there was no appearance of fright, much less of panic to be observed. The disease is entirely quenched, and will doubtless not recur until the approach of warmer weather, when it will, in the opinion of most of those with whom I have spoken, again appear, and will far exceed the present epidemic both in the extent of its ravages and in severity. The disease has already been recognized in Nantes, in Yport, in Brussels, in Marseilles, in Toulon; it has crossed the border into northern Italy; it has invaded Spain, and has been reported in some other places. It is to be feared that the advent of spring will arouse the disorder anew, and that the entire west of Europe will be devastated by it.

The epidemic just ended has not contributed anything material in support of the theories of Professor Koch as to the origin or "Wesen" of cholera. I have not been able to find either here or in Berlin any ardent support for the claims of the comma bacillus as the cause or essential element of the disease. The importance of the bacillus of tubercle is generally conceded, and in Berlin I saw specimens which were made for purposes of diagnosis, thus showing that the presence of the organism is recognized as of practical value in daily routine; but the same authority spoke of the bacillus of cholera with some degree of distrust, and expressed the opinion of the profession as being that the bacillus is a concomitant but not clearly the cause of the disease. A French physician, to advance the cause of science, and to disprove the claims of Koch, prepared a portion of the dejections of a cholera patient containing the comma bacillus and swallowed the infection. He was ill for thirty-six hours with the symptoms of a gastro-intestinal catarrh with febrile action, etc., but then quickly recovered his usual health, and could perceive no detriment from this nauseating experiment. I do not need to add that the feeling in France is decidedly antagonistic to the claims of Professor Koch.

It is yet too early for the official report of the sanitary authorities and the medical department upon the recent epidemic in Paris, but I am led to believe that efforts are being made to utilize the presence of the disease as a study for guidance in the expected revival of the disorder in the near future. It is to be hoped that this important information may be published in advance of the threatened outbreak of cholera, but in the mean time every precaution is being employed to secure the best possible sanitary conditions, which must favor a mitigated severity in any epidemic disease.

Very truly yours,

ALBERT N. BLODGETT, M. D.

Miscellany.

THE INSTINCT OF THE SPHEX.

IN an article in the *Nineteenth Century* (September, 1884) on the Darwinian theory of instinct, Mr. G. J. Romanes speaks of the instinct of the sphex as being the most extraordinary known. This insect, which is of a wasp-like species, lays its eggs in a hole excavated in the ground. It then flies away and finds a spider, which it stings in the main nerve centre of the animal. This has the effect of paralyzing the spider without killing it. The sphex then carries the now motionless spider to its nursery and buries it with the eggs. When the eggs hatch out the grubs feed on the paralyzed prey, which is then still alive, and therefore quite fresh, although it has never been able to move since the time when it was buried. Satisfactory explanation of this instinct is difficult on either of the twofold bases of Mr. Darwin's theory of the origin of instinct, namely, natural selection and the "lapsing of intelligence." What is still more astonishing is that M. Fabre, the French entomologist who first noted these facts, has more recently discovered another species of sphex which preys upon the grasshopper. As the nervous system of the grasshopper is more elongated than that of the spider, the sphex in this case has to sting its victim in three successive nerve centres in order to cause paralysis. Again, yet more recently, M. Fabre has discovered still another species of sphex which preys upon the caterpillar, in which case the animal must sting its victim in nine successive nerve centres. These last observations militate against the view that the sphex's sting being in the median line, and the spider's nerve centre being also in the median line, an accidental striking of the nerve centre might have been naturally favored in the first instances, and thus a basis have been supplied upon which natural selection could work.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 13, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				Infectious Diseases.	Lung Diseases.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	658	235	19.35	19.65	1.80	8.25	1.85
Philadelphia	927,995	372	111	16.47	10.26	1.35	10.26	2.70
Brooklyn	644,526	290	118	14.35	24.85	.35	8.05	.70
Chicago	632,100	230	113	29.42	15.48	2.58	17.63	2.15
Boston	423,800	179	68	14.82	22.80	2.80	7.98	—
Baltimore	408,520	138	57	17.52	10.95	—	3.14	.73
St. Louis	400,000	134	48	27.38	21.46	2.96	11.10	3.70
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	49	10	18.36	8.16	6.12	4.08	6.12
New Haven	62,882	21	—	9.52	—	4.76	—	—
Nashville	54,400	19	4	26.30	11.52	5.26	11.52	—
Charleston	52,286	37	9	10.80	—	2.70	—	—
Lowell	71,447	25	4	24.00	12 00	8.00	8.00	4.00
Worcester	69,442	26	13	26.85	15.40	—	26.85	—
Fall River	62,674	27	12	18.50	7.40	—	11.10	7.40
Cambridge	60,995	28	11	21.60	21.60	—	14.40	7.20
Lawrence	45,516	20	7	20.00	10.00	—	5.00	10.00
Lynn	44,895	15	5	13.33	13.33	6.66	—	—
Springfield	38,090	19	5	26.30	10.52	2.56	10.52	—
Somerville	31,350	10	5	—	20.00	—	—	—
Holyoke	30,515	9	2	44.44	11.11	—	—	44.44
New Bedford	30,144	15	3	13.33	6.66	13.33	—	—
Salem	29,503	6	2	—	—	—	—	—
Chelsea	24,347	5	1	—	—	—	—	—
Taunton	22,693	4	1	25.00	—	—	25.00	—
Gloucester	21,400	7	3	—	14.28	—	—	—
Haverhill	20,905	6	2	16.66	16.66	—	—	16.66
Newton	19,421	7	0	14.28	14.28	14.28	—	—
Brockton	18,323	6	0	50.00	—	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	9	2	11.11	22.22	—	11.11	—
Fitchburg	13,433	7	2	28.56	14.28	—	14 28	—
Massachusetts towns	—	55	10	9.10	29.12	1.82	3 64	3.64

Deaths reported 2433: under five years of age, 863; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 458; lung diseases 411, consumption 369, diphtheria and croup 232, scarlet fever 53, typhoid fever 47, diarrhœal diseases 38, measles 25, malarial fevers 19, whooping-cough 18, cerebro-spinal meningitis 15, puerperal fever nine. From *diarrhœal diseases*, New York 13, Brooklyn and Chicago six each, St. Louis three, Baltimore, Nashville, and Charleston two each, Boston, Providence, New Haven and Lynn one each. From *measles*, New York 16, Brooklyn four, Philadelphia three, Chicago and St. Louis one each. From *malarial fevers*, New York 10, St. Louis four, Chicago two, Philadelphia, Brooklyn, and Charleston, one each. From *whooping-cough*, New York five, Brooklyn four, Chicago three, Boston and Baltimore two each, Philadelphia and St. Louis one each. From *cerebro-spinal meningitis*, Boston four, New York three, Philadelphia and Springfield two each, Chicago, Lowell, Lawrence, and Fitchburg one each. From *puerperal fever*, St. Louis four, New York and Chicago two each, Baltimore and Charleston one each. From *erysipelas*, Philadelphia and Chicago one each.

One case of small-pox reported in St. Louis; scarlatina 53, diphtheria 27, measles 19, and typhoid fever 18 in Boston.

In 103 cities and towns of Massachusetts, with an estimated population of 1,402,843 (estimated population of the State 1,955,104), the total death-rate for the week was 18.00 against 19.29 and 18.92 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending November 29th, the death-rate was 23.8. Deaths reported 3994: infants under one year of age 986; acute diseases of the respiratory organs (London) 511, measles 83, scarlet fever 76, whooping-cough 73, fever 53, diarrhœa 39, diphtheria 37, small-pox (London 30, Birkenhead two, Leeds and Cardiff one each), 34. The death-rates ranged from 17.3 in Plymouth to 30.7 in Cardiff; Birkenhead 21.2; Birmingham 24.3; Blackburn 22.7; Leeds 23.6; Leicester 23.6; Liverpool 27.4; London 22.3; Manchester 28.7; Nottingham 30.2; Sheffield 19.1. In Edinburgh 18.6; Dublin 37.1; Glasgow 35.4.

For the week ending November 29th, in the Swiss cities, there were 21 deaths from lung diseases, consumption 18, diarrhœal diseases 16, diphtheria and croup eight, whooping-cough four, erysipelas two, typhoid fever two, puerperal fever two, measles one, scarlet fever one. The death-rates were, at Geneva 13.2; Zurich 9.8; Basle 14.7; Berne 22.2.

The meteorological record for the week ending December 13th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Dec., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 7	29.482	54.8	60.5	45.5	86	54	62	67.3	SW	SW	SW	16	18	25	C	O	F	—	—
Mon., 8	29.709	44.5	53.2	41.9	52	51	64	55.7	W	W	W	20	20	27	O	O	C	—	—
Tues., 9	29.858	38.4	44.7	35.2	61	59	65	58.7	SW	W	NW	10	10	12	C	O	C	—	—
Wed., 10	30.152	32.5	37.9	26.8	65	37	70	57.3	W	W	SW	8	10	8	C	F	O	—	—
Thurs., 11	30.017	35.8	40.5	32.5	96	82	68	82.0	S	SW	W	8	10	8	N	O	C	—	—
Fri., 12	30.061	35.0	37.1	32.6	64	69	78	70.3	NW	N	N	5	9	12	O	O	O	—	—
Sat., 13	30.265	30.2	34.5	27.6	78	90	86	84.7	N	N	W	12	12	3	N	N	O	—	—
Mean, the Week.	29.935	38.7	42.6	34.6				68.0										32.00	1.15[2]

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; N., snow.
[2] Melted snow and rain.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM DECEMBER 6, 1884, TO DECEMBER 19, 1884.

Kane, John J., captain and assistant surgeon. From Department of the East to Willet's Point, New York. S. O. 286, A. G. O., December 6, 1884.

Banister, J. M., captain and assistant surgeon (Fort Adams, R. I.). Granted one month's leave of absence on surgeon's certificate of disability. S. O. 251, Department of the East, December 9, 1884.

Barrows, C. C., first lieutenant and assistant surgeon. In addition to other duties to take charge of Medical Director's office, Department of Arizona, during absence of Surgeon B. J. D. Irwin. S. O. 112, Department of Arizona, November 25, 1884.

Gray, Chas. C., major (retired), died at Geneva, N. Y., November 22, 1884, instead of November 26th, as heretofore announced. Circular Orders, A. G. O., December 8, 1884.

O'Reilly, Robert M., captain and assistant surgeon. Assigned to duty as attending surgeon, Washington City, D. C., to date from October 20, 1884. S. O. 284, A. G. O., December 4, 1884.

Pilcher, J. E., first lieutenant and assistant surgeon. Ordered to Fort Custer, M. T., for duty. Order assigning him to duty at Fort A. Lincoln, D. T., amended. S. O. 145, Department of Dakota, December 8, 1884.

Comegys, E. T., captain and assistant surgeon. Granted leave of absence for one month. S. O. 234, Department of Missouri, December 8, 1884.

Lauderdale, Jno. V., captain and assistant surgeon (Fort Sully, D. T.). Granted leave of absence for one month; to take effect about December 20, 1884. S. O. 146, Department of Dakota, December 9, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE UNITED STATES NAVY DURING TWO WEEKS ENDING DECEMBER 20, 1884.

Craig, T. C., passed assistant surgeon. Detached from the Alliance and placed on waiting orders. December 6, 1884.

Curtis, L. W., assistant surgeon. To the Naval Hospital, Chelsea. December 6, 1884.

Gaines, J. H., passed assistant surgeon. Present duty continued.

[illegible], H., passed assistant surgeon. Special duty at Museum of Hygiene, Washington. December 11, 1884.

Murray, J. M., passed assistant surgeon. Detached from Naval Hospital, Chelsea, to the Training-ship Hartford. December [illegible], 1884.

Woolverton, T., surgeon. To the Shenandoah. December 6, 1884.

Kindleberger, D., medical inspector. Detached from the Hartford and placed on sick leave.

WOMAN'S MILK FOR ANALYSIS.

The undersigned is desirous of securing specimens of woman's milk for analysis, and begs the physicians of Boston to aid him in securing such. About two fluid ounces, — the more the better, — with a statement of the age of the woman, is desired, number of previous confinements, weight and food of child (if any food but breast milk is given), time of last nursing, from which breast sample is obtained. If any one will send word to the undersigned by mail a messenger will be sent for sample, and a copy of analysis furnished if desired.

H. C. Haven, M. D., 19 Exeter St., Boston.

Books and Pamphlets Received. — The Principles and Practice of Gynecology. By Thomas Addis Emmet, M. D., etc., etc. Third Edition, thoroughly Revised. With 150 Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1884.

Asiatic Cholera as it appeared at Suspension Bridge, Niagara County, N. Y., in July, 1854, and its Lessons. What we Know of the Cholera. By Frank H. Hamilton, M. D. (Reprint.)

Transactions of the New Hampshire Medical Society at its Ninety-Fourth Annual Session. Held at Concord, June 17–18, 1884.

Proposed Plan for a Sewerage System, and for the Disposal of the Sewage of the City of Providence. By Samuel M. Gray, City Engineer. Made by order of the City Council of Providence. 1884.

Transactions of the Maine Medical Association. 1884. Vol VIII. Part II. Portland, Me. 1884.

Muriate of Cocaine in Ophthalmic Surgery. By C. J. Lundy A. M., M. D., Professor of Diseases of Eye, Ear, and Throat in the Michigan College of Medicine. (Reprint.)

The Dry Treatment of Chronic Suppurative Inflammation of the Middle Ear. By Charles J. Lundy, A. M., M. D. Detroit. (Reprint.)

Fifth Annual Report of the State Board of Health, Lunacy, and Charity of Massachusetts. Supplement Containing Report and Papers on Public Health. Boston. 1884.

Elements of Surgical Diagnosis. By A. Pearce Gould, M. S., M. B. Lond., F. R. C. S. Eng. London: Cassell & Co.

A Manual of Dissection of the Human Body. By Luther Holden, Late President of the Royal College of Surgeons of England. Fifth Edition. Edited by John Langton. With over Two Hundred Illustrations. Philadelphia: P. Blakiston, Son & Co. 1885.

A Manual of Bandaging. Adapted for Self-Instruction. By C. Henri Leonard, A. M., M. D., Professor of the Medical and Surgical Diseases of Women and Gynæcology, Michigan College of Medicine, etc. With One Hundred and Thirty-Nine Engravings. Second Edition. Revised and Enlarged. Detroit: Published by the Illustrated Medical Journal Company.

Membrana Virginalis. By E. S. McKee, M. D., Late Clinical Assistant Hospital for Sick Children, London. (Reprint from Nashville Journal of Medicine and Surgery. November, 1884.

Concerning the Climate of New Mexico. By W. Thornton Parker, M. D. (Munich), Acting Assistant Surgeon, U. S. A (Reprint.)

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